Accelerating Digital Transformation in Zambia

DIGITAL ECONOMY DIAGNOSTIC REPORT

THE WORLD BANK
Accelerating Digital Transformation in Zambia

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Acknowledgments

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Executive Summary

Zambia’s 7th National Development Plan (7NDP) sets ambitious targets for economic growth and poverty reduction. Technology can play an important role as Zambia advances this vision for economic transformation.

Recent evidence tells us that reaching the goal of universal and affordable internet coverage can raise growth per capita by 2 percentage points per year and reduce the poverty headcount by 1 percentage point per year. When internet coverage is complemented by human capital investments, growth per capita increases by approximately 5 percentage points and the poverty headcount falls by 2.5 percentage points per year. These contributions to growth are mainly due to growth in productivity across economic sectors; digital transformation is thus part and parcel of economic transformation.

The introduction of digital systems can also have a transformative effect on government. It is estimated that developing countries could collectively save 0.9 to 1.1 percent of GDP, equivalent to $220 billion to $330 billion annually (IMF 2017), by introducing digital systems in government that increase efficiency and reduce the potential for leakages to occur. Additionally, significant effectiveness gains can be realized by equipping government officials responsible for public service delivery with access to better data and tools.

Improved access to digital technologies and effective use of data and digital systems can thus be powerful tools in the quest to increase private sector productivity, enhance public sector efficiency and effectiveness, and improve the accountability of both the public and private sectors. Indeed, 7NDP includes several digital transformation strategies for these reasons.
This digital economy diagnostic assesses Zambia’s strengths and weaknesses with respect to five pillars that together form the foundation upon which the benefits of digital transformation can be realized. These pillars are Digital Infrastructure, Digital Skills, Digital Entrepreneurship, Digital Platforms, and Digital Financial Services. As discussed in the 2016 World Development Report (World Bank 2016), progress in these areas—combined with “analog complements,” that is, a favorable business environment, strong human capital, and good governance—can enable and accelerate development returns.

This digital economy diagnostic was carried out by a multidisciplinary World Bank Group team in close collaboration with a ministerial working group, led by the Cabinet Office. More than 100 stakeholders from the public and private sectors were engaged in interviews, focus groups, and workshops to derive, triangulate, and validate the findings.

In summary, this analysis finds that Zambia has made significant strides on its path to digital transformation over the past few years. Progress is particularly evident in digital infrastructure, digital financial services, and digital platforms, while more significant gaps remain in digital skills and digital entrepreneurship.

With respect to digital infrastructure, all provincial centers are now linked to the fiber backbone, and the country has a state-of-the-art data center that can be leveraged for government and commercial use. International benchmarks for affordability of broadband have also been met, and the use of mobile phones has increased significantly, reaching 15.5 million mobile subscriptions in 2019, out of which 63.5 percent use broadband. The digital infrastructure foundation has thus been built to now focus on the use of the infrastructure, as well as on ensuring the reliability and security of the infrastructure that is in place. However, last mile connectivity remains a gap, preventing greater use of digital systems in more sparsely populated areas where access to services and markets is more limited, and where digital systems could help reduce transaction costs associated with serving smaller populations. The cost of connectivity also imposes a barrier to greater citizen and business take-up caused by low income levels, calling for measures to reduce connectivity costs.

Despite these remaining connectivity challenges, the take-up of digital financial services (DFS) has increased significantly since 2016. This illustrates that Zambia does not have to wait to deliver more services via mobile; a two-pronged strategy can be pursued that enables more mobile-based service delivery while steps are taken to promote greater last mile connectivity in secondary towns and rural areas.

With regard to DFS specifically, Zambia has had a strong commitment to financial inclusion over the course of the past several years. The country recognized early on that DFS can make financial inclusion less costly for financial services providers and consumers, and it was among the first set of countries to allow nonbank payment service providers. Access to financial accounts more than doubled from 21 percent in 2011 to 46 percent in 2017, and increased access to mobile money providers has been driving the bulk of this growth since 2016. The private sector clearly sees the provision of DFS as an opportunity; the DFS market now includes 10 banks, 3 mobile network operators, and 5 third-party providers, including financial technology companies. In June 2019, the national payment switch enabled the interoperability of all domestic transactions. This functionality was expected to be available for all point-of-sale and mobile money transactions by the mid-2020. This step would further increase convenience and reduce costs for citizens and businesses.

Substantial progress is also reported to have been made to digitize government salary and pension payments; some gains have been made in government-to-business and government-to-government payments; and early efforts have been made to digitize receipts from businesses and individuals. Early indications are that important results are being achieved; preliminary data from the digitization of government pay slips show that transaction costs decreased by 85 percent and several “ghost” workers were identified and removed. Similarly, when the pension authorities introduced a mobile-enabled module, contributions increased substantially.

These early results demonstrate the promise of greater use of digital payment systems in Zambia. However, several payment systems have just initiated their digitization journey, and most government payments for social cash transfers and subsidies are not yet digitized. Opportunities therefore exist to initiate or expand the digitization of such government payments for the purpose of efficiency gains and increasing the resilience of vulnerable and often unbanked populations (for example, smallholder farmers and social cash recipients). With the advancement of DFS, the need to develop adequate consumer protection measures is also pressing.

Payment systems is only one of several areas in which the Zambian government can—and is—taking steps to use digital tools to increase the efficiency of government services. With respect to digital platforms, the 7NDP sets specific targets for providing government services online, and Zambia is now among the top 10 in the least developed countries category of the E-Government Development Index published by the United Nations. The government has launched internal systems for internal government administration, and government-to-person and government-to-business services are increasingly digitized. However, interoperability between systems is often lacking, thus reducing their benefit to citizens, businesses, and government; usage and usability are not consistently monitored, and some systems suffer from a limited scale of implementation or from deterioration.
Furthermore, the ability to authenticate that people are who they say they are is fundamental to financial and public services delivery. The current identification system has several weaknesses in this regard, and the Zambian government has determined that a biometric national ID system would be the optimal approach for Zambia. Investments in a modernized ID system can result in significant fiscal returns, but it can also involve a significant fiscal outlay, thus requiring careful consideration.

To enable Zambia to make greater use of digital technologies as a transformation tool, individuals, businesses, and government must also have the requisite digital skills. This is an area in which Zambia has made less progress. The 7NDP Implementation Plan aims to have information and communications technologies (ICT) mainstreamed in schools, and the new competency-based national curriculum has made ICT a compulsory subject. In practice, however, most schools are not connected to the internet, they do not have adequate access to devices, and teachers have limited knowledge of how to use ICT in teaching and learning. Furthermore, the quality of general education is of serious concern; for example, fewer than one-third of learners pass their grade 12 examination.

Zambia will not realize the full benefits of digital transformation—nor will it meet its 7NDP goal of facilitating “innovative technologies skills development”—unless it also ensures that learners going through the school system are equipped with foundational numeracy and literacy skills. However, there is still room to better leverage digital tools for teacher training and access to up-to-date educational materials, as well as for education policy planning and monitoring and evaluation. With regard to government capacity in digital skills, important gaps remain to ensure the ability across ministries and government offices to systematically develop, maintain, and use digital systems.

The requisite digital and entrepreneurial skills are also needed to advance digital entrepreneurship; it is digital entrepreneurs who will derive innovative solutions to public and private sector challenges that can be resolved through the application of technology. Zambia has seen an increase in the registration of ICT-related firms between 2016 and 2019, and entrepreneurs are initiating innovative digital solutions in a wide array of sectors, including financial services, education, tourism, and agriculture. Although a handful of entrepreneurs are now delivering solutions at scale, most digital enterprises in Zambia are at the very initial stages of development.

Zambia’s Global Entrepreneurship Index scores in Startup Skills, Technology Absorption, and Risk Capital are very low, and entrepreneurial confidence is declining. Concerns about these four areas were also expressed repeatedly in the consultations for the diagnostic. Zambia is, however, fortunate to have a range of nascent private entrepreneurship initiatives that, coupled with increasing corporate interest, can lend themselves to public-private partnerships that make public funds stretch further. The public-private dialogue during the diagnostic process also indicated recognition of the challenge associated with regulating digital innovation and the importance of engaging in continued dialogue to ensure that regulators provide clarity and strike the difficult balance between enabling innovation and ensuring that citizens are protected.

Surprisingly, a relatively large proportion of start-ups focus on e-commerce. This is remarkable given the significant obstacles to e-commerce in Zambia; only a small proportion of the population has a home address, and goods ordered online can therefore not always be efficiently and reliably delivered to the buyer. Long distances and high logistics costs also affect the viability of both domestic and cross-border trade. Considerable improvements in addressing and logistics will therefore be needed before e-commerce significantly benefits Zambia. The government has recognized this obstacle and has recently embarked on the development of a new national logistics strategy.

All in all, Zambia has made important strides in initiating a digital transformation process, but there is still a long way to go. As was acknowledged by H.E. President Lungu in a speech to the National Assembly in September 2019, Zambia’s fiscal space is limited, and there is a need to “achieve economic stability, sustainable growth and development, within the spirit of ‘doing more with less.’”

The authors recommend that the government of Zambia develop a digital transformation strategy with a dual focus on meeting the 7NDP targets and improving the country’s fiscal space. This recommendation is closely aligned with the “doing more with less” mantra introduced by H.E. President Lungu, and it emphasizes the use of digital technology to improve (1) public sector efficiency and effectiveness, (2) private sector productivity, and (3) accountability across both the public and private sectors.

Against this background, this report suggests that the digital transformation strategy include four strategic themes (figure ES.1): (1) promoting greater use of digital technologies in the economy, (2) reducing government transaction costs and reducing the cost of doing business through digitally optimized government systems, (3) improving the adoption of innovative digital solutions by enabling entrepreneurship, and (4) leveraging data and digital systems to improve sector-specific outcomes in secondary towns and rural areas.

Promoting greater use of digital technologies in the economy. Enhanced broadband usage alone contributes significantly to growth and poverty reduction. Additionally, initiatives undertaken under this theme are foundational to greater adoption of digital technologies by citizens, businesses, and government. The probability of success
of initiatives launched under the other strategic themes will thus be limited without progress under this theme. Priority activities suggested under this theme include (1) streamlining compliance costs for connectivity providers; (2) strengthening government capacity in cybersecurity, data privacy, and consumer protection; (3) developing a road map and implementation plan for the rollout of digital ID that carefully considers the costs and benefits of the vast array of design options; and (4) partnering with the private sector to map and fill the digital skills needs for government to successfully design and implement priority digital transformation activities.

Reducing government transaction costs and the cost of doing business through digitally optimized government systems. Initiatives undertaken under this theme will have the most immediate and direct budgetary impact while also promoting private sector activity without much additional fiscal outlay. Priority activities suggested under this theme include (1) developing a government-wide implementation approach to advancing and scaling up digitization of major government payment flows (such as social cash, fertilizer subsidies, school fees, taxes, customs, and licenses), and (2) optimizing and scaling up the e-border management, e-licenses, and public e-procurement systems.

Improving adoption of innovative digital solutions by enabling entrepreneurship. Initiatives undertaken under this theme will ensure that the private sector has the capacity to develop innovative solutions to resolve public and private sector challenges. Priority activities suggested under this theme include (1) conducting a regulatory review assessing how tax, labor, and other pertinent regulations affect enterprises at the start-up stage, and developing a regulatory sandbox for digital innovation that provides digital entrepreneurs with a clearer mechanism for navigating regulatory requirements for innovative products and services; and (2) developing a start-up strategy that includes attention to technology entrepreneurship and that leverages the competency and resources of the Ministries of Higher Education and Commerce, Trade and Industry as well as the private sector and the continental entrepreneurship ecosystem.

Leveraging data and digital systems to improve sector-specific outcomes in secondary towns and rural areas. Initiatives undertaken under this theme would focus on the digital transformation of a sector (such as agriculture, education, or health) with the purpose of increasing the effectiveness of public service delivery or increasing productivity and reducing vulnerability. This theme will necessarily draw upon the other three themes, and should be planned spatially to ensure economies of scale and thus increased attractiveness for private sector participation.

While this report provides a suggested prioritization of digital transformation activities, it is recommended that the government create a Digital Transformation Steering Committee to lead the articulation of the digital transformation strategy and implementation matrix. Given that this agenda cannot be achieved by one ministry alone, the committee should have representation from multiple ministries. Relatedly, a dedicated public-private Digital Transformation Advisory Council may be advisable to ensure that the expertise of nongovernmental actors is leveraged in the articulation of the strategy and implementation matrix and to optimize the likelihood that the private sector buys into, and therefore contributes to, implementation.
Promote greater use of digital technologies in the economy.

- Streamline compliance costs for connectivity providers, and develop a framework for **PPP investments** in last mile connectivity
- Strengthen the institutional capacity of government to **protect consumers, data, and critical digital infrastructure**
- Develop a detailed implementation road map for the modernization of the ID system, and implement the same
- Map data and skills needs to support evidence-based policy planning; integrate data collection, accessibility, and analysis into digital government systems planning, and partner with the private sector to implement

Reduce government transaction costs and the cost of doing business through digitally optimized systems

- Develop a government-wide implementation approach to **digitize major government payment flows** (social cash, fertilizer subsidies, school fees, tax, customs, and licenses)
- Optimize and scale the **e-border management, e-licenses, and public e-procurement systems**
- Enable data sharing and compatibility between core government systems starting with enforcing interoperability standards and publishing the API road map

Improve adoption of innovative solutions by enabling digital entrepreneurship.

- Conduct a **regulatory review** related to start-ups and develop a regulatory sandbox for digital innovation
- Develop a **start-up strategy**, including explicit attention to technology entrepreneurship
- **Invest in PPPs** to seed and scale up programs that build start-up skills, provide startup financing, and link entrepreneurs to regional markets

Leverage data and digital systems to improve sector-specific outcomes in secondary towns and rural areas

- Identify two to three priority **sectors for transformation**, agriculture, education, and health
- Based on current national strategies derive priority challenges to address, engage the digital entrepreneurship community to identify innovative digital transformation solutions that work, and partner with the private sector to replicate and scale them.
- **Plan spatially** such that economies of scale are achieved, using an integrated approach that takes into account the connectivity, skills, and systems required

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<td><strong>REDUCED DEVELOPMENT INEQUALITY</strong></td>
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<td>- Map data and skills needs to support evidence-based policy planning; integrate data collection, accessibility, and analysis into digital government systems planning, and partner with the private sector to implement</td>
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<td>2 Reduce government transaction costs and the cost of doing business through digitally optimized systems</td>
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<td><strong>CONDUICIVE GOVERNANCE</strong></td>
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<td>- Develop a government-wide implementation approach to <strong>digitize major government payment flows</strong> (social cash, fertilizer subsidies, school fees, tax, customs, and licenses)</td>
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<td><strong>MACRO TARGET</strong></td>
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<td>- Optimize and scale the <strong>e-border management, e-licenses, and public e-procurement systems</strong></td>
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<td><strong>IMPROVED FISCAL SPACE</strong></td>
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Note: 7NDP = 7th National Development Plan; API = application programming interface; PPP = public-private partnership.

**REFERENCES**


Digital Financial Services

Definition and Importance of Digital Financial Services

Digital financial services (DFS) can be defined as the broad range of financial services accessed and delivered through digital channels, including payments, credit, savings, remittances, and insurance. In this context, the term “digital channels” refers to the internet, mobile phones (both smartphones and digital feature phones), automated teller machines (ATMs), point-of-sale (POS) terminals, near field communication–enabled devices, chips, electronically enabled cards, biometric devices, tablets, phablets, and any other digital system. DFS models usually use agents and the networks of other third-party intermediaries to improve accessibility and lower the overall service delivery cost (AFI 2016a). DFS is expanding financial inclusion through digital access to and use of formal financial services by excluded and underserved populations, both globally and in Zambia. To be viable, such services should be suited to the customers’ needs and delivered responsibly, and at a cost both affordable to customers and sustainable for providers (Lauer and Lyman 2015). (See appendix D.)

Digital technologies can improve the delivery of financial services (for example, payments, savings, credit, and insurance products) and contribute to a deeper, more efficient, and more inclusive financial sector. DFS enables individuals, private businesses, and the government to access financial services more efficiently and conveniently. With greater financial inclusion, individuals are enabled to better manage household financial well-being, invest in education and nutrition, and save and borrow to launch and grow businesses—all of which contribute to poverty reduction and economic growth. According to the Group of 20 high-level principles for DFS (GPFI 2016), more than 2 billion adults globally do not have access to
formal financial services, thereby excluding them from opportunities to improve their livelihoods. DFS offer an important opportunity to close this gap in financial inclusion by providing affordable ways for the financially excluded and underserved groups (the majority of whom are women, youth, and populations living in rural areas) to save, make payments, access credit, and buy insurance. DFS are able to reach more people now that nearly 50 percent of people in the developing world already own a mobile phone (World Bank Group 2014).

The 2017 Global Findex data reflect the continued evolution of financial inclusion and the recent progress that has been driven by digital payments, government policies, and a new generation of financial services accessed through mobile phones and the internet. The power of financial technology to expand access to and use of accounts is demonstrated most persuasively in Sub-Saharan Africa, where 21 percent of adults now have a mobile money account—nearly twice the share in 2014 and easily the highest of any region in the world. The Findex emphasizes that owning an account is an important first step toward financial inclusion, but to fully benefit from having an account, people need to be able to use it in safe and convenient ways. It also underlines that digital technology alone is not enough to increase financial inclusion. Ensuring that people benefit from DFS requires a well-developed payments system, good physical infrastructure, appropriate regulations, and robust consumer protection safeguards. Financial services also need to be tailored to the needs of disadvantaged groups such as women, poor people, and first-time users of financial services who may have low literacy and numeracy skills (Demirgüç-Kunt et al. 2018).

Although the causal relationship between financial inclusion and household welfare remains a matter of debate, significant evidence supports a positive link (Aron 2018; CGAP 2019). The most notable evidence shows that access to mobile money helped female-headed households increase consumption by 18.5 percent and enabled women to switch from relying on subsistence farming into starting small businesses as their main occupation, while also reducing their reliance on multiple part-time jobs (Suri and Jack 2016). Another notable study from Bangladesh reports a 7 percent increase in consumption among rural households and migrants from these households who start using electronic remittances after receiving training and hands-on help to use the service (Lee et al. 2018).

DFS are, however, not without risks, such as overindebtedness and higher exposure to cybercrimes. Moreover, less literate and illiterate individuals would still need to depend on help from others to be able to use DFS, thereby limiting their use and increasing risks of fraud. Hence, to maximize the benefits of DFS, service providers and regulators would need to build their institutional capacity to adequately address these risks.

Widely available, well-designed DFS that meet appropriate customer protection standards can play a transformational role in Zambia’s socioeconomic development. Several key government documents indicate the government’s commitment to promoting financial sector development, financial inclusion, and DFS:

- The National Financial Sector Development Policy 2017 (Republic of Zambia, Ministry of Finance 2017a) provides a framework for the development of a stable, resilient, competitive, innovative, and inclusive financial sector that contributes to broad-based wealth creation and sustainable economic development. It recognizes the role of the national payment system in helping accelerate the country’s transition from cash to digital payments.
- The National Financial Inclusion Strategy 2017–22 (NFIS) (Republic of Zambia, Ministry of Finance 2017b) aims to achieve universal access to and usage of a broad range of quality and affordable financial services that meet the needs of individuals and enterprises. It sets out to increase the formal financial inclusion of adults from 38 percent in 2015 to 70 percent by 2022. The NFIS includes “improved outreach and adoption of DFS” as one of the key drivers for reaching these targets and has a dedicated working group on delivery channels and digital payments.
- The National Payment System Vision and Strategy 2018–2022 (Bank of Zambia 2018a) outlines framework payment systems that are inclusive, affordable, appropriate, efficient, secure, and interoperable. It aims to achieve this goal through a clear regulatory framework, a cyber security monitoring system, an increase in access points and interoperable retail payment systems, digitized government payments, safer and more efficient remittance services, and promotion of DFS through increased sensitization. It also recognizes the emergence of priority areas such as financial inclusion, cybersecurity, and consumer protection.

The government has also made several global commitments related to DFS:

- Under the Alliance for Financial Inclusion’s (AFI)’s Sochi Accord Fintech for Financial Inclusion (AFI 2018), the Bank of Zambia has committed to develop a fintech policy by 2020 jointly with the Zambia Information and Communication Technology Authority to promote financial inclusion, including for women.
- The financial technology (fintech) policy commitment builds on Zambia’s commitment to the 2016 Denarau Action Plan on Women Financial Inclusion (AFI 2016b) under the AFI’s Maya Declaration, according to which the target is to halve the gender gap at a national level by 2022.
Access to financial accounts and the use of formal financial services has rapidly increased over the past few years, driven by several key regulatory and market developments. Access to financial accounts by the population older than age 15 more than doubled from 2011 to 2017, with increased access to mobile money providers driving the bulk of the growth since 2015. Supply-side data suggest access is likely to have substantially increased in 2018, again driven by mobile money. The market has developed rapidly, with exponential growth in the customer base of mobile money providers and their partnerships with banks and fintechs to enable the introduction of new DFS products. The Bank of Zambia’s regulatory actions have enabled market development and thereby access and use of DFS. This section presents key elements of these developments and discusses some of the main challenges that remain.

ACCESS TO AND USE OF DIGITAL FINANCIAL SERVICES

The rapid increase in mobile money accounts has been a major contributor to expanding financial access and usage in Zambia. According to the Global Findex, the proportion of the population older than age 15 with financial accounts (both financial institution and mobile money accounts) increased from 21 percent in 2011 to 46 percent in 2017; the primary driver of growth was an increase in access to mobile money accounts—from 12 percent in 2014 to 28 percent in 2017 (figure 6.1). Increased access to mobile money accounts also seems to be driving increased usage of financial services. According to the Global Findex 2017, 39 percent of the surveyed population reported having made or received digital payments, compared with 29 percent in 2014.

There is, however, a persistent gender gap as well as a rural-urban divide for overall financial access and usage. While Findex reports 52 percent of surveyed males owned an account in 2017, only 40 percent of surveyed females owned one, and only 41 percent of the surveyed rural population. The access gap is narrower for mobile money; 26 percent of surveyed females compared with 30 percent of surveyed males, and 26 percent of the surveyed rural population compared with 28 percent of the entire surveyed population. The gap is also reflected in usage: 35 percent of surveyed women report having made or received digital payments in 2017 compared with 43 percent of men, and only 34 percent of the rural population compared with 39 percent of the surveyed population.

Supply-side data indicate that the trend of increasing financial access may have accelerated and that the use of DFS is increasing. The number of active DFS accounts, defined as accounts that have been used to conduct at least one transaction during a 90-day period, rose from 2.3 million in 2017 to 4.3 million in 2018, an 89 percent increase (UNCDF-MM4P and Bank of Zambia 2019).

Although not all of this information corresponds to an increase in financial inclusion, given that many customers have multiple mobile accounts, it is likely to have made a significant contribution. The volume of mobile money transactions and POS transactions increased substantially in the three year period from 2016 to 2018 (386 percent and 268 percent, respectively) while the volume of ATM transactions has decreased (4 percent) (Bank of Zambia, n.d.).

Zambia’s levels of financial inclusion are high relative to Sub-Saharan Africa and income-group averages, but its levels are lower than three out of the four benchmark countries. According to the Global Findex 2017, Zambia had a higher level of account ownership than the average for low-income countries and Sub-Saharan Africa. The comparison with select countries presents a mixed picture. The levels of account ownership in Zambia are comparable to that in Côte d’Ivoire, but lower than those in Ghana, Kenya, and Rwanda (figure 6.2).
MARTK DEVELOPMENT

The DFS market has expanded rapidly since 2016, although the number of providers has remained steady. UNCDF’s State of the Digital Financial Services Market in Zambia, 2018, reports 18 providers of DFS, comprising 10 banks, 3 mobile network operators, and 5 third-party providers including fintechs. Figure 6.3 shows trends in key market development indicators. Partnerships between banks and nonbank financial service providers, fintechs, and real-sector companies (utilities, agribusinesses) are accelerating, which is leading to the growth of new products and services. Financial service providers are exploring digital innovations and partnerships, such as mobile banking applications, bank agent distribution channels, and bank-to-wallet links, to reduce reliance on physical branch services.

**FIGURE 6.2:**
ACCOUNT OWNERSHIP, BENCHMARKED COUNTRIES, 2017

<table>
<thead>
<tr>
<th>Country</th>
<th>Age 15 and older</th>
<th>Female</th>
<th>Rural</th>
<th>Poorest 40 percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coté d’Ivoire</td>
<td>41</td>
<td>38</td>
<td>37</td>
<td>24</td>
</tr>
<tr>
<td>Ghana</td>
<td>58</td>
<td>43</td>
<td>48</td>
<td>34</td>
</tr>
<tr>
<td>Kenya</td>
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</tr>
<tr>
<td>Zambia</td>
<td>46</td>
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<td>41</td>
<td>31</td>
</tr>
<tr>
<td>SSR</td>
<td>43</td>
<td>37</td>
<td>39</td>
<td>35</td>
</tr>
<tr>
<td>Low Income</td>
<td>35</td>
<td>30</td>
<td>32</td>
<td>26</td>
</tr>
</tbody>
</table>

Source: Global Findex 2017
Note: SSA = Sub-Saharan Africa.

**FIGURE 6.3:**
DFS MARKET TRENDS

Note: DFS = digital financial services.

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25. The 10 financial service providers (banks and microfinance institutions) identified by the report as offering DFS include Atlas Mara, Ecobank, FINCA, First National Bank, Investrust Bank, UBA, and Zanaco. The Bank of Zambia’s website lists 18 banks, 35 microfinance institutions, and 8 leasing and finance companies as registered financial service providers (UNCDF-MM4P and Bank of Zambia 2019).

26. The report team calculated the indicators based on responses provided by providers participating in the survey. In 2018, 13 providers, including all three mobile money providers, the bank with the largest outreach, and the two largest third-party providers, participated in the survey.
MOBILE MONEY

Mobile network operators have the majority market share of active DFS customers, and mobile money transactions dominate the use of DFS. Zambia has three mobile money providers (MTN, Airtel, and Zamtel), which together accounted for 88 percent of active DFS customers in 2018 (UNCDF-MM4P and Bank of Zambia 2019). MTN and Airtel, which have the largest market shares, are 2 of the 62 mobile money deployments globally that claim 1 million or more active accounts. Mobile money transactions account for 83 percent of the market share of the combined transaction volume of mobile money, ATM, and POS transactions.27

Agents continue to play a key role; the agent network has grown rapidly and new models are emerging. Although the share of over-the-counter transactions at agent locations has declined, they still contribute 45 percent of the value of transactions, as compared with users conducting person-to-person transfers from their own mobile devices or wallets (UNCDF-MM4P and Bank of Zambia 2019). This creates a challenge for agent liquidity, a key barrier reported for expanding DFS into rural areas. However, as figure 6.3 shows, the number of active agents more than doubled in 2018 compared with 2017. Although, agent exclusivity is banned in Zambia, in practice, most agents only serve one service provider, primarily one of the mobile network operators. However, a notable development is the rapid growth of the agent network serving Kazang, a fintech platform that provides access to the two main mobile money providers and some banks. This business model may be the beginning of a shared agent network that could support and promote better agent viability, especially in rural areas.

The uptake of second-generation DFS products, defined to include digital credit, savings, insurance, pay-as-you-go services, and merchant payments, has been rapid.28 UNCDF reports that active users of second-generation products grew from 1.3 million in December 2017 to 2.3 million in December 2018, while use of second-generation products grew 72 percent by volume and 43 percent by value during the same period. This demonstrates the role DFS can play in helping Zambia achieve broader financial inclusion beyond digital payments.

Digital credit is the second-generation product that has had the most uptake. MTN and Airtel have partnered with JUMO, a technology company with operations in multiple African markets and operating in Zambia with a nonbank financial institution license, and banking partners (Barclays and Standard Chartered) to offer small, short-term loans through mobile money accounts. With approximately 1.2 million active customers, these nano-loans primarily target short-term consumer credit for the mass market. The digital savings product Kasaka, launched by MTN in partnership with JUMO and Barclays, is reported to have gained 10,000 savers in the first quarter after its launch.29

Merchant payments and mobile money bulk payments are available but not yet widely used. Both MTN and Airtel have merchant wallets but usage is still relatively low.20 Insurance underwriters and mobile network operators are also partnering to facilitate premium payments via mobile money, although this arrangement is not a digital insurance product.25 The use of mobile money bulk payments by businesses, development and humanitarian organizations,26 and government cash transfers is a potential opportunity to drive the adoption of DFS, strengthen investment in distribution networks, and promote overall financial inclusion.

MOBILE AND AGENT BANKING

Several banks have already digitized their services to varying degrees. Some banks, including FINCA, Stanbic, Investrust, FNB, and Atlas Mara, are offering mobile banking with smartphone applications available to customers for account management, although most of these target the already banked population. Zanaco is an exception—it launched its own mobile wallet (a transactional account with light know-your-customer procedures) and aims to extend services to the lower-income segment and into rural areas with its own agent network. Others are creating bilateral partnerships with mobile network operators to link bank accounts with mobile wallets for push-pull functionality (that is, bank-to-wallet), which enables customers to get cash out at bank ATMs without cards, and cash-in or out at mobile money agents.33

Agency banking has yet to become widespread.34 Agency banking could offer a range of banking services beyond cash-in–cash-out services provided by mobile money agents in locations that remain un- or underserved and where brick-and-mortar branches are not viable. The recent rapid growth in the number of mobile money agents offers potential for some of them to become banking agents. Furthermore, the increased potential for profitability can attract new entities to this business segment.

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27. During this period, the volume of POS transactions has also shown remarkable growth, at 268 percent, while the volume of ATM transactions has declined 4 percent and check transactions have declined by 33 percent. By transaction value, ATM transactions accounted for 56 percent of the combined value, while mobile money accounted for 27 percent and POS transactions the rest. See Bank of Zambia: Payment Systems Statistics website (https://www.the Bank of Zambia.zm/payment-systems-statistics.html).

28. First-generation products include cash-in, cash-out, person-to-person transfers, bill and utility payments, airtime top-ups, and bulk payments.


30. Bulk payments are estimated to be 15 percent of total value of DFS transactions, and merchant payments are estimated to be 8 percent (UNCDF-MM4P and Bank of Zambia 2019).

31. Examples include paying premiums via Airtel Money for the MLIFE policy and via MTN Airtime for MTN Zambia Life after Life coverage.

32. One example is the UNHCR and UNCDF digital payments pilot in the Meheba refugee settlement in 2018.

33. Airtel Money allows bankzwallet with Barclays Bank and Standard Charter, while MTN is integrated with Access Bank and Barclays Bank. The Zamtel Kwacha mobile wallet is not integrated with any bank.

34. Based on stakeholder interviews, only Finca, Madison Finance, and Zanaco have to date launched agent banking services.
INTERNATIONAL REMITTANCES
The emergence of innovative money transfer operators and new partnerships are benefiting Zambia. Although Zambia is not as dependent on international remittances as most of its neighboring countries, these developments are important given that the average cost of international remittances in the region is among the highest in the world. For example, Mukuru operates regionally and enables mobile transfers and cash-in–cash-out through stores and has partnered with Zoono in Zambia.35 Traditional money transfer operators and mobile network operators are also beginning to partner up to enable customers to receive transfers into their mobile wallets (for example, MTN and WorldRemit), and other bilateral partnerships are emerging (such as MTN Zambia and EcoCash Zimbabwe). These innovations could result in lower prices and better choices for consumers (World Bank Group 2018).

FINTECH
Zambia’s ecosystem of fintech start-ups is growing. A 2018 survey by UNCDF counted 25 fintechs operating in the market (UNCDF-MM4P and Bank of Zambia 2019). These fintechs are developing innovative products and services for digital credit and insurance, pay-as-you-go energy, payments and transfers, and the aggregation of payments. Fintechs are anticipated to expand partnerships with other digital enterprises to support solutions in health care, agritech, group savings, and small and medium enterprise (SME) business. For example, one fintech (ZPOS) has developed a platform to support SME transactions, which can be used to create financial profiles for financial service providers to use when assessing creditworthiness and extending financing. As discussed in chapter 5 on Digital Entrepreneurship, fintech is one of the most active subsectors for the tech start-up community in Zambia.

Enabling Environment for Digital Financial Services
The Bank of Zambia has played a key role in facilitating the growth of DFS. A key action taken is publication of the National Payment Systems Directives on Electronic Money Issuance, issued in 2015 and updated in 2018 (Bank of Zambia 2018b). These directives allow for providers other than commercial banks to offer services issuing e-money and distributing or redeeming e-money through a distributor or agent. These directives also allow simpler know-your-customer requirements for e-money accounts.

Full operationalization of the national payment switch (NPS) is expected to play a key role in improving the enabling environment for the growth of DFS. The NPS project, managed by the Zambia Electronic Clearing House (ZECH) and overseen by the Bank of Zambia, achieved a key milestone in June 2019 when it enabled the interoperability of all domestic ATM transactions. However, the interoperability of POS and mobile money transactions has been delayed and is now expected to be achieved by June 2020.

Key elements of the credit infrastructure necessary for the growth of digital credit for individuals and enterprises have been established. These include the Moveable Property (Security Interest) Act No. 3 of 2016, a web-based collateral registry for moveable assets in 2017, and the enactment of the Credit Reporting Act of 2018. Banks and microfinance institutions also report to a functioning private credit bureau (TransUnion). However, the functionality of both the moveable collateral registry and the credit reporting system is still limited and needs to be strengthened for the full benefits to DFS to be realized. A key enhancement to the credit reporting system that can benefit DFS users is the feeding of utility bill payment data into the credit information system.

Key actions being taken to strengthen financial consumer protection and financial capability would also strengthen the enabling environment for DFS. The three financial sector regulators—the Bank of Zambia, the Pensions and Insurance Authority, and the Securities and Exchange Commission—and the Competition and Consumer Protection Commission (CCPC) signed a memorandum of understanding in early 2019 to align their approaches to financial consumer protection. In a measure to protect consumers from fees deemed unwarranted, the Bank of Zambia also issued a directive in 2018 banning several bank charges and fees. Last, the effective adoption of the Second National Strategy on Financial Education, launched in December 2019, can also play a key role in the enabling environment for DFS.36

Multiple other initiatives are also contributing to the development of an enabling environment for the DFS sector through established forums for dialogue, knowledge sharing, and the promotion of professional standards. The Payment Association of Zambia, formed in early 2019, is expected to serve as a payment system industry association with a mandate derived from the National Payment Systems Act of 2007 and with authorization from the Bank of Zambia. The NFIS working group on delivery channels and digital payments, which includes a broader set of actors, also provides opportunities to advance issues relevant to the DFS sector. Last, market research, professional development, and industry development initiatives by key entities such as Financial Sector Deepening Zambia (FSD Zambia) and UNCDF’s Mobile Money for the Poor program are making critical contributions to strengthening the enabling environment for DFS in Zambia (Chikumbi 2019).

Constraints to Digital Financial Services Development
Several factors constrain the growth of DFS in Zambia. Many of them are discussed in this report, including limited mobile and broadband connectivity (chapter 2 on Digital Infrastructure), the absence of a digital identity (chapter 5 on Digital Platforms), and limited digital skills (chapter 3 on Digital Skills). Additionally, the following five areas need improvements for Zambia to fully benefit from the potential of digital financial services.

35 See Mukuru website (https://www.mukuru.com/send-money-to-zambia/).
LIMITED SHARED AGENT NETWORK
As previously discussed, most DFS agents in Zambia are franchises of a single service provider. This situation results in low profitability for the agents and an insufficient number of agents with sufficient cash liquidity. Furthermore, in many markets where mobile money is thriving, agents offer mobile money services as one of several business lines (for example, corner shop, agriculture supplier, pharmacy, hardware store), which improves the viability of an agent’s business and expands liquidity sources. Such agents also have an incentive to accept digital payments, which can contribute to addressing the challenge of limited opportunity to use e-money without cashing out. The emergence of platforms such as Kazang seems to be starting to address the issue of limited shared agent network-agent viability. Further enhancements in increasing the ease of business registration by the Patents and Companies Registration Agency can also contribute to a larger number of rural businesses becoming agents.

ABSENCE OF FULL DFS INTEROPERABILITY
The lack of full interoperability is an obstacle to developing the market for mobile money, creating diverse services, and providing incentives for uptake. Users are not able to make payments directly to mobile wallets of other mobile network operators, though off-net transfers are available, which means customers can send from their mobile wallet to a nonaccount holder and the recipient receives a voucher or token that they take to an agent for cashing out. This may be a valuable service for customers, especially those with lower digital literacy, but it incurs higher fees than direct wallet-to-wallet transfers, does little to promote continued use of DFS, and perpetuates agent liquidity challenges, especially in rural areas. It may also contribute to unused accounts (70 percent of accounts were inactive in 2018) because customers may open accounts when receiving money from senders, and then let the accounts go dormant. Bulk payments are also constrained, because payers are required to establish multiple service provider contracts for recipients using different mobile money services.

LACK OF IMPROVEMENTS IN CREDIT INFRASTRUCTURE
Improvements in the credit infrastructure, a key requirement for scaling up digitally enabled credit, have not been fully leveraged. The enactment of the Moveable Property Act, the establishment of the web-based collateral registry, and the enactment of the Credit Reporting Act are key reforms and infrastructure improvements that can strengthen the ability of DFS providers to provide credit digitally to individuals and enterprises. However, use of the moveable collateral registry and credit reporting system remains much below potential. Lenders are not registering most of the moveable asset-based loans and are not always searching the registry for prior registrations—both omissions increase their credit risk. Reporting to the credit bureau by bank and nonbank financial institutions is not yet complete, and reporting of nonfinancial transactions (utility payments) has yet to start.

[37] The Bank of Zambia’s National Financial Inclusion Strategy 2017–2022 compares access per 10,000 adults for branches, ATMs, and mobile money agents across nine countries, and in 2016 Zambia had lower overall density of financial access points than several neighboring countries, with financial access points being highly concentrated in Lusaka and a few other densely populated urban centers along the main trade corridors. See http://www.the Bank of Zambia.zm/National-Financial-Inclusion-Strategy-2017-2022.pdf.
LIMITED DIGITIZATION OF MAJOR GOVERNMENT PAYMENT FLOWS

The majority of government receipts from businesses (business-to-government, or B2G) and individuals (person-to-government, or P2G) are not digitized and are still transacted in cash, checks, and vouchers. The Government Payment Flows Diagnostic published by FSD Zambia and UNCDF (2017) reports that only 14 percent of B2G payments and 4 percent of P2G payments were made digitally in 2016. The government has largely digitized its salary and pension payments and tax payments to the Zambia Revenue Authority since then. However, several major government payment flows, such as school fee payments, agricultural subsidy payments, and social cash transfer payments, that reach a much larger number of people are yet to be fully digitized. School fee payments are estimated to be about 44 percent of volume of all P2G payments; agricultural subsidy payments reach about a million farmers; and Social Cash Transfers reach about a half million beneficiaries. Digitization of government payments has lagged because of the absence of a government-wide approach, inadequate interoperability of data platforms and financial management systems, lack of full interoperability of the national payment system, and change management challenges.

Digitization of government payments has also been hampered by government procurement processes, which typically select one or two payment service providers for a given program, resulting in limited service provider choices for payment recipients, and thus reduced convenience for the target beneficiaries.38

NASCENT FINANCIAL CONSUMER PROTECTION

The early stage of development of the financial consumer protection regime and financial capability challenges of DFS consumers are also key constraints to increasing the use of DFS. The ability of consumers to trust a financial product is critical to its adoption and use, and a well-functioning financial consumer protection regime plays a key role in building this trust. Nonetheless, the financial consumer protection regime in Zambia is in the early stage of development notwithstanding some of the key actions that have been taken recently (see the section titled “Enabling Environment for Digital Financial Services”). In addition, the World Bank’s 2016 financial capability survey identifies several capability limitations that can be critical constraints in the ability to choose from among DFS products offered in the market (Zottel, Joubert, and Khoury 2017).

38. FSD Zambia and UNCDF-MM4P (2017) highlight the need to review and improve the government’s tendering process for digital payments.
Recommendations

DFS are expected to continue growing in Zambia, driven by technology-oriented financial institutions and companies and increasing access to mobile phones and telecommunication infrastructure. However, the pace and robustness of this growth could be enhanced by public policy measures that provide incentives for innovation and competition among service providers while strengthening consumer empowerment. This section recommends three high-level actions to be taken by the government and one high-level action to be taken by private sector stakeholders.

ACHIEVE FULL INTEROPERABILITY OF PAYMENTS AND PROVIDE INCENTIVES FOR ITS USE BY THE MARKET

The Bank of Zambia and ZECH should prioritize the achievement of full interoperability of payments. As discussed previously, the first phase of the NPS project successfully achieved interoperability of ATM payments by linking nearly all banks to the national payment switch. However, the interoperability of POS payments and mobile money payments, originally envisaged to be completed by December 2019, has been delayed. The Bank of Zambia and ZECH should take all necessary actions to ensure that this is achieved at the earliest. As was previously mentioned, these two channels already have the largest volumes of transactions, and achievement of full interoperability can therefore play a key role in driving the growth of DFS usage.

In parallel to ZECH and the Bank of Zambia’s efforts toward achieving full interoperability in the payment infrastructure, the government should provide incentives to the private sector to fully use this key infrastructure component. Interoperability across payment services offered by banks and nonbanks, including mobile money providers, is expected to result in consumer benefits and cost savings for service providers, thereby driving the market to use the infrastructure. However, use may still be slow because of an insufficient number of aggregators building use cases. Fintechs can play a key role in this space; therefore, the government needs to assess factors that may be constraining their growth and take corrective actions as a priority.

The fintech working group, constituted by the Bank of Zambia, is a step in the right direction and should be strengthened. However, the government may want to consider expanding its mandate and capability by including experts from outside the Bank of Zambia (including key government ministries, agencies, and the private sector). The working group should review barriers for fintechs to ensure the business environment is conducive to the entry to new companies (for example, through tax policy and incentives), the framework is clear for compliance and certification of financial platforms, the regulatory guidance is clear, and there is a clear pathway for fintechs to link into the NPS. Broad ecosystem recommendations and guidance on best practices are available in the International Monetary Fund–World Bank Group Bali Fintech Agenda (appendix E).

ACCELERATE DIGITIZATION OF MAJOR GOVERNMENT PAYMENT FLOWS

The government may want to consider developing a government-wide policy and approach to digitizing government payments. This effort can provide high-level impetus for digitizing payments and ensuring a coordinated effort across various ministries and agencies. This effort can build on analytical work already undertaken, such as the Government Payments Flow Diagnostic, but may need to be supported by further analytical work. Key elements of such an approach need to include the use of financial accounts instead of vouchers: providing payers and recipients with a choice among multiple service providers, including mobile money providers; and adequate investments in building user awareness and understanding.

A major opportunity to digitize government payments is the flagship Fertilizer Input Subsidy Program. This program provides agricultural input subsidies worth more than $135 million to more than 1 million farmers every year. Although the Ministry of Agriculture, in collaboration with Smart Zambia, launched a digitization effort in 2017, this endeavor has been significantly rolled back because of initial implementation challenges. Well-designed digitization of the Fertilizer Input Subsidy Program can use financial accounts, including mobile accounts, to transfer the payments and can crowd in DFS providers to develop and offer value added services such as digital savings, digital credit, and digital insurance services tailored to the needs of the farmers.

Another major government payments flow to consider digitizing is the Social Cash Transfer program. The Social Cash Transfer program, which reaches about half a million beneficiaries and makes up 21 percent of volume of all government-to-people (G2P) payments, remains a fully cash-based program. Although the remote locations of some recipients would not allow full digitization of these payments, partial digitization is definitely possible and desirable for beneficiaries located in areas with good access to DFS and where the beneficiaries are willing to receive digital payments. As with agricultural input subsidies, digitizing social transfers can contribute to the increased use of DFS and benefits to beneficiaries by reducing leakage and costs of access. The digitization of payment of livelihoods grants under the government’s $65 million GEWEL project, supported by the World Bank, provides valuable lessons on how digitizing G2P payments can be undertaken in a manner that enables the use of DFS and that is beneficial to target beneficiaries.
STRENGTHEN CONSUMER EMPOWERMENT OF DFS USERS

The consumer protection capabilities of financial sector regulators, particularly of the Bank of Zambia, need to be substantially strengthened to ensure that appropriate consumer protection measures are in place and effectively practiced. The memorandum of understanding between the financial sector regulators and the CCPC in 2019 is a step in the right direction. However, much more needs to be done to strengthen the consumer protection capabilities of the regulators, who are expected to take the lead on consumer protection aspects relating to financial services. Key DFS-related consumer protection issues that need regulatory attention include developing consumer protection rules, standards, and practices for digital payments (including transparency of fees charged and clear recourse mechanisms for delays in receiving funds from failed transactions); protecting DFS consumer data; and ensuring that costs of default by financial consumers are proportionate to the costs to service providers.

The rapid growth of digital credit in recent years calls for priority attention to this DFS product. Although digital loans provide a valuable service to users, they also carry risks of overindebtedness and disproportionate costs of default (Izaguirre and Mazer 2018). The current requirement that all credit defaults, including digital credit and irrespective of size, be reported and remain on the credit record of the borrower for seven years should be reviewed. Many of these borrowers are accessing formal financial services for the first time, and this requirement has the potential to adversely affect financial inclusion (by constraining future access to credit to these borrowers, particularly from the banking sector).

Finally, new data collection methodologies, such as artificial intelligence–based algorithms to create financial profiles from digital transactions, raise issues of customer data privacy rights that should be included in a consumer protection framework. This data may be collected without the knowledge of the data owner and can have negative implications for the individual’s ability to obtain loans or insurance, or to control whether it is being reported to the credit bureau and how to dispute negative information. Regulations on data governance will need to ensure consumer data privacy rights, including for digital savings and credit. By reviewing and adapting relevant policies, the Bank of Zambia can increase the availability of responsible DFS, and improve consumer welfare.

Finally, the government needs to ensure that national financial education efforts cover DFS adequately and needs to monitor the efficacy of these efforts. As DFS become more widespread, it is important to ensure that consumer capability to effectively use DFS (to shop and compare DFS provided by different providers, be informed and avoid falling victim to scams, and avoid excessive use) is built through financial education initiatives beyond just sensitization campaigns. A good example of a cost-effective approach is the initiative recently launched by Financial Sector Deepening Zambia and Zazu that delivers financial literacy courses via mobile phones through unstructured supplementary data service, short message service, and voice. Efforts to promote consumer capability must be carried out in collaboration with private and nonprofit stakeholders.

The interest earned on the mobile money trust account in which customer mobile money balances are held could be a potential source of funding to support financial capability initiatives, provided that a carefully researched action plan in consultation with DFS stakeholders demonstrates feasibility.

39 Guidance on client protection principles and responsible finance can be referenced at the SMART Campaign website (http://smartcampaign.org/).
BUILD STRATEGIC CAPACITY IN THE PRIVATE SECTOR TO INNOVATE AND DELIVER DFS AT SCALE

Private sector stakeholders need to collaborate to drive collective action around fair competition, market intelligence, and a common vision for growing DFS. Building a collaborative network across the ecosystem provides opportunities for participants to clarify regulatory constraints, gaps, and overlaps (for example, digital transaction limits, a tiered know-your-customer framework); encourages business partnerships for experimentation; fosters a level playing field; takes collective action; and supports a common vision for creating a robust DFS ecosystem. Building such a network requires regular dialogue between DFS stakeholders, and may need new structures to pool resources for activities of collective benefit (for example, market research, shared agent network). Cosponsored efforts to provide capacity building and knowledge sharing to sector stakeholders should be cost effective and create professional standards.

Strengthening private sector capacity for data analytics and skills development for consumer-centric product innovation and market expansion is critical. The availability of up-to-date and relevant market data facilitates the analysis and understanding of customer needs that allow for customer segmentation and tailored DFS. To continue to drive the adoption and use of DFS, service providers will need to use such market data to develop different use cases such as school fee payments, agriculture value chain payments, merchant payments, and credit to micro, small, and medium enterprises as a way to create value for the service provider and customer. Access to relevant data is essential and there are several public sources in Zambia, but it is also critical to enhance capacity and skills within the private sector to make use of the data for decision-making purposes. DFS increasingly relies on having a skilled workforce, particularly in the area of data science (refer to chapter 3 on Digital Skills for more information about professional development). Box 6.1 shows that cutting-edge innovations are already happening in Zambia.

Strategic capacity building in the private sector is critical for identifying opportunities for partnerships within and outside the financial services industry and for operationalizing them. One example is financial sector providers partnering with fintechs to adopt platform-based business models (for example, digital credit). Such models offer the opportunity for the diversification of revenue streams for service providers. Fintechs in Zambia are beginning to offer relevant technology-driven ideas and solutions; however, the financial sector has not yet fully embraced such business model innovations, and most segments still struggle to transform their traditional banking operations. A critical part of the ecosystem that can benefit from improved strategic capacity in the private sector is shared distribution channels. The last mile delivery channel is critical for extending mobile money and agent banking to rural areas, but building a robust and reliable agent network requires considerable investment. A shared agent network solution among DFS providers, including third-party aggregators, could be more economical and less operationally challenging to financial institutions, allowing them to focus on their core business. A shared solution has the potential to lower costs of agent networks, increase efficiency, ease liquidity constraints for agents, and improve service delivery to customers. A shared, fully interoperable agent network could be explored among multiple DFS providers.

BOX 6.1: USING BLOCKCHAIN-BASED DIGITAL FINANCIAL SERVICES FOR AGribusiness PAYMENTS TO FARMERS

A key challenge for most farmers in Zambia is that their produce is sold in cash, leaving them without an electronic transaction record. This means they do not have an electronic payment history, which can be critical in getting access to savings, credit, and insurance services from formal financial service providers.

A partnership between AB InBev, the parent company of Zambian Breweries; BanQu, a blockchain-based platform; and Musika, a local nonprofit market development company is aiming to change this. The platform creates a decentralized digital ledger of each transaction for the produce bought on the platform, and instead of cash, each farmer can choose to receive a digital payment through either Airtel or MTN, the two largest mobile money providers in Zambia. The platform also tracks the volume of goods delivered, the quality of those goods, and the price paid. Both the agribusiness and farmers benefit from increased traceability and transparency in their supply chain.

In 2018, about 2,000 cassava farmers in Zambia began selling their harvests to Zambian Breweries through the platform. The company added a mark-up to the payment due to farmers to offset the cost of withdrawing cash from the mobile money agents. In 2019, all farmer payments in Zambia are expected to be made through the platform, and building on the Zambian experience, InBev is currently expanding its digital payment initiative to Uganda and India.

Source: https://www.fastcompany.com/90328012/this-digital-ledger-helps-small-farmers-get-a-fair-deal; and personal communication with Katie Hoard, Global Director, Agricultural Innovation and Sustainability, AB-InBev.

40. Financial Sector Deepening Zambia’s FinScope surveys, United Nations Capital Development Framework’s financial service provider surveys, the Bank of Zambia’s Credit Market Monitoring initiative, and Zambia Information and Communication Technology Authority’s use of information and communication technology services surveys.
41. IFC (2017, 27) describes the Data Science Analytic Framework for Business Intelligence, and key skills: performance reporting and traditional business intelligence are enabled by descriptive and diagnostic data analytics, while further information optimization can be achieved using predictive and prescriptive data analytics.
42. Agent interoperability involves agents using a single float for multiple e-money providers, and ideally a single POS. Agent interoperability is still nascent but working successfully in a few markets, such as Tanzania.

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**DIGITAL ECONOMY DIAGNOSTIC REPORT**
REFERENCES


