2024

ISLAMIC MICROFINANCE FINTECH SOLUTIONS FOR THE LEAST DEVELOPED COUNTRIES: AFGHANISTAN, BANGLADESH, AND DJIBOUTI

Cover Photo: UNDP Afghanistan

ABOUT THIS REPORT

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AAAA	Addis Ababa Action Agenda
ADDS	Agence Djiboutienne de Développement Social
ADF	Agricultural Development Fund (Afghanistan)
ADP	Annual Development Plan (Bangladesh)
AfDB	African Development Bank
AFN	Afghan Afghani
AI	Artificial Intelligence
AMA	Afghanistan Microfinance Association
APS	Afghanistan Payment System
ATM	Automatic Teller Machine
BB	Bangladesh Bank
BCA	Bank Company Act 1 (Bangladesh)
BCD	Banque Centrale de Djibouti
BDT	Bangladesh Taka
BTRC	Bangladesh Telecommunication Regulatory Commission
CAGR	Compound Annual Growth Rate
CDD	Customer Due Diligence
CNEC	Caisse Nationale d›Epargne et de Crédit (Djibouti)
CPEC	Caisses Populaires d'Épargne et de Crédit (Djibouti)
COMCEC	The Standing Committee for Economic and Commercial Cooperation
CSB	Central Sharia Board
CSBIB	Central Sharia Board for Islamic Banking and Finance (Bangladesh)
DAB	Da Afghanistan Bank
DFS	Digital Financial Services
DJF	Djiboutian Franc
EMI	Electronic Money Institutions
ESG	Environmental, Social, and Governance
EVI	Economic Vulnerability Index
FGD	Focus Group Discussion
FSD	Fonds Social de Développement (Djibouti)
FSP	Financial Service Provider
GCC	Gulf Cooperation Council
GDP	Gross Domestic Products
GIFIIP	Global Islamic Finance and Impact Investing Platform
GIFT	Global Islamic Financial Technology
GNI	Gross National Income
GSM	Global System for Mobile
HAI	Human Assets Index
IBBL	Islami Bank Bangladesh Limited
ICT	Information and Communication Technology
ICTI	Information and Communication Technology Development Index
IFAD	International Fund for Agricultural Development
IFDI	Islamic Finance Development Index
IGAD	Intergovernmental Authority on Development
IICPSD	Istanbul International Center for Private Sector in Development
IMFI	Islamic Microfinance Institutions
IMPU	Islamic Microfinance Pilot Unit (Djibouti)

INGO	International Non-Governmental Organizations
IsDB **IsDBI**	Islamic Development Bank Islamic Development Bank Institute
IsMF	Islamic Microfintech
IsMFI	Islamic Microfinance Institution
ITU	International Telecommunication Union
KYC	Know Your Customer
LDC	Least Developed Country
LNG	Liquified Natural Gas
MENI **MFIs**	Minister in Charge of the Digital Economy and Innovation (Djibouti) Microfinance Institutions
MFS	Mobile Financial Services
MMO	Mobile Money Operators
MRA	Microcredit Regulatory Authority (Bangladesh)
MSMEs	Micro, Small, and Medium-Sized Enterprises
NGO	Non-Governmental Organizations
OIC	Organisation of Islamic Cooperation
P2P	Peer to Peer
PI	Payment Institutions
POS	Point of Sale
QR codes	Quick Response Codes
RCIBCI	Research Center for Islamic Banking and Contemporary Issues (Afghanistan)
RDS	Rural Development Scheme
ROSCAs	The Rotating Savings and Credit Associations
RSA	Regulatory and Supervisory Authorities
SDF	Social Development Fund
SDG	Sustainable Development Goal
SESRIC	The Statistical, Economic and Social Research and Training Centre for Islamic Countries
SGF	Sharia Governance Framework
SIM card	Subscriber Identity Module card
SME	Small Medium Enterprise
TVC	Television Commercial
UN	United Nations
UNCDF	UN Capital Development Fund
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
US$	United States Dollars
UTAUT	Unified Theory of Acceptance and Use of Technology
VGS **WEF**	Village Saving Group World Economic Forum
WFP	World Food Programme
WMSME	Women Micro, Small, and Medium-Sized Enterprises

Executive Summary

The Organization of Islamic Cooperation (OIC) comprises twenty-one members that fall under the Least Developed Countries (LDCs) category. These members are faced with intricate challenges that lie at the heart of complicated economic and social issues. These difficulties stem from escalating human conflicts and are compounded by the fragmentation of the global economy, the impacts of climate change, and the ongoing repercussions of the COVID-19 pandemic. The issues have resulted in a slowdown and reversed growth and development progress, including those essentials in the Sustainable Development Goals (SDGs). A significant

Photo UNDP Afghanistan

drop in their combined GDP, 10 per cent lower than before the pandemic, caused an increase in poverty with millions of people living in extreme poverty. Getting these countries back on track to improve living conditions and financing the SDGs will require a significant amount of funding. To fill the financial gap for SDGs in these countries, it will require $372 per person annually, which will cost 45% of their GDP. A steady flow of funds is necessary to increase household income and reduce poverty, and financial inclusion plays a crucial role in achieving this. Moreover, financial exclusion poses a major hindrance to income opportunities and economic welfare, particularly for the poor, women, youth, and MSMEs. Growing evidence shows that financial inclusion reduces the rate of poverty and inequality through an increased rate of individual contribution in managing consumption, getting bank loans, and even promoting the innovation and expansion of businesses. Therefore, the United Nations Sustainable Development Goals for 2030 place a significant emphasis on financial inclusion as a key enabler for broader developmental objectives.

This report examines the present state of economic development, financial inclusion and literacy, the impact of Islamic microfinance, and the market served by

In Bangladesh, **fintech** has enabled the country to **deliver financial services** to **100M citizens** in 2023

Islamic fintech in selected three OIC LDCs—**Afghanistan**, **Bangladesh**, and **Djibouti**. Considering the current inclusion rates ranging from 11 percent to 28 percent in these countries, the report underscores the importance of extensive awareness programs in attaining development goals, especially in the financial sectors. Financial inclusion serves as a litmus test for the efficacy of economic empowerment, where a low inclusion rate is indicative of an underdeveloped economy and weak financial systems. In **Djibouti**, only 26 percent of the adult population have a bank account by 2022, in **Afghanistan** a mere 12 percent of adults had accounts in financial institutions in 2021, contrasting with **Bangladesh**'s commendable 53 percent rate in the same year. In **Bangladesh**, the emergence of financial technology (fintech) has enabled the country to deliver financial services with nearly 100 million citizens accessing the services in the past years. Fintech intervention, as showcased in **Bangladesh**, can provide the solution to reduce financial exclusion. Fintech can function as an effective financial innovation to enhance the efficiency of the financial system and eventually reduce poverty in the LDCs. Considering the circumstances in these three countries, the primary factor contributing to financial exclusion is the geographical distance between the population and urban centers. The alternate consideration of this study is the significant number of Muslim populations in these three countries, as religious beliefs may be identified as collaborative causes for voluntary financial exclusion. Consequently, Islamic Microfinance comes with embedded significant potential for these countries.

The connection between financial inclusion and development is closely tied to the inclusivity of financial services offered by microfinance institutions (MFIs). **Bangladesh**, with a long history of Islamic microfinance institutions, shows its indispensability for poverty alleviation and economic development. MFIs effectively served 45 million underserved individuals in **Bangladesh**. In spite of this, the potential of microfinance institutions remains mostly untapped in terms of development due to a weak regulatory environment, human capital, and low financial literacy. Similarly, these challenges hinder the outstanding role of Islamic microfinance institutions in **Afghanistan** and **Djibouti**.

The **projected increase in revenues** over the next decade is a growth of sixfold from **$245B to $1.5T**

The growth of fintech services is becoming increasingly prominent on a global scale, particularly in developing nations. The projected increase in revenues over the next decade is substantial, with a growth of sixfold from $245 billion to $1.5 trillion. According to economic analysis, the expansion of fintech is projected to be the primary driver of growth in the financial industry as a whole. While Asia is leading the way in fintech growth among developing markets, the African continent is also making significant progress in this field. A significant portion of transactions in Africa, around 10 percent, are conducted through fintech, resulting in a revenue of roughly $4-6 billion. Within a span of just one year, from 2021 to 2022, the total count of tech startups on the continent witnessed a remarkable threefold increase, reaching a staggering 5,200. Notably, half of these startups belong to the fintech sector.

The Islamic Fintech Solution is expected to enhance the accessibility of Islamic microfinance. Similar to the widely recognized role of conventional fintech in enhancing financial inclusion, it offers personalized choices and cost-effective financial services, greatly improving accessibility and convenience in opening bank accounts, transferring money, and making payments.

In the context of **Afghanistan**, **Bangladesh** and **Djibouti**, the fintech landscape in least developed countries presents promising opportunities despite facing regulatory challenges, limited funding, and a shortage of skills. By employing different approaches, the Islamic microfinance industry in these countries has the opportunity to significantly enhance financial inclusion. By prioritizing customer satisfaction and operational efficiency, this industry can also achieve a competitive edge.

This report aims to provide a comprehensive overview by examining the challenges and opportunities for the Islamic microfinance sector and bringing in a multitude of best practices and solutions into the specific contexts of three selected countries. With identifying impediments such as low income, awareness gaps, ethical aversions to financial services, remoteness, weak institutional infrastructure, and unsupportive regulatory systems, the report proposes a digital financial ecosystem anchored in Islamic microfinance principles and cutting-edge technologies.

Considering the facts and findings, the report proposes a set of recommendations for policy enhancement, financial literacy improvement, bolstering the Islamic microfinance sector and nurturing the development of Islamic fintech. The summary of main recommendations can be seen in the diagram below

1. Awareness and Financial Literacy

- Launch awareness campaigns and financial literacy programs
- Establish formal financial literacy policies fo easy access to education

2. Tailored Strategies and Regulatory Support

- Develop tailored strategies and reinforce legal and regulatory infrastructure
- Foster sector-specific growth initiatives for Islamic Fintech

3. Islamic Microfinance Sector Strenghening

- Introduce innovative funding solutions and diversify product offerings
- Encourage investment in skill development within the microfinance sector

4. Islamic Fintech Development

- Simplify taxation, reinforce intellectual property protection and pioritize data privacy
- Stimulate investment and skill development in Islamic Fintech

5. Incentives and Strategic Support

- Aligh incentives for the Islamic Microfinance sector and provide strategic support

6. Embracing Digital Solutions in Islamic Finance

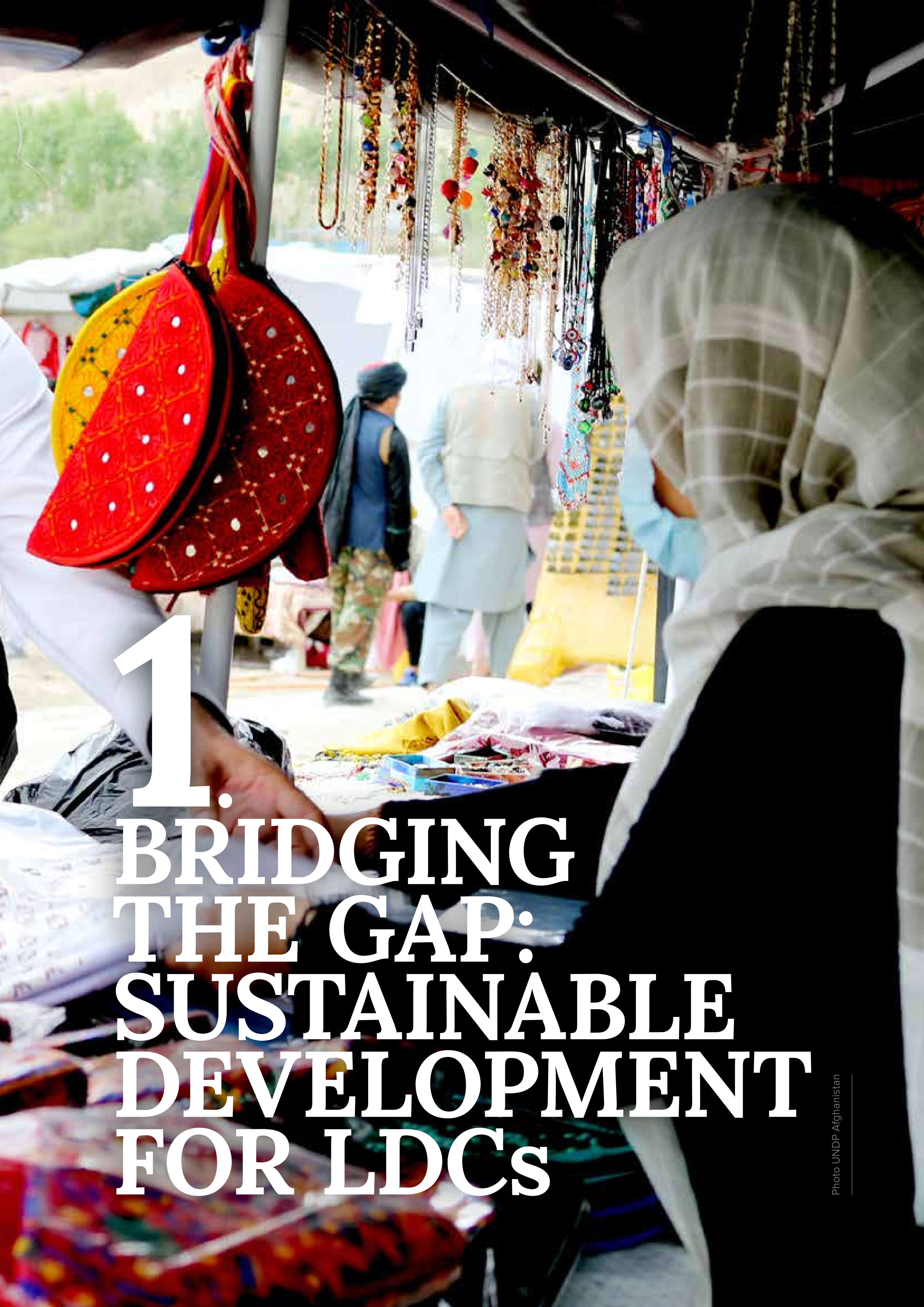
- Encourage integration of digital solutions within Islamic finance for broader financial access

7. Digital Citizen Identification System

- Implement a digital citizen identification system for streamlined KYC activities

8. Regulatory Sandboxes and Digital Infrastructure

- Advocate for regulatory sandboxes and establish partnerships with telecom providers
- Introduce agent services for cash transactions and create central bank-level data repositories



1. BRIDGING THE GAP: SUSTAINABLE DEVELOPMENT FOR LDCs

Photo UNDP Afghanistan

1. Bridging the Gap: Sustainable Development for LDCs

Increasing financial inclusion is considered one of the key targets of the Sustainable Development Goals (SDGs), as inclusive finance is a fundamental component of economic sustainability. The scale of funding, financing, and technical support required to achieve the ambitious 2030 Agenda for Sustainable Development is far beyond the scope of individual governments and multilateral development agencies. Private sector financing, capabilities, and know-how must be mobilized within the global partnership for sustainable development to fill this funding gap and operationalize the policies and actions outlined in the Addis Ababa Action Agenda (AAAA).[1] As one of the important possible sources, Islamic finance's untapped potential could be explored as a strong and non-traditional source of financing for the SDGs besides conventional finance. Its developmental virtues such as enhanced financial stability, financial inclusion, reducing the vulnerability of the poor and shared prosperity, are aligned with the SDGs as well as the impact investing agenda. Within its philosophical worldview, Islamic economics essentializes social justice and socio-economic development. With a human-centric development-oriented paradigm, Islamic finance is envisaged to play a crucial role in mobilizing resources and supplying the necessary funding to succeed in meeting sustainable development targets in many communities and particularly in the OIC member countries which are classified as LDCs (hereinafter referred to as OIC-LCDs).

The LDCs, in general, need support to build the capacity for SDGs achievement. According to current projections by the United Nations (UN), the estimated financing required for the implementation and monitoring of their programs is around US$5 - 7 trillion per year between 2023 and 2030.[2] LDCs are low-income countries (GNI per capita of $1,135 or less in 2022) confronting severe structural impediments to sustainable development. The OIC-LDCs, especially those in Sub-Saharan Africa, are particularly less equipped to develop their domestic economies and ensure a sustainable and adequate standard of living for their populations. They are highly vulnerable to economic and environmental shocks and have low levels of human assets. Despite the efforts, financial exclusion is still a major issue in all LDCs, where the advantages of the digital age are not equally distributed. There are still significant access gaps between men and women, poorer and wealthier households, and rural and urban populations.[3] The impact of enhanced financial inclusion on economic development has always been an open debate in developing countries. However, this debate has been neglected in the LDCs, where little or no evidence supports this relationship. Empirical evidence demonstrates how inclusive financial markets lower discriminatory reasons such as poverty and inequality by enabling people to manage their spending, get bank loans, and purchase insurance showing the enormous positive influence of financial inclusion on financial sustainability. Many LDCs record extremely high exclusion rates compared to other nations.[4]

1 UN (2015), Addis Ababa Action Agenda of the Third International Conference on Financing for Development, https://sustainabledevelopment.un.org/content/documents/2051AAAA_Outcome.pdf

2 The Sustainable Development Agenda - United Nations Sustainable Development

3 Demirgüç-Kunt, A., Klapper, L., Singer, D., Ansar, S., & Hess, J. (2018). "Global findex database 2017 measuring financial inclusion and the fintech revolution", World Bank.

4 Abubakar, A. M., Daneji, B. A., Muhammed, A. I., & Chekene, I. A. B. (2020). "Driving faster financial inclusion in developing nations". Technology Audit and Production Reserves. https://doi.org/10.15587/2706-5448.2020.201120; Le, T. T., Dang, N. D. L., Nguyen, T. D. T., Vu, T. S., & Tran, M. D. (2019). "Determinants of financial inclusion, comparative study of Asian countries. Asian Economic and Financial Review".

1.1 Understanding the Least Developed Countries

LDCs represent the underprivileged segment of the global community and grapple with persistent challenges that hinder their progress toward sustainable development and graduation from their status. Currently, there are 45[5] countries classified as LDCs. Despite representing around 14 percent of the global population, LDCs contribute only about 1 percent to global trade and less than 1.3 percent to the world's Gross Domestic Product (GDP).[6] Among the LDCs, there are 21 nations which also have membership of OIC. This implies that a significant portion of the OIC members are facing critical development challenges and socioeconomic vulnerabilities. According to the UNCTAD report in 2023, the harsh reality is that with 1.1 billion people, or 14 percent of the world population, LDCs account for more than half of the world's extremely poor (those living on less than US$1.9 a day). Yet, their economies account for only 1.3 percent of the world's total. Moreover, hunger remains alarmingly high. In 2021, an estimated 768 million people globally were undernourished, of whom 34 percent were from LDCs. More than 377 million people are suffering from poverty in the OIC Region. Restrictive trade measures, sustained shortages and high prices could further worsen food availability and access in LDCs, where food insecurity is already rampant (more than 50 percent), with the prevalence being higher among women than men. Four LDCs (**Malawi**, **Mozambique**, **Niger**, and **South Sudan**) faced famine-like conditions in 2021 due to a confluence of armed conflict, economic decline and weather extremes, and one OIC-LDC (**Afghanistan**) has been facing a humanitarian catastrophe since the end of 2021 due to its political upheavals.

LDCs as a group experienced a sharp slowdown in economic growth in 2020 and 2021. In

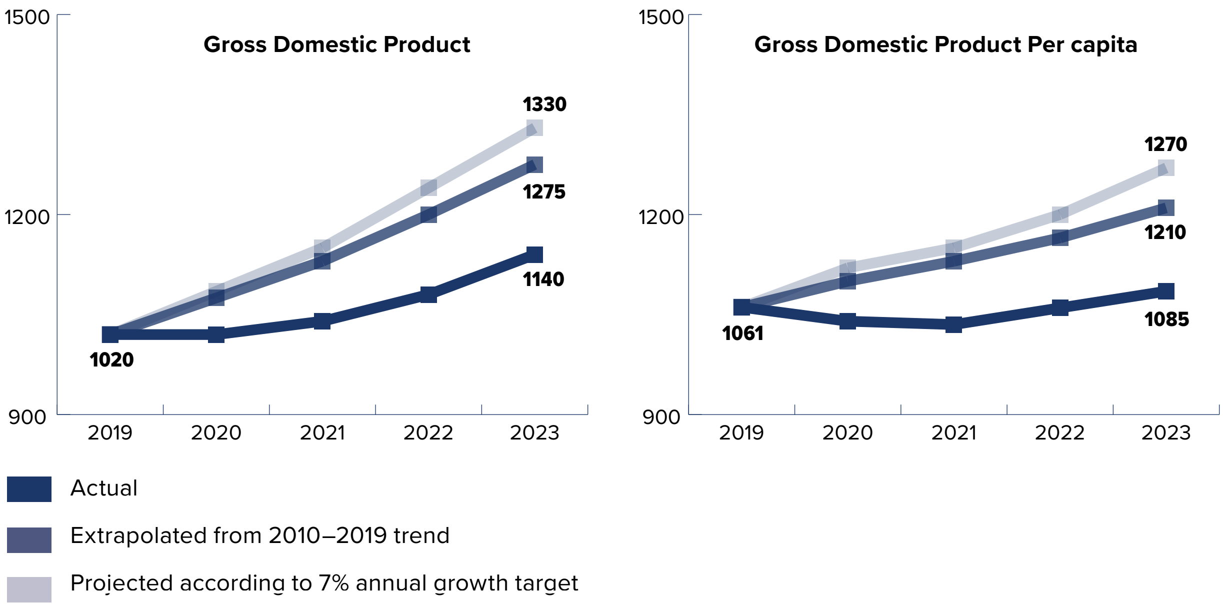


Figure 1

Trends in GDP and GDP per capita of LDCs, 2020–2023

Source: The Least Developed Countries Report (UNCTAD, 2023)

5 These are: **Afghanistan**, Angola, **Bangladesh**, Benin, Burkina Faso, Burundi, Cambodia, the Central African Republic, Chad, the Comoros, the Democratic Republic of the Congo, **Djibouti**, Eritrea, Ethiopia, the Gambia, Guinea, Guinea-Bissau, Haiti, Kiribati, the Lao People's Democratic Republic, Lesotho, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Myanmar, Nepal, Niger, Rwanda, Sao Tome and Principe, Senegal, Sierra Leone, Solomon Islands, Somalia, South Sudan, Sudan, Timor-Leste, Togo, Tuvalu, Uganda, United Republic of Tanzania, Yemen and Zambia.

6 United Nations. Department of Economic and Social Affairs., Handbook on the Least Developed Country Category: Inclusion, Graduation and Special Support Measures (2021), accessed 19 December 2023, https://doi.org/10.18356/9789210010443.

2023, their combined GDP was 10 percent lower than the level it would have reached if the pre-pandemic (2010–2019) growth trend had been sustained. GDP per capita would have been 16 percent higher in 2023 than current estimates if growth had reached the 7 percent target set in LDC programmes of action. According to SESRIC Report (2023), OIC-LDCs will not be able to achieve the target of 7% GDP growth per annum unless their development pace accelerates notably. Between 2000 and 2021, these countries experienced an average annual real GDP per capita growth rate of 2.9%, outpacing the global average of 1.7% but still falling short of the goal. With the growth rate less than half the targeted 7%, OIC-LDCs must intensify their efforts to reach this objective[7]. Thus, LDCs are characterized by limited productive capacities and multiple structural constraints to tackle today's poly-crisis, which can have disproportionately damaging effects on their economies and they require much effort to graduate from LDCs.

Currently, to be able to graduate from LDCs status, a country needs to fulfil either two of the three criteria mentioned below or maintain per capita income that exceeds more than twice the income graduation threshold at two consecutive triennial meetings of the UN Committee for Development Policy (CDP).

The road to graduation from the LDC status is fraught with difficulties, with the COVID-19 pandemic posing the latest hurdle. Efforts to take on these challenges call for an all-round reform of the international system, involving far-reaching and comprehensive measures. This includes coordination of LDC-related initiatives among international institutions, increased financial support, trade policy enhancement, stabilizing measures for commodity prices, and an escalated focus on climate change mitigation and persistent environmental degradation. These unified actions underline the commitment of the international community to enhance LDC's resilience and improve their socio-economic conditions, thereby supporting their gradual integration into the fabric of overall global development.

Graduation from LDC status is a significant milestone in socioeconomic development, but it does not guarantee sustained economic progress. It marks the conclusion of an initial phase, during which specific international support measures for LDCs are phased out. However, efforts towards achieving the SDGs

INCOME PER CAPITA	• **BASED ON A THREE-YEAR AVERAGE ESTIMATE OF GNI PER CAPITA, BASED ON THE WORLD BANK ATLAS METHOD** (under $992 for inclusion, above $ 1,190 for graduation as applied in the 2012 triennial review).
HUMAN ASSETS INDEX (HAI)	**BASED ON INDICATORS:** • **Nutrition:** percentage of the population undernourished • **Health:** mortality rate for children aged five years or under • **Education:** the gross secondary school enrolment ratio • **Adult literacy rate**
ECONOMIC VULNERABILITY INDEX (EVI)	**BASED ON INDICATORS:** • **Population Size** • **Remoteness** • **Merchandise export concentration** • **Share of agriculture, forestry, and fisheries in Gross Domestic Product** • **Shared of the population living in low elevated coastal zones** • **Instability of exports of goods and services** • **Victims of natural disaster** • **Instability of agricultural production**

Figure 2

Graduation Criteria of LDCs

Source: http://unohrlls.org/about-ldcs/criteria-for-ldcs/

7 SESRIC (2023), Towards the Achievement of Prioritised Sustainable Development Goals in OIC Countries 2023, https://sesricdiag.blob.core.windows.net/sesric-site-blob/files/article/859.pdf

can lead to improvements in development indicators in many LDCs, potentially surpassing the thresholds set for LDC criteria. This perspective emphasizes long-term development rather than solely meeting statistical criteria for eligibility, and requires many efforts in enhancing their productive capabilities, focusing on structural transformation, such as shifting towards higher-value-added products and sectors, upgrading technology, diversifying the economy, and boosting productivity.[8] Hence, in shaping this developmental trajectory, financial inclusion plays a critical role, functioning as a catalyst that bridges gaps in accessibility and equity, thereby fostering sustainable economic growth and promoting productive capabilities in the ever-evolving global economy.

1.2 Developmental Challenges of LDCs

LDCs are deemed highly disadvantaged in their development process due to structural, historical, and geographical reasons.[9] The key challenges faced by OIC LDCs, like other LDCs, include economic struggles, marginalization and exclusion from global trade, increasing public debt, underperforming and weak education system, vulnerability to climate-related risks, lack of access to energy that leads to insufficient productive capacities, a shortage of essential resources for progress, and stagnant economic growth. With a significant portion of OIC LDCs in sub-Saharan Africa, these countries grapple with geographical and various economic handicaps. External financial flows, development assistance, debt, human development, and poverty eradication are crucial areas needing attention.

Slow and inconsistent economic growth contributes to the widening gap between the living standards in LDCs and those in fast-growing developing countries. At the core of these challenges lies a profound lack of productive capacity, with most LDCs economies remaining predominantly agricultural and having made limited diversification into manufacturing or high-value services. Nearly 70 percent of the population is engaged in agriculture and most of the population resides in rural areas.[10] External factors such as climate change and technological advancements significantly affect agricultural outputs, directly impacting food security and economic stability. Such dependency exposes these nations to severe price volatility, undermining their trade balances and export earnings. The compounding problem of rural areas is difficult to address. The remoteness of rural regions increases the cost of providing public services such as education. Without proper education, prospects for poverty alleviation become limited. This creates a vicious cycle of illiteracy and poverty. Moreover, these challenges hinder the expansion of productive capacity, industrialization efforts, and the attraction of private capital and investment, thereby constraining their overall economic growth and integration into the global trading system. The lack of manufacturing or high-value services diversification leaves LDCs vulnerable to market fluctuations, trade shocks, and external crises. It is exemplified in the underdevelopment of stock and private bond markets in these countries, where government bonds dominate asset trading, which in turn further impedes their economic diversification efforts. The establishment of a robust market for private securities in LDCs is contingent upon the gradual expansion of the corporate sector, both in terms of the number and scale of enterprises, underscoring the interplay between financial development and economic resilience in these nations.[11]

Simultaneously, these countries endure a state of export marginalization, the share of LDC exports of goods has decreased from 1.05% in 2019 to 1.01% in 2020. Compared to global trade, with their share of global merchandise exports hovering around just 1% since 2010. [12] In terms of services, the drop is even more pronounced, with LDCs› share of global commercial services exports falling from 0.70% to 0.57% from 2019

8 UNCTAD, Acheiving the Sustainable Development Goals in the Least Developed Countries, 2018, https://unctad.org/system/files/official-document/aldc2018d4_en.pdf

9 Lunenborg, P. (2023). Least Developed Countries and their progress on the sustainable development goals (No. 183). Research Paper https://www.southcentre.int/wp-content/uploads/2023/09/RP183_LDCs-and-Their-Progress-on-the-SDGs_EN.pdf.

10 UNCTAD, 'Sustainable Agriculture and Food Security in LDCs' (May 2011).

11 UNCTAD, Acheiving the Sustainable Development Goals in the Least Developed Countries, 2018, https://unctad.org/system/files/official-document/aldc2018d4_en.pdf

12 UNCTAD, Four key challenges facing least developed countries, 2022, Four key challenges facing least developed countries | UNCTAD

AFRICA (18)		ASIA (3)
OIC Member within The Least Developed Countries (LDCs)		
Benin (2) (5)	Mauritania (1) (2)	Afghanistan (1) (2) (3) (4)
Burkina Faso (2) (3) (4) (5)	Mozambique (2) (3) (4) (5)	Bangladesh (1)
Chad (2) (3) (4) (5)	Niger (2) (3) (4)	Yemen (1) (3) (4)
Comoros (1) (2)	Sierra Leone (2) (3) (4)	
Djibouti (1)	Somalia (3) (4) (5)	
Gambia (1) (2) (3)	Sudan (3)	
Guinea (1) (2) (4) (5)	Senegal (2)	
Guinea-Bissau (2) (3) (4) (5)	Togo (2) (3)	
Mali (1) (2) (3) (4) (5)	Uganda (2) (3)	

Table 1

The List of OIC Members states within the LDC category

Source: Worlbank Data, Sesric, and World Population Review
Note:
(1) Muslim population more than 70% of total population
(2) Heavily Indebted Poor Countries (HIPC)
(3) Low-income country with a GNI per capita less than $1,035 or less
(4) HDI value less than 0.50
(5) Life expectancy at birth (years) 2022 less than 60 years old

to 2020. [13] This trade stagnation, largely due to their over-reliance on primary goods, exposes them to drastic export downturns during crises, adversely affecting employment and government revenues.[14] Consequently, these difficult circumstances make them highly vulnerable to global crises and shocks.

Concerning public debt, LDCs have also witnessed a substantial surge in their national debt, with debt service payments tripling to $33 billion between 2011 and 2019. [15] This burden corresponds to a sizeable 5% to 13% of their export values. The COVID-19 pandemic has amplified this predicament, with estimated debt repayments of $43 billion in 2022, thereby jeopardizing recovery initiatives and hampering poverty reduction and infrastructure investments.[16]

In 2020, in terms of expected years of schooling, the average children in LDCs attended schools for 2.8 years fewer compared to the global average.[17] This is compounded by the wider disparity in the learning quality tends to perform lower results in harmonized test scores (standardized tests designed to allow comparison across different countries). It suggests that although the children in LDCs attend school for fewer years, they may not acquire proficiency in core subjects and skills required in the industries. Such significant gaps in the education metrics might have far-reaching consequences and opportunity costs, hindering human capital accumulation which is critical to promote economic development in LDCs.

Health, along with education, is seen as one of the fundamental goals of development. Health and sustainable development are

13 WTO. (2021). Market Access for Products and Services of Export Interest to Least Developed Countries.

14 Least developed countries remain marginalized in global exports. (2021). UNCTAD. https://unctad.org/topic/least-developed-countries/chart-december-2021

15 Soaring debt burden jeopardizes recovery of least developed countries. (2022). UNCTAD. https://unctad.org/topic/least-developed-countries/chart-march-2022

16 UNCTAD. (2023). Trade and Development Report 2023: Growth, Debt and Climate: Realigning the Global Financial Architecture. In UNCTAD (UNCTAD/TDR/2023). United Nations Conference on Trade and Development. Retrieved February 20, 2024, from https://unctad.org/system/files/official-document/tdr2023_en.pdf

17 UNCTAD, (2020), 'Least Developed Countries Lag behind in expected years of Schooling'. Retrieved on 21 February 2024 from: https://unctad.org/topic/least-developed-countries/chart-june-2021.

closely connected. For instance, poverty, lack of education and information, and natural and human-induced disasters can all exacerbate health problems such as malnutrition, health services, illness (the problems of AIDS and Malaria), infant, child and maternal mortality. Currently, it is estimated that over 46.3% of the mortality burden in the OIC member countries is due to non-communicable diseases, mainly: cardiovascular disease, diabetes, cancer and chronic lung disease, whereas 45.6% of deaths are caused by communicable diseases. Moreover, many countries in LDCs within the OIC still suffer from high child mortality. Moreover, child mortality rates vary significantly in OIC countries. Countries like **Djibouti**, **Afghanistan**, **Somalia** and **Sudan** have high infant mortality rates, indicative of broader challenges faced by many LDCs in ensuring the health and survival of children. The condition became worse affected when an outbreak of the pandemic happened in 2020. As reported by UNCTAD, the disease spread rapidly causing the collapse of their inadequate health system infrastructure. For example, at the beginning of the pandemic, **South Sudan** had only 24 Intensive Care Units (ICUs) available for the entire population.[18] This shows how vulnerable is the healthcare system in the LDCs despite recent improvements that have been made.

Improving healthcare facilities includes basic water, sanitation, hygiene, and waste management services that play important roles in building a healthy society.[19] Despite encouraging progress in recent decades, in 2020, 665 million people in LDCs lacked access to safe drinking water services (about one-third of the global average) and 782 million lacked access to sanitation (about 22 percent of the global average).[20] Data shows that only 53 percent of total healthcare facilities have access to a safe water source.[21] Addressing these basic needs not only promotes individual health but also strengthens the overall resilience of communities, particularly in the face of public

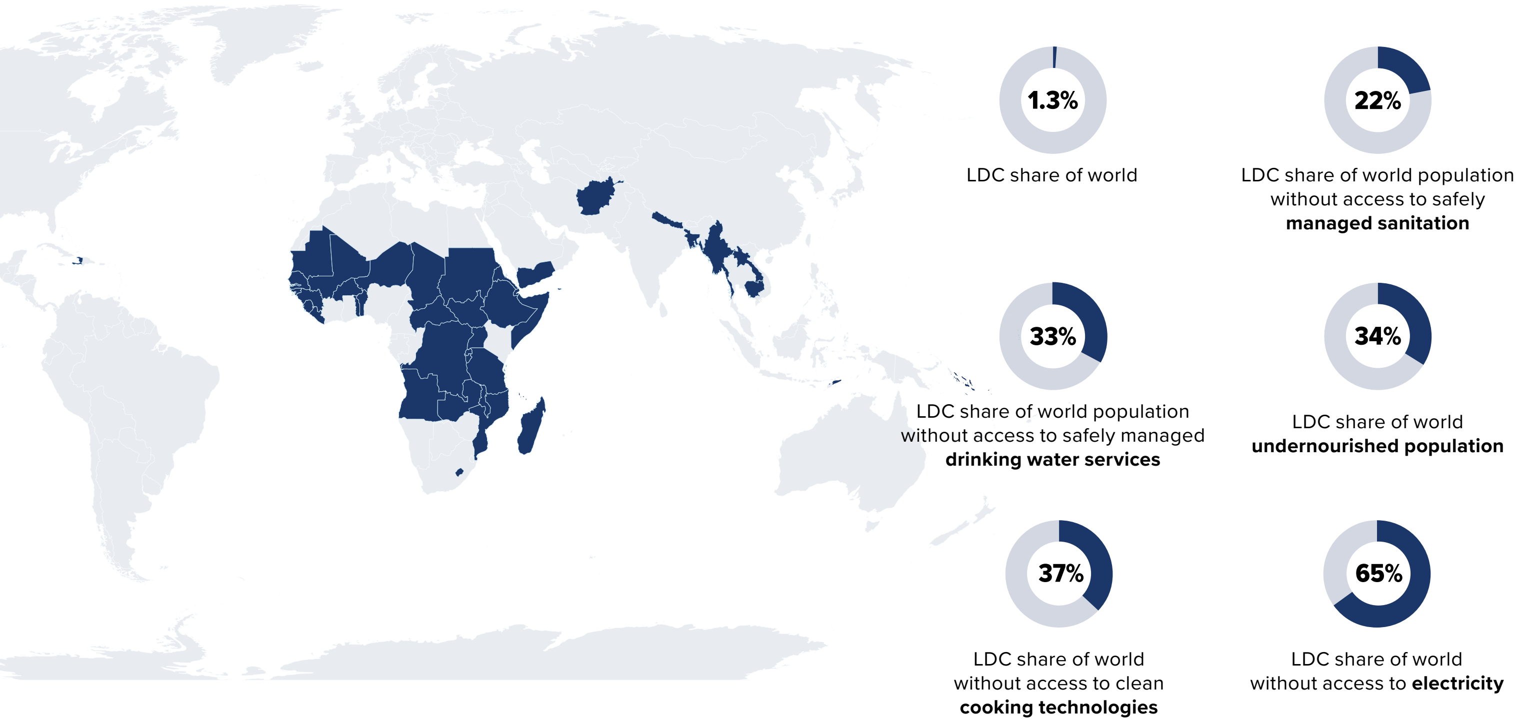


Figure 3

LDCs Snapshot

Source: UNCTAD, 2023

18 Ibid.

19 Ellish Hannah, etc. (2022), 'Achieving basic rights in health-care facilities in low-income-countries'.

20 UNCTAD, 'The Least Developed Countries Report 2023' (2023).

21 WHO, JMP, and UNICEF, (20220, '. Progress on WASH in health care facilities 2000–2021: special focus on WASH and infection prevention and control (IPC)'.

health crises like pandemics.

Addressing the economic challenges faced by OIC LDCs is critical and provides an opportunity to demonstrate the potential of Islamic finance to support sustainable development. In LDCs, where over half the population, amounting to approximately 570 million individuals, lacks access to modern energy, this deficit significantly hampers the development of essential infrastructure, constraining economic and social progress.[22]

Despite contributing just 1.1% of global CO2 emissions, LDCs are disproportionately affected by climate change, leading to a «climate apartheid» where the least contributors face the severest consequences.[23] The high vulnerability to the adverse impacts of climate change as well as natural disasters is undeniable. LDCs› geographical locations, often in regions prone to extreme weather events such as hurricanes, floods, and droughts, exacerbate these vulnerabilities. Climate change further intensifies these risks, leading to disruptions in agricultural productivity, water scarcity, loss of biodiversity, and increased frequency and severity of extreme weather phenomena. The limited resources and infrastructure in LDCs make them ill-prepared to cope with and adapt to these environmental challenges.

1.3 Global Efforts to Support LDCs towards Sustainable Development Goals

The rationale behind establishing the category of LDCs is to mobilize global support for their development endeavors, a pivotal aspect highlighted within the 2030 Agenda for Sustainable Development. This commitment is particularly emphasized in SDG 17 (Strengthen the means of implementation and revitalize the global partnership for sustainable development), underscoring the imperative to enhance the mechanisms for implementing the agenda. The achievement of the SDGs hinges significantly on a concerted international effort to provide LDCs with augmented financial and technical assistance.

LDCs' Governments encounter significant challenges in effectively managing the design and implementation of their national development strategies, leading to implications for country ownership and aid effectiveness. These challenges stem from weak technical capacities and heavy reliance on donor finance, often accompanied by policy conditionality. Consequently, aid frequently lacks alignment with country plans and budgets, negatively impacting governance and aid effectiveness.[24]

Various development strategies have been proposed to surmount these challenges, including prioritizing investments in productive capacity, including human capital development, infrastructure, energy, and health and sanitation. This also extends to strengthening social protection systems and bolstering resilience against pandemics and other shocks. Additionally, efforts should be directed towards mitigating the impacts of climate change and improving access to climate finance for LDCs. Crucially, greater commitment from international development partners is sought for supporting these initiatives, with the ultimate target of steering LDCs towards a trajectory of economic growth and resilience.

Realizing the SDGs in LDCs requires substantial financial support, as estimated by the UN to be around $5-7 trillion per year between 2023 and 2030.[25] The SDGs comprise several goals that explicitly refer to income growth, employment creation, and industrialization. The achievement of all other goals also depends on progress made on the economic front. Some SDGs are important reference points for the design of national development strategies for least-developed countries. These are SDG 1, SDG 2, SDG 7, SDG 8, SDG 9, SDG 10, SDG 13, and SDG 17.[26] LDCs have made progress in 28% of the 169 SDG targets since 2015. For the remaining 72% (121 SDG targets), LDCs have regressed, or their progress is unknown.[27]

22 UNCTAD, 'Why the Least Developed Countries Need Urgent Action' (6 March 2023) accessed 13 January 2024.

23 OHCHR. (2019, June 25). UN expert condemns failure to address impact of climate change on poverty. Retrieved February 20, 2024, from https://www.ohchr.org/en/press-releases/2019/06/un-expert-condemns-failure-address-impact-climate-change-poverty?LangID=E&NewsID=24735

24 UNCTAD, The Least Developed Countries Report 2023 (unctad.org)

25 UNCTAD, The costs of achieving the SDGs, https://unctad.org/sdg-costing/about accessed 13 January 2024.

26 UNCTAD, Acheiving the Sustainable Development Goals in the Least Developed Countries, 2018, https://unctad.org/system/files/official-document/aldc2018d4_en.pdf

27 Lunenborg, P. (2023). Least Developed Countries and their progress on the sustainable development goals (No. 183).

End poverty everywhere

Ensure access to affordable, reliable, sustainable and modern energy for all

Build resilient infrastructure, promote sustainable industrialization and foster innovation

Take urgent action to combat climate change and its impacts

End hunger, achieve food security and improved nutrition and promote sustainable agriculture

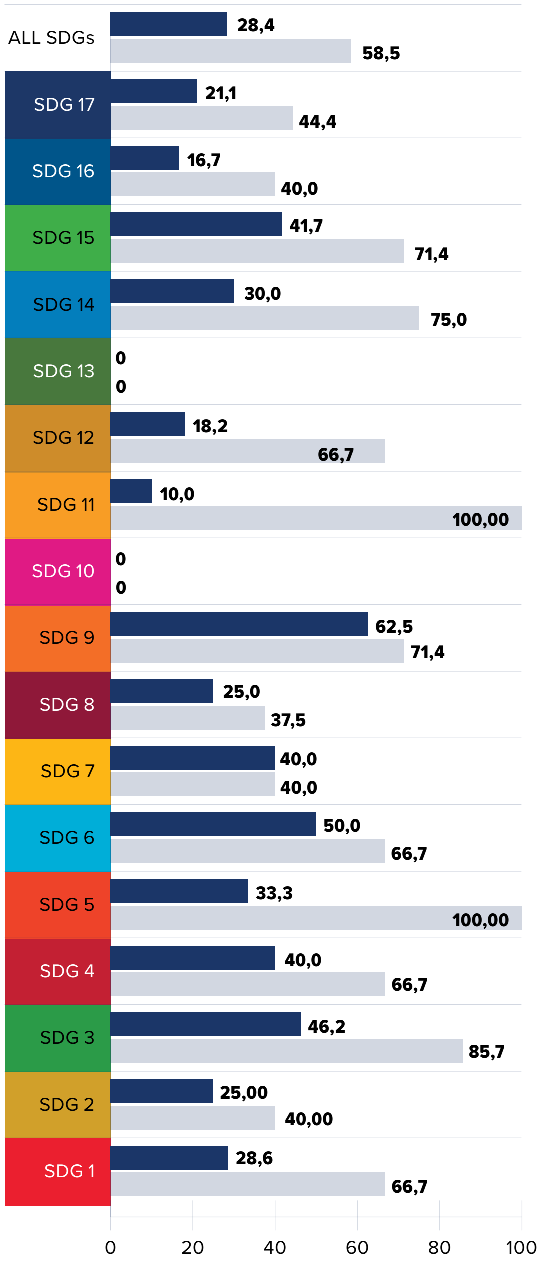
Promote sustained and sustainable economic growth, full and productive employment and decent work for all

Reduce inequality within and among countries

Strengthen the means of implementation and revitalize the global partnership for sustainable development

Figure 4

SDGs to Support the Design of National Development Strategies



Share of SDG targets where LDCs made progress (of total SDGs target within SDG)

Share of SDG targets where LDCs made progress (excluding SDG targets within SDG with insufficient data)

Figure 5

Share of SDG Targets where LDCs Made Progress since 2015

Source: South Centre, 2023*

* Lunenborg, P. (2023). Least Developed Countries and their progress on the sustainable development goals (No. 183). Research Paper. https://www.southcentre.int/wp-content/uploads/2023/09/RP183_LDCs-and-Their-Progress-on-the-SDGs_EN.pdf

To effectively pursue these goals, LDCs necessitate an international financial framework characterized by inclusivity, innovation, and tailored solutions addressing their distinct challenges. This assumes heightened significance as the international community transitions from rhetoric to tangible actions, as articulated in the Doha Programme of Action for LDCs the Decade 2022–2031. There is a growing recognition of the essential role finance and debt management play in bolstering the developmental prospects of LDCs. Various initiatives, such as the United Nations Secretary-General's SDG Stimulus for Agenda 2030 aimed at reforming multilateral development banks, are actively engaged in tackling financial challenges and augmenting the fiscal maneuverability of LDCs. These endeavors, complemented by deliberations in diverse international forums, underscore the critical importance of overcoming the prevailing obstacles confronting LDCs to safeguard the SDGs amidst the multifaceted global crises.[28]

In alignment with these efforts, the UN has convened a series of conferences dedicated to addressing the challenges confronting the LDCs and mobilizing international support for their socio-economic advancement. These conferences began in 1981 in Paris and continued with subsequent meetings in 1990 again in Paris, 2001 in Brussels, and 2011 in Istanbul. Each conference resulted in the adoption of specific programs and declarations aimed at advancing the development agenda for LDCs. The most recent conference, the Fifth United Nations Conference on the Least Developed Countries (LDC5), was held in two parts: the first part convened at United Nations Headquarters in New York on 17th March 2022, while the second part took place in Doha, Qatar, from 5th to 9th March 2023. This conference featured a critical opportunity to formulate a comprehensive new program to drive progress for LDCs.[29]

In LDCs, institutionalizing dialogue and fostering growth coalitions with the private sector are crucial components of a successful developmental state. This involves active cooperation between the government and private entities to support structural transformation. Such collaboration facilitates regular dialogue and coordination, enabling policymakers to identify constraints to productive capacity expansion and adapt regulations to promote socially and environmentally sound structural transformation. Additionally, it enhances policy transparency, predictability, and private sector understanding of regulatory measures. Governments in LDCs must closely collaborate with the private sector in designing and implementing industrial policy strategies. This entails identifying subsectors and manufacturing activities with significant growth potential and supporting market forces, entrepreneurship, and innovation. The state should facilitate transformative capital accumulation and learning, promoting the achievement of SDGs by fostering entrepreneurial search, coordinating private investment, providing incentives, and disseminating relevant information to drive innovation and economic diversification.[30]

The significant need for extensive infrastructure investment poses a considerable financial burden. While leveraging additional and upgraded economic infrastructure can accelerate GDP and export growth and lead to higher long-term public revenues, the required investment surpasses the budgetary capabilities of LDCs for the foreseeable future. Addressing the infrastructure gap in these nations heavily relies on substantially increased support from the international community. Over the medium to long term, governments should enact legislation and establish institutions to develop or enhance domestic bond and equity markets, including venture capital funds. Institutional capital raised through pension reforms can bolster these markets. Bonds offer an efficient means for governments to secure long-term financing for infrastructure projects, while capital markets and venture capital funds provide a more sustainable avenue for government borrowing compared to short-term treasury bills, particularly in terms of their impact on macroeconomic stability. For infrastructure investments involving marketable goods like electricity, governments could explore public-private partnerships (PPPs) and joint ventures.

Research Paper. https://www.southcentre.int/wp-content/uploads/2023/09/RP183_LDCs-and-Their-Progress-on-the-SDGs_EN.pdf

28 UNCTAD, The Least Developed Countries Report 2023 (unctad.org)

29 Conferences | United Nations

30 UNCTAD, The Least Developed Countries Report 2023 (unctad.org)

KEY HIGHLIGHTS

- **Increasing financial inclusion** is crucial for achieving SDGs, especially in Least Developed Countries (LDCs). Private sector financing, including Islamic finance, can play a significant role in bridging the funding gap for SDG implementation.
- **LDCs confront severe structural impediments to sustainable development,** including low income, vulnerability to economic and environmental shocks, and limited human assets.
- **The graduation process** from LDC status involves meeting specific criteria, including income thresholds and indicators related to human assets and vulnerability.
- **Graduation** from LDC status is a significant milestone but does not guarantee sustained economic progress, requiring a focus on long-term development strategies.
- The UN has set some critical **reference points in SDGs** that align with national priorities and needs, aiming to address multifaceted issues and promote sustainable development (SDG 1, SDG 2, SDG 7, SDG 8, SDG 9, SDG 10, SDG 13, and SDG 17).
- To achieve those goals, LDCs need an **international financial framework** characterized by inclusivity, innovation, and tailoring solutions that address their distinct challenges.
- **Active cooperation between the government and private entities** is necessary to foster transformative developmental changes, particularly in structural transformation.
- **Enhanced international cooperation, financial support, and tailored development strategies are crucial for supporting LDCs.**

2. ADVANCING FINANCIAL INCLUSION IN LDCS

Photo UNDP Afghanistan

2. Advancing Financial Inclusion in LDCs: Intervention through Islamic Microfinance and Financial Technology

Financial inclusion plays a crucial role in promoting economic development by enhancing access to finance for rural communities and low-income families. It enables local businesses and small enterprises to increase their income and competitiveness, thereby positively impacting a country's overall economic progress. Furthermore, a country with a well-developed and accessible financial system can reduce information and transaction costs. Such a system yields favorable effects on savings, long-term growth rates, investment decisions, and technological innovation. In contrast, the inability to access formal financial products and services can lead to missed development opportunities and push individuals into poverty. Lack of access to financial services is strongly associated with financial exclusion, particularly affecting rural communities, the unemployed, individuals with limited skills, those with low incomes, people living in poverty, and those already facing an unstable environment or poor health conditions.[31] Consequently, social disparities intensify, with the rich getting richer, the poor getting poorer, and national economic development suffering the consequences. Therefore, each country formulates unique financial inclusion policies that align with its economy, social dynamics, and cultural characteristics, all with the common objective of fostering economic development.

According to the World Bank's Global Findex (2021), approximately 1.9 billion adults worldwide are still unbanked. About half of the unbanked people included women in poor households in rural areas or out of the workforce.[32] This accounts for 24 percent of all adults globally. Among the remaining 76 percent, a considerable share goes to adults who own an account but do not have access to diversified financial services. Despite the patterns of growth in account ownership in the last ten years, financial inclusion remains one of the top agendas in many countries and international organizations' policies for future financial development.[33]

In recent years, new technological developments have made it significantly easier to provide financial services to segments of the population that were previously excluded, either voluntarily or involuntarily. The Internet has attained pervasive global outreach, permeating even the most remote areas. Mobile banking, subsequently, emerged as a transformative force, especially in regions with disadvantageous infrastructure such as LDCs. It bridged the gap, providing financial services at the fingertips of millions of financially disconnected and excluded communities. With the leaps and technological advancements experienced worldwide, financial inclusion efforts can now reach new levels and unlock previously unreachable areas. In many countries, digital financial inclusion increased even where traditional financial inclusion was stalling or declining. It's a developing trend and has a lot of policy implications. In 2023, the Digital Banking Market size was estimated at $8 trillion and is projected to increase by 4 percent by 2030 reaching $11 payment value[34] in 2023 accounting for $9 trillion with a projected total amount of $14 trillion by 2027.[35]

31 Anderloni, L., Bayot, B., Błędowski, P., Iwanicz-Drozdowska, M., & Kempson, E. (2008), Financial Services Provision and Prevention of Financial Exclusion. European Commission.

32 The World Bank, 'The Global Findex Database 2021', (2021) https://www.worldbank.org/en/publication/globalfindex accessed 27 November 2023, https://www.worldbank.org/en/topic/financialinclusion/overview

33 Jie Li, Yu Wu and Jing Jian Xiao (n 2).

34 Global Market Insights, 'Digital Banking Market Size and Share | 2023 -2032 Forecast', (2023).

35 Statista, 'Digital Payment – Worldwide', (2024), accessed 16 January 2024, https://www.statista.com/outlook/dmo/fintech/

Technological mediums are potent facilitators for disseminating financial information and services to regions previously devoid of such access. Consequently, they play a pivotal role in mitigating the challenges associated with inadequate financial literacy and constrained financial inclusivity, particularly in regions with high mobile phone penetration. Mobile money accounts have enabled 1.2 billion previously unbanked adults to access financial services, reducing the global unbanked population by 35 percent.[36] By leveraging technological advancements such as Blockchain, Big Data, Artificial Intelligence (AI), Cloud Computing and Mobile computing, financial institutions offer products better tailored to consumers' needs at a lower cost. Fintech is expected to fill gaps in payments and lending, especially where the traditional delivery of financial services is less available. As a result, it would promote financial inclusion and benefit disadvantaged groups.

2.1 Financial Inclusion

Access to financial services is crucial for achieving Sustainable Development Goals by 2030. At the G20 Summit held in Seoul in 2010, South Korea, financial inclusion was recognized as an area among the nine key pillars to ensure inclusive and sustainable economic growth and resilience in LDCs. Financial inclusion provides benefits from financial services such as receiving bank loans, having insurance coverage for various types of risks, and facilitating and securing payments. In this context, financial inclusion is considered as the coexistence of a multitude of formal financial services, offered at a fair price, in the right place, in the form and time required, and without inequity to all agents of the economy[37], especially for at-risk groups such as unprotected segments and low-income families[38].

Given that 45 LDCs classified by the UN in Africa, Asia and Oceania and Asia, governments and international organizations have supported financial inclusion initiatives in these nations. In African countries, financial inclusion initiatives have received support from governments and international bodies, such as the World Bank and the International Monetary Fund (IMF), which are revisiting and reviewing their developmental policies to provide the much-needed support to accelerate the economic growth of these countries.[39] In 2019, the African Development Bank (AfDB) introduced the Africa Digital Financial Inclusion Facility (ADFI), an innovative financing facility developed to catalyze digital financial inclusion across Africa and ensure millions of Africans› access to the formal sector. With a similar trend, Asian countries also have given attention to financial inclusion on a regional level, and several of them included it in their national plans for achieving inclusive growth.[40] This is while, only 27% of individuals in developing Asian countries have an account in a formal financial institution, meaning that over a billion people lack access to formal financial services. Despite the progress made in the last decade, financial inclusion remains a key challenge between developed, developing, and least-developed countries. This persists particularly among Asian and African countries where the level of development is minimal, benefits of the digital age are not being shared equally, and significant access gaps persist between men and women, poorer and richer households, and rural and urban populations.

In this matter, one of the fundamental measures of financial inclusion is the number of account ownership. It provides the means through which both households and businesses use financial services in a way that promotes inclusive development. Owners of accounts can save, transmit, and receive money whether these accounts are held with banks or regulated

digital-payments/worldwide.

36 Dinar Standard and Elipses, "Global Islamic Fintech Report 2022" (2022).

37 Commonly used dimensions for measuring financial inclusion rates: usability (% of bank credit to bank deposits), accessibility (commercial bank branches), concentration (% of concentration of banks), and availability (depositors with commercial banks)

38 Afonso, A. , Blanco-Arana M.C. (2024), Does financial inclusion enhance per capita income in the least developed countries?, International Economics, Volume 177, Issue 1de

39 World Bank (2014), Global Financial Development Report 2014: financial inclusion. Washington: World Bank. Available at: https://openknowledge.worldbank.org/handle/10986/16238; International Monetary Fund (2015a), Financing for development – revisiting the Monterrey Consensus, Washington: IMF Policy Paper. Available at: http://www.imf.org/external/np/pp/eng/2015/061515.pdf

40 Loukoianova, M. E., Yang, Y., Guo, M. S., Hunter, M. L., Jahan, M. S., Jamaludin, M. F., & Schauer, J. (2018), Financial Inclusion in Asia-Pacific, International Monetary Fund departmental paper No. 18/17. Available at: https://www.imf.org/en/Publications/Departmental-Papers-Policy-Papers/Issues/2018/09/18/Financial-Inclusion-in-Asia-Pacific-46115

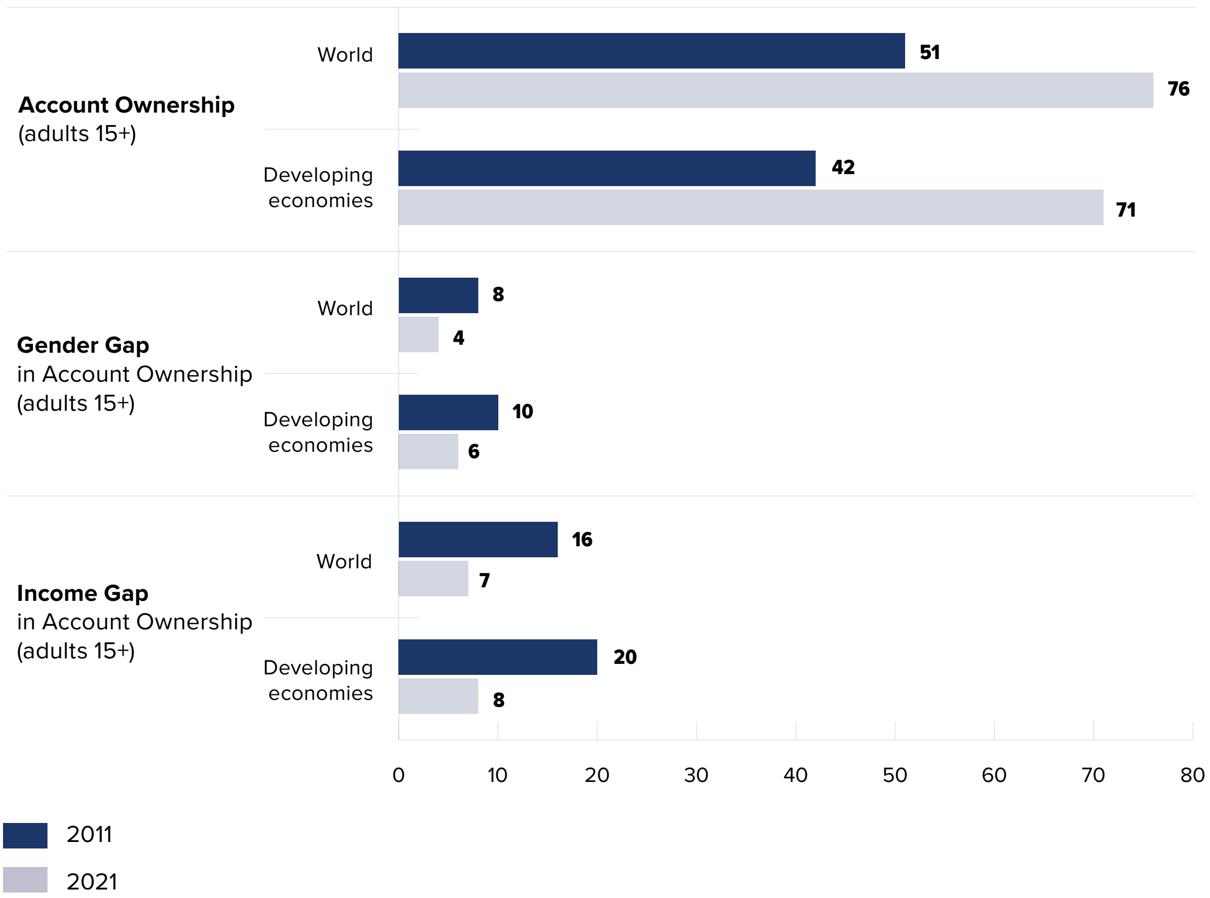


Figure 6

Account Ownership – World vs Developing Economies (2011-2021)

Source: UNCDF, 2022

organizations like credit unions, microfinance institutions, or mobile money service providers. According to the World Bank, 76.2 percent of adults (15+ years) across the world, which is the equivalent of 3 out of 4 adults have an account at a bank or a regulated institution in 2021 (a considerable rise from 2011 when just 51% of people had an account)[41]. In developing nations, account ownership increased at a faster rate, rising from 42% in 2011 to 71% in 2021. Additionally, according to the SESRIC Report, although the level of financial inclusion has also improved in OIC member countries, more than half of adults aged 15 and above are financially excluded[42]. However, LDCs do not follow this trend, as in countries like **Afghanistan** the recorded rate of account ownership remained low for only 9.65% in 2021.

Interestingly, since the significant increase in account ownership, the gender gap and income inequality both worldwide and in developing economies decreased. In developing economies, the average gender difference in account ownership has fallen from 10% in 2011 to 6% in 2021, while the income gap has been reduced to 8 percent in the same time frame. These trends suggest that efforts to close the access gap to financial services for adults who are typically underserved are making headway.

One prominent key factor in driving growth in account ownership and narrowing gender and income gaps is mobile money. Being catalyzed by the COVID-19 epidemic, about 60% of adults in developing nations made or received a digital payment, up more than 13%

41 Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, and Saniya Ansar (2022), The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19, Washington, DC: World Bank. doi:10.1596/978-1-4648-1897-4. License: Creative Commons Attribution CC BY 3.0 IGO.IMF

42 SESRIC (2021), OIC Economic Outlook: Mobilizing Financial Resource in Development,

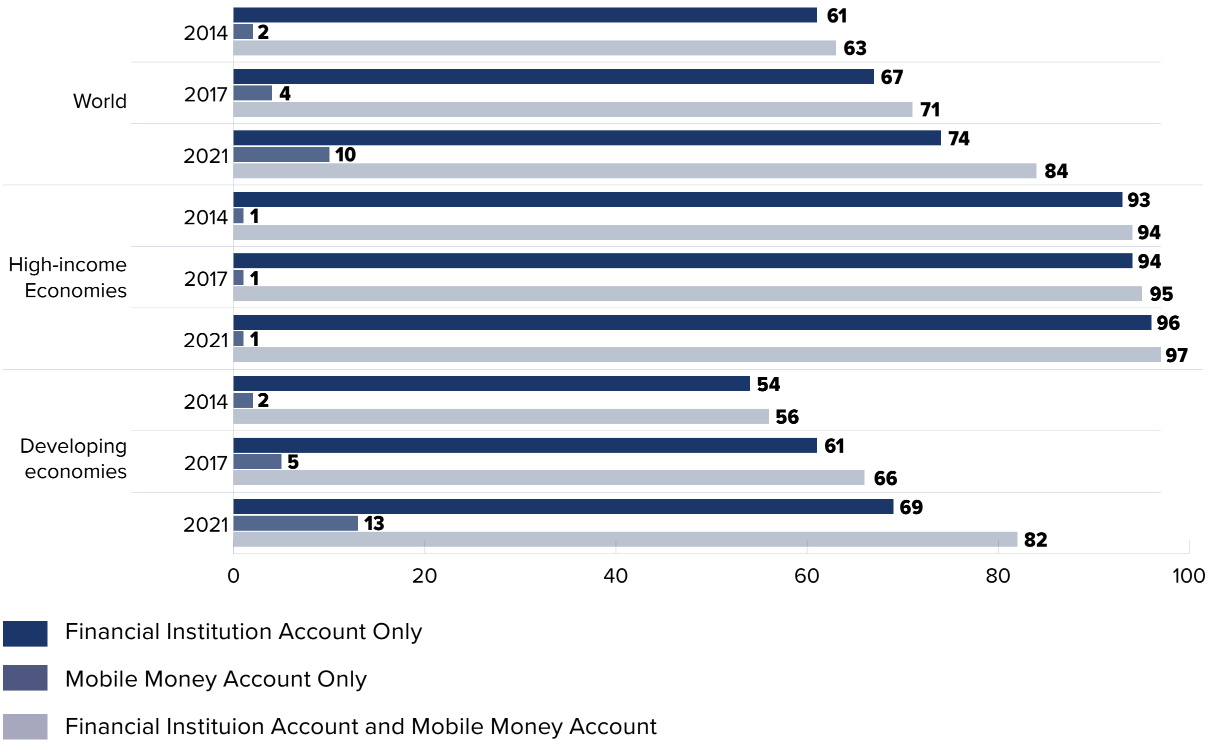


Figure 7

Mobile Money Accounts Growth (2014-2021)

Source: The Global Findex Database, 2021

compared to 2017. These spread out especially in developing countries and in Sub-Saharan Africa where 33 percent of adults have a mobile money account in 2021. It suggests that there is potential to enhance access to government transfers, public pensions, and domestic remittances for marginalized and low-income communities.

Many nations in Sub-Saharan Africa, grouping the totality of the 33 African LDCs, witnessed an increase in mobile money accounts accompanied by a decrease in financial institution accounts. For example, the rate of account ownership in one of the OIC members, Benin rose from 38% in 2017 to 49% in 2021. Over that period, the number of adults who had a financial institution account fell by 8 percentage points, from 32 percent to 24 percent, and the percentage of adults who had a mobile money account doubled, from 18 percent in 2017 to 37 percent.

In another example, after 2017, account ownership in a financial institution in Ghana remained mostly stagnant. However, mobile money account ownership rose by 21 percent, from 39 percent to 60 percent, increasing the total account ownership rate by 11 percentage points. Meanwhile, between 2017 and 2021, the overall percentage of accounts owned in Zambia stayed almost unchanged: the ownership of accounts at financial institutions fell from 36 to 24 percent, while the ownership of accounts using mobile money climbed by 14 percentage points, from 28 to 42 percent.

COVID-19 proved to play a significant role in driving the unprecedented move towards mobile money solutions. People have embraced the convenience of utilizing mobile phones for financial transactions, which has led to an increase in the acceptance of mobile money. Mobile money accounts grew by double digits in Benin, Cameroon, the Republic of Congo, Gabon, Ghana, Malawi, Togo, and Zambia separately.

However, overall LDCs still face significant challenges that prevent them from taking full

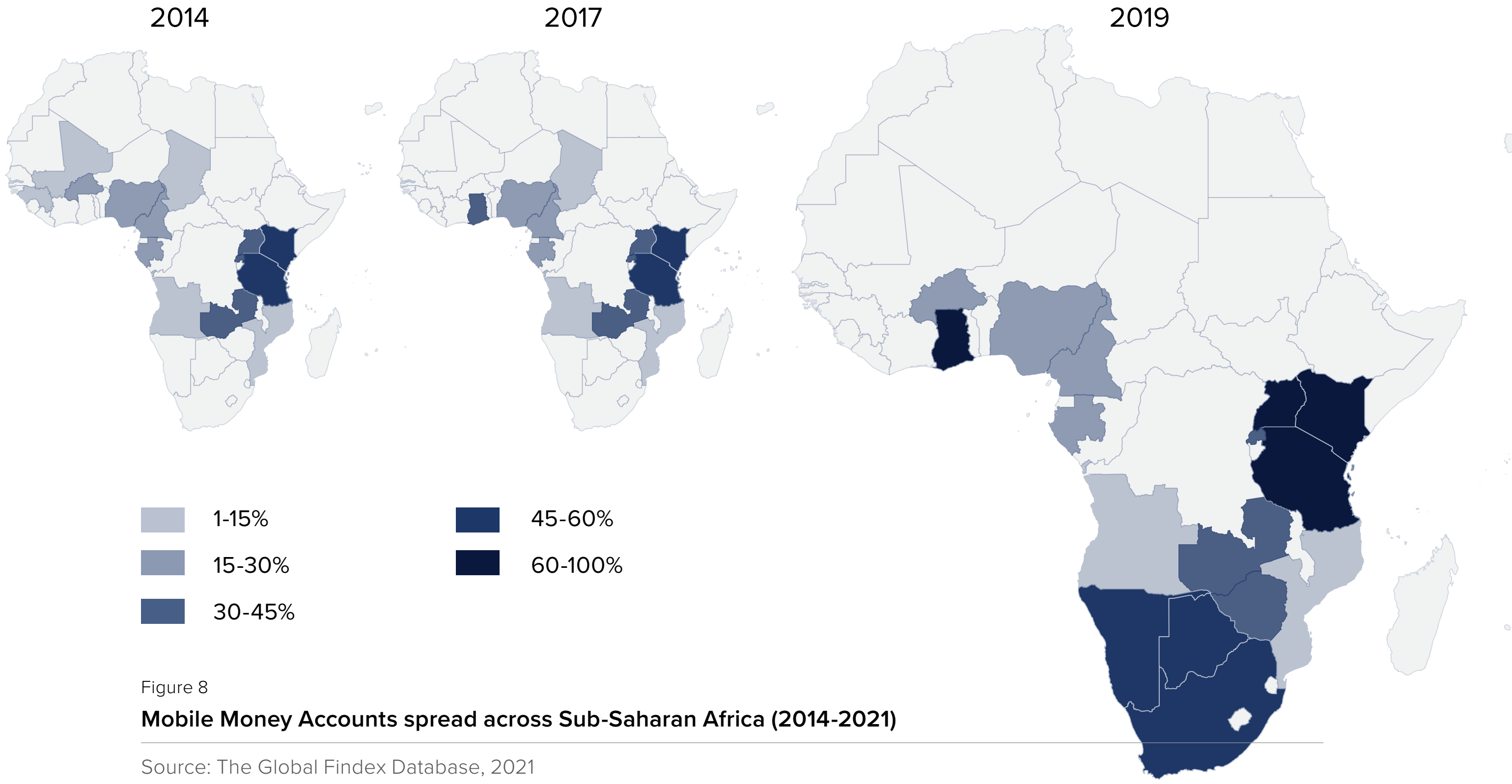


Figure 8

Mobile Money Accounts spread across Sub-Saharan Africa (2014-2021)

Source: The Global Findex Database, 2021

advantage of financial inclusion policies.[43] Among the critical challenges identified in those countries is limited financial literacy, i.e. many people are unaware of how to take advantage of the available opportunities. Financial literacy rates are notably low in selected OIC-LDCs, with **Djibouti** at 53 percent[44], **Bangladesh** at 28 percent[45] and **Afghanistan** at 14 percent ranking among the lowest.[46]

A significant group that has historically been financially marginalized are Micro, Small, and Medium-Sized Enterprises (MSMEs). According to estimates from the International Finance Corporation (IFC), there is an annual financing gap of $5.2 trillion that affects about 65 million businesses or 40% of formal MSMEs in developing countries.[47] This figure is equivalent to 1.4 times the existing global lending level for MSMEs.[48] It is mainly attributed to the creditworthiness of small enterprises with no track record, making financing them an act of imprudence on the part of banks. Fintech provides hope that the proliferation of data will make it easier to track sales and performance, reducing the asymmetry of information, making it easy to track the use of funds, and reducing moral hazards. Consequently, the opportunity that fintech provides to reduce high operational costs, enhance customer lifetime value, and mitigate credit risk uncertainty is unprecedented.

Another excluded social segment is low-income individuals. As they lack the funds to contribute to banking deposits and fees, it is

43 Challenges will be detailed in the following parts of the report.

44 World Bank, "Djibouti's Data Collection Efforts: How Information Helps Tackle Poverty," 2020, https://www.worldbank.org/en/news/feature/2020/08/11/Djiboutis-data-collection-efforts-how-information-helps-tackle-poverty. World Bank, "Djibouti's Data Collection Efforts: How Information Helps Tackle Poverty," 2020,

45 Sabrina Farin and Enamul Hoque Mohammad, 'Why Personal Finance Belongs in Every Major' (The Business Standard, 11 December 2023) https://www.tbsnews.net/thoughts/why-personal-finance-belongs-every-major-755534 accessed 13 January 2024.

46 Howmuch.net, 'Financial Literacy Rates Around the World' (S&P's Global Financial Literacy Survey, 2018).

47 International Finance Corporation, 'Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets' (2017) <www.ifc.org>.

48 SME Finance Forum, 'MSME Finance Gap' (2022) https://www.smefinanceforum.org/data-sites/msme-finance-gap accessed 13 January 2024.

not economically viable to spend resources on giving them access to financial services. This problem was partially addressed by microfinance institutions, although the experience did not come without its unique troubles. Specifically, among the focus on LDCs of this report, **Bangladesh** was the birthplace of microfinance. The success of microfinance institutions in the country has been hailed for their uniqueness, innovativeness, and ability to serve segments that were previously considered un-servable. It has grown into 750 MFIs serving almost 36 million borrowers.[49]

Given their alignment with local religious and ethical values, focus on poverty alleviation

Bkash (Bangladesh): A Success Story of Mobile Money Solutions in OIC-LDCs

Launched in July 2011, bKash is a mobile money solution in Bangladesh that registered 2.2 million customers in 2012. BKash aims to serve users at the bottom of the economic pyramid (BOP) by ensuring a broad range of financial services across Bangladesh's population allowing users to send and receive money in a fast, secure, and affordable manner. Over the years, bKash has expanded to become the leading mobile financial services provider in Bangladesh, with a network of nearly 30 Million registered users, 300,000 households, and 300,000 businesses across the country in January 2024. BKash not only catalyzed the access of millions of financially excluded people to financial services, but it also promoted economic empowerment and financial literacy within Bangladesh's unprivileged socioeconomic groups.

Increased Financial Inclusion and Community's Economic Empowerment

Millions of people without access to physical banks were able to manage their money through their phones with ease thanks to Bkash. For example, Plan Bangladesh used bKash to distribute livelihood and cash-for-work incentives to close to 15,000 people. Those who were previously excluded may now transfer, receive, and save money easily thanks to Bkash. It went beyond basic financial transactions by expanding its services to include international remittance, utility payments, and savings schemes. This diversification not only catered to a broader range of customers residing in rural areas which improved Bangladesh's financial landscape.

Social Impact

Oxfam used bKash to provide funds to more than 3,300 Dhaka households in need of humanitarian aid following a flood. This indicates that help is distributed rapidly and effectively to the most vulnerable segments. Additionally, NGOs and other organizations use bKash to provide various forms of financial assistance to unemployed, poor, and marginalized individuals and households. Then, bKash has been a game-changer improving standards of living and bolstering communities across Bangladesh through increasing access to the most basic financial services.

49 Asian Development Bank, "Microenterprise Financing and Credit Enhancement Project: Sector Assessment (Summary) - Finance (Inclusive Finance)" (2020).

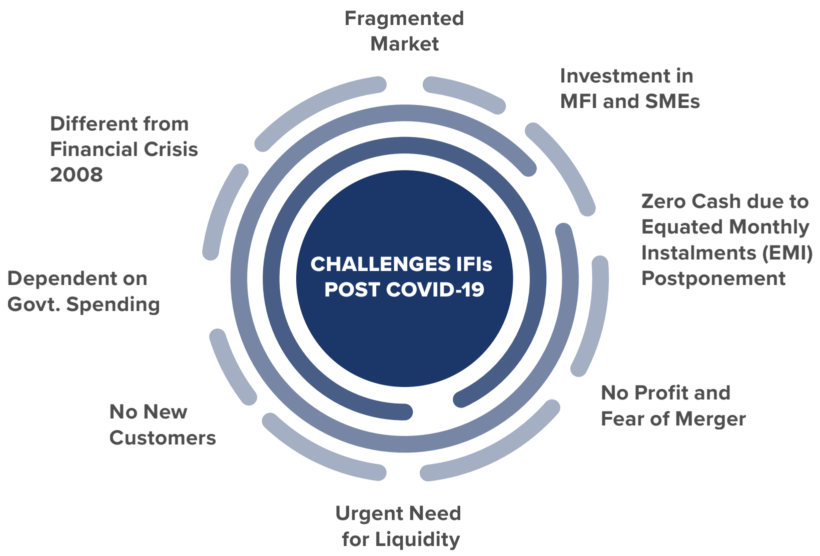


Figure 9

Challenges to IFIs post Covid-19

Source: SESRIC, 2022

and social welfare, and ability to enhance financial inclusion, Islamic microfinance, and Islamic microfintech are particularly suitable for development in OIC-LDCs. The integration of technology in these financial models further aids in making financial services more accessible and understandable, even in regions with limited traditional banking infrastructure.[50]

2.2 Islamic Microfinance

Islamic microfinance can be described as the fusion of Islamic financial principles with microfinance operations to foster financial inclusion. It promotes financial inclusion by providing access to underserved populations. As a vital element of Islamic Social Finance, it is an indispensable tool for poverty alleviation and economic development in OIC-LDCs. It enables access to financial services for those in need. Islamic microfinance, offering more accommodating mechanisms and structures, provides direct financial access to individuals. It often establishes a direct connection between donors and beneficiaries, allowing for more personalized support. While microfinance funds exist, donors frequently opt to channel their contributions through microfinance institutions.[51] Efforts have been made in this direction notably developing and expanding microfinance services while maintaining a good performance as measured by the triple bottom line: financial profitability, societal well-being and environmental impact.[52]

Islamic microfinance extends financial services to those with limited income or resources, including individuals or groups typically regarded as unqualified for traditional banking services, often lacking collateral or even basic bank accounts. The institutions that adopt Islamic microfinance or present themselves as IMFIs usually offer products and services using Islamic financial instruments.

Islamic microfinance's main objective is to increase underprivileged groups› access to financial services, especially for women and those living in rural regions. The ultimate goal is to encourage self-reliance and help individuals escape poverty. A profit-sharing system at the heart of this idea can protect small business owners from the negative effects of debt from unsuccessful commercial ventures by sharing

50 ansar Group, 'Leveraging Islamic Fintech to Improve Financial Inclusion' (18 November 2020) accessed 13 January 2024.

51 OECD, "How Islamic Finance Contributes to Achieving the Sustainable Development Goals" (Istanbul, Turkey, Turkey: OECD, 2020), https://www.oecd-ilibrary.org/docserver/ac1480ca-en.pdf?expires=1628507254&id=id&accname=guest&checksum=B771651853712598D262B872858406DD.

52 Annamaria Lusardi and Olivia Mitchell, "The Economic Importance of Financial Literacy: Theory and Evidence." (2014) Journal of Economic Literature.

the risk with capital providers. Moreover, IMFIs provide a wide range of products that cover several industries and sectors, including small-scale traders, cooperatives, commerce in commodities and services, agriculture, and more. Thus, IMFIs can promote growth and productivity among their clients and underserved populations through targeted financing.

2.3 Islamic Fintech

Islamic fintech abides by specific Islamic finance principles. Fintech services need significantly lower investment in physical locations, reducing their capital needs. This advantage enables it to reach segments of society that were otherwise financially excluded. Capitalizing on these advantages will provide a much-needed push for Islamic microfinance.

In 2021, the financial landscape underwent significant changes due to the unprecedented effects of the global coronavirus pandemic, presenting challenges for policymakers and regulators, as illustrated in Figure 1. The pandemic created a perfect storm for the Islamic fintech sector to thrive amidst challenging operating conditions that filtered out weaker players, evidenced by:

I. A Fragmented Market: The world economy experienced a financial crisis more severe than the Global Financial Crisis of 2008.

II. Investment in MFI and SMEs: Particularly in African and Asian countries, Islamic finance held a significant market share in MFI, SME, and retail lending. The hardest hit by COVID-19 were SMEs, low-income individuals, and daily wage workers.

III. Zero Cash due to EMI Postponement: Islamic Financial Institutions (IFIs) faced liquidity problems due to EMI postponements announced by governments, resulting in virtually no cash inflow.

IV. Urgent Need for Liquidity: IFIs were particularly exposed to market liquidity issues due to COVID-19.

V. No new Customers: Customers were hesitant to invest due to fear and uncertainty.

VII. No Profit and Fear of Merger: Asset quality of loans for IFIs became the biggest concern, impacting profitability. When profits declined, capital and equity deteriorated, prompting shareholders, across multiple institutions, to consider mergers.

Saudi Arabia, **Iran,** the **United Arab Emirates**, **Malaysia,** and Indonesia are the top OIC countries in terms of the amount of Islamic fintech transactions. According to 2020 estimates, Islamic fintech business in OIC countries approximately amounted $49 billion overall, which only accounts for 0.72 percent of the size of current global fintech business (based on transaction volumes). The Islamic fintech industry in OIC countries is anticipated to grow at a CAGR of 21 percent to $128 billion by 2025, compared to a CAGR of 15 percent for the conventional fintech sector, indicating that the market is poised for a successful future.[53] Investors and companies are clearly keeping a close eye on the development of Islamic fintech and its potential to empower a new generation of customers who previously lacked access to fintech services. In this regard, Islamic fintech can be a massive contributor to increasing financial inclusion in the following years. The potential impact of Islamic fintech on global financial inclusion is considerable. According to the estimates, there are about 1.9 billion unbanked adults worldwide, a sizable fraction of whom reside in countries with predominantly Muslim populations. Islamic fintech could enable these individuals to access financial services that align with their religious beliefs.[54] Additionally, governments are recognizing the potential benefits of Islamic fintech and are actively encouraging its growth. Countries are creating hubs for entrepreneurs to engage and work, as well as early-stage funding and connections between fintech businesses and investors, all within a welcoming legal and legislative climate.

Fintech solutions in Islamic financial institutions have demonstrated that improved cost-efficiency, deposits, and withdrawals, transferring funds, and online transactions can be easily achieved. Islamic fintech, which is based on traditional fintech except for complying with the Sharia principles of the products, has been working in different areas such as follows:

53 Dinar Standard and Ellipses, 'Global Islamic Fintech Report 2022' (2022).

54 Gökmen KILIÇ and Yavuz TÜRKAN, 'The Emergence of Islamic Fintech and Its Applications' [2023] International Journal of Islamic Economics and Finance Studies.

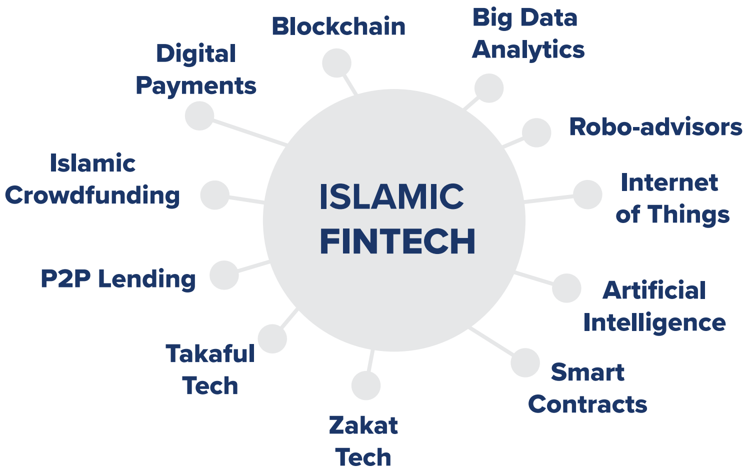


Figure 10

Islamic Fintech's Area of Work

While Islamic finance could potentially serve a core population of 1.8 billion Muslims worldwide and a broader audience of ethical finance consumers, innovations in banking and financial systems are essential to increase the level of financial inclusion. This positions Islamic fintech as an effective solution that may help millions of unbanked entities access savings, investments, insurance, and many other financial services in accordance with their beliefs. Moreover, the demand for fintech solutions is on the rise due to the rapid adoption of technology, increased usage of mobile devices, and higher rates of internet usage. This demand is also fuelled by an increasingly urban, literate, and young population, as well as by consumers and MSMEs who are underserved by traditional banking solutions.

2.4 Continuous Innovation and Future of Financial Inclusion in LDCs

Continued progress is anticipated worldwide in expanding access to financial services, facilitated by well-defined enablers that are increasingly leveraged to establish effective Digital Public Ecosystems (DPEs). These ecosystems encompass a robust combination of public infrastructure and policies, fostering responsible and inclusive mobile money as well as other digital financial services. Among the critical enablers are connectivity, phone accessibility, efficient payment systems, universal identification, digitized payment channels (including social safety net transfers), supportive financial sector policies (e.g., sandboxes, data sharing frameworks, and financial agent networks), consumer protection measures to instill confidence in digital financial services, and enhanced financial and digital literacy to drive societal advancement.

However, despite substantial global progress in expanding account accessibility, significant regional disparities persist. Access remains comparatively lower in many parts of Africa, as well as in the poorest countries of South and East Asia, particularly the LDCs. Consequently, it is insufficient to solely prioritize the mechanisms that enable access to financial accounts under the banner of financial inclusion 2.0. In LDCs, financial inclusion 2.0 must concentrate on developing financial solutions that foster a more inclusive, resilient, and environmentally sustainable future for low-income individuals, vulnerable populations, households, and micro and small enterprises (MSEs). On the other hand, with regard to the matter mentioned above, Islamic Fintech could be a powerful alternative that elevates living standards for vulnerable populations by fostering digital financial inclusion excluded voluntarily or involuntarily. It has the potential to unlock business growth (aligned with SDG 9), generate jobs (SDG 8), and boost economic engagement (SDG 10).

In practical terms, this entails transcending the mere expansion of financial inclusion's reach — i.e., the number of individuals and MSEs with access to accounts for digital transactions — and surpassing the augmentation of its depth (i.e., the extent to which individuals and MSEs can access a diverse array of financial products and services). Instead, the main focus should be on maximizing the utility derived from financial inclusion, specifically the societal impact it generates for LDC populations. Both the private and public sectors must, therefore, move beyond breadth and depth, and intentionally adopt the outcomes sought by the global community through financial inclusion. This will enable the design of future mechanisms and inclusive financial products that effectively achieve these intended outcomes.

Another important consideration of its innovation is that the new technologies, data capabilities, and the resulting data trails present a significant opportunity to optimize the utility of financial inclusion for vulnerable populations. Governments in African and Asian countries are actively advocating for data-driven innovation through the establishment of requisite Digital Public Ecosystems (DPEs). Within these ecosystems, open finance emerges as a promising avenue, empowering financial institutions to share data gathered from low-income segments. Additionally, open application programming interfaces (APIs) allow third-party providers, such as fintech microfinance companies, to develop data-driven products and services. While the open API system has been adopted a lot in the banking industries in most OIC member countries like **Malaysia** and **Indonesia**, the fintech microfinance should also take this into account which allows them to create credit scoring models and customer due diligence algorithms based on alternative data.

In LDCs and OIC-LDCs, the private sector can harness the power of data capabilities to design, innovate, and develop new financial solutions, while also fostering market-based mechanisms that amplify the breadth, depth, and utility of financial inclusion. Furthermore, it can provide financing for technological expansion with a high potential for success. Meanwhile, the public sector must establish the necessary foundations and erect successful Digital Public Ecosystems (DPEs), encompassing responsible digital ecosystems, enabling frameworks for open finance and regulation, and digital public infrastructure.

KEY HIGHLIGHTS

- **Governments and international organizations are crafting initiatives and proposals** to aid LDCs in addressing persistent issues hindering their economic development.
- **Financial inclusion** is recognized as a key pillar to ensure inclusive and sustainable economic growth and resilience in LDCs.
- Many LDCs are **Muslim-majority countries** suffering from chronic problems like financial exclusion and low financial literacy.
- **Microfinance has helped remedy some of these issues but not to the full fruition.** With technological advancements, financial services have unlocked new areas.
- This report aims to **provide recommendations and proposals** leveraging technology to develop Islamic microfinancial technology for LDCs.

3. FINANCIAL CHALLENGES IN SELECTED LDCS

Photo UNDP Afghanistan

Financial Challenges in Selected LDCs: Afghanistan, Bangladesh, Djibouti

This report has a grand approach toward LDCs by unifying and operationalizing a common identity as an umbrella under which the LDCs can bring together and exhibit their contextual similarities. The countries under consideration are all designated as LDCs by the UN Committee for Development Policy.[55] Particularly, focusing on 21 OIC countries out of the 45 LDCs which are mainly in Sub-Saharan Africa and Asia. These include **Afghanistan**, **Bangladesh**, and **Djibouti**, —nations where the majority of the population practices Islam, accounting for 99.7%, 91%, and 97%.[56] The selection of these countries is strategic not only because they are spread across different geographies but also because they exemplify the cultural diversity and varied socio-economic statuses that are characteristic of OIC LDCs.

3.1 Politics, International Sanctions and Development

Many LDCs grappling with civil conflicts and political instability exemplify this complexity, underlining the multifaceted nature of political upheavals.[57] These countries, often struggling with economic development challenges, face a unique set of political problems that can lead to instability and unrest. The root causes of these political problems are diverse and interconnected. They can include economic inequality, corruption, poor governance, ethnic tensions and the struggle for resources. These issues are often exacerbated by external factors such as foreign intervention, climate change and global economic trends.

Afghanistan is a prominent case of political unrest and sudden change of regime with the international community's reaction in terms of sanctions. The country is left with a severely damaged infrastructure, a poor educational system, a political crisis and vast rural areas cut apart. The current international sanctions on **Afghanistan** have profoundly impacted the nation's economy, exacerbating an already precarious situation. Restrictions on banking operations and freezing of assets, despite exemptions for humanitarian aid, have created severe impediments to essential services and relief efforts.[58] The sanctions not only impacted investment and increased capital escape from the country, but also limited **Afghanistan**'s access to international banking services, hindering economic transactions and exacerbating the cost of imports, particularly food, intensifying food insecurity. The economic strain caused by restrictions resulted in a ripple effect, hampering the nation's ability to function under normal economic conditions.

As indicated in the World Bank Survey below, two in five men-owned firms in **Afghanistan** reported feeling constrained by the absence of a fully functional banking sector, while most women-owned firms identified uncertainty about the future as a top constraint:

55 United Nation, 'List of Least Developed Countries', (18 December 2023).

56 Wisevoter, number of muslims in the world, 2023

57 Gyimah-Brempong Kwabena and L Traynor Thomas, 'Political Instability and Savings in Less Developed Countries: Evidence from Sub-Saharan Africa' (1996) 32 The Journal of Development Studies 695.

58 Human Rights Watch, 'Afghanistan: Economic Roots of the Humanitarian Crisis | Human Rights Watch' (1 March 2022) accessed 13 January 2024.

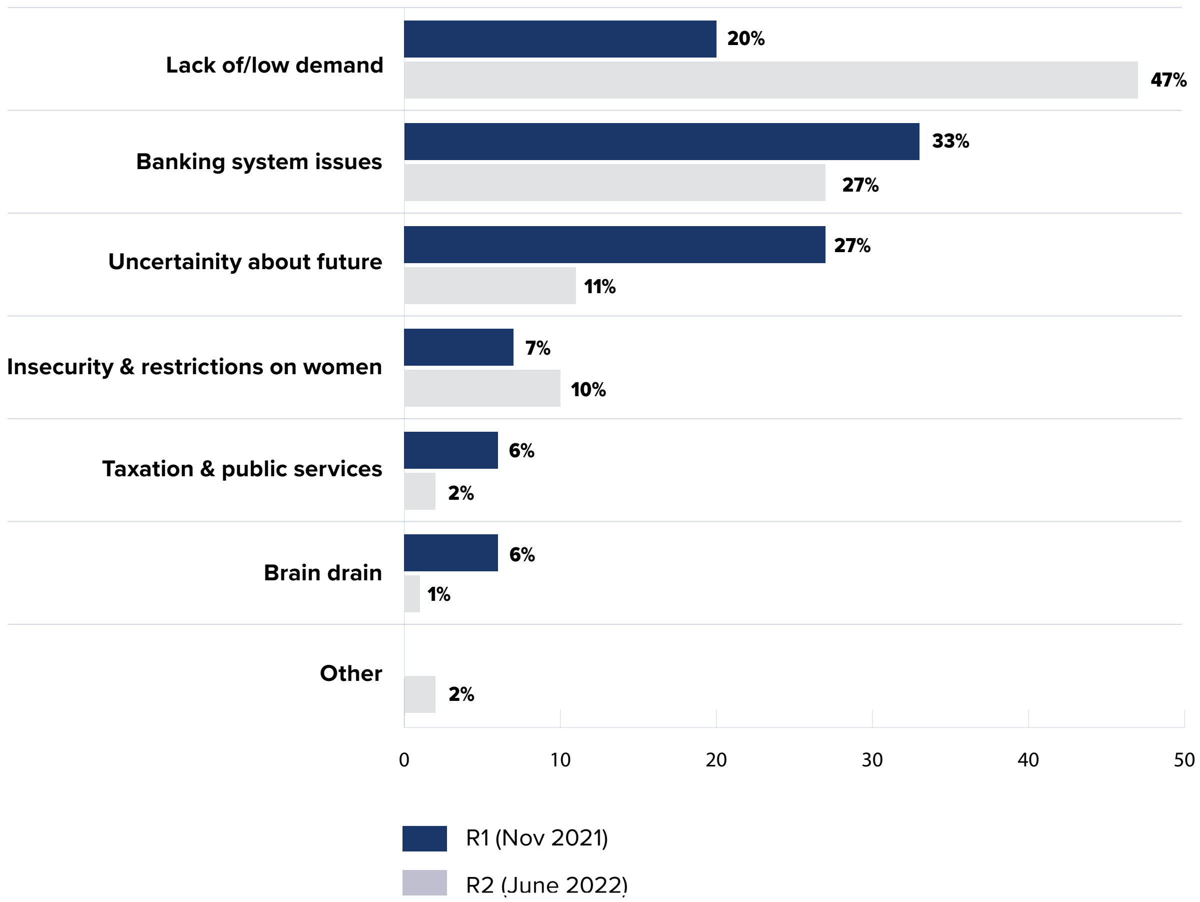


Figure 11

Top Business Constraints by Gender of Firm Owner

Source: World Bank, 2022. Afghanistan PSRS - R1 (2021), R2 (2022). N1=100, N2-527. Multiple responses allowed; results normalized to 100%.*

* The World Bank, 'AFGHANISTAN PRIVATE SECTOR RAPID SURVEY: An Assessment of the Business Environment-Round 2' (2022).

Despite a decrease in incomes and domestic demand, prices have rapidly increased, indicating a significant supply shock caused by disruptions in international transactions and rising global prices. According to official data from July 2022, the consumer price index inflation stood at 18.3 percent primarily driven by a 25 percent year-on-year inflation in the food sector.[59] These elevated prices have severely impacted individuals with lower incomes, particularly those who allocate food expenses.[60] The average monthly household debt is estimated at $650 in 2022,[61] which translates to a staggering debt-to-income ratio - a significant burden that may hinder the development of the financial sector.

The ongoing recovery trajectory appears feeble, lacking sustainability and falling short of long-term requisites. According to the UNDP's baseline scenario, the GDP is anticipated to grow by a mere 1.3 percent in 2023 and a meager 0.4 percent in 2024. These projections notably lag behind the population growth rate, surpassing 2 percent. Consequently, this signifies a continuing decline in per capita

59 Da Afghanistan Bank, "Inflation Rate", (19 November 2023), accessed 13 December 2023, https://dab.gov.af/inflation-rate.

60 World Food Programme, "Afghanistan Inflation Rate' (WFP database, 2023) https://dataviz.vam.wfp.org/economic_explorer/macro-economics/inflation?adm0=1 accessed 13 December 2023.

61 OCHA Relief Web, "Afghanistan Joint Market Monitoring Initiative", (2022).

incomes, portraying a concerning economic downturn relative to the expanding populace.[62]

Although to a significantly lesser degree, **Djibouti** had a period of civil conflict lasting from 1991 to 1994. A conflict whose impacts are still felt today. Internally, **Djibouti** still faces fragility in its economic landscape. **Djibouti**'s leadership aims for prosperity but faces harsh realities. Indeed, the country heavily relies on a service-based economy, which is highly vulnerable to shocks.[63] The country has capitalized on its geostrategic position by specializing in transport and logistical operations. A popular saying goes, "When **Djibouti**'s transport sector sneezes, the whole economy catches a cold." During the civil war in the 1990s, the country lost its reputation as an "oasis of peace", which damaged both its peaceful reputation and economic stability.[64] Additionally, foreign assistance, particularly the agreement with the Dubai company DP World based on a twenty-year concession,[65] while providing a temporary boost to the service industry, raises concerns about the sustainability of such partnerships. Finally, the looming fear of a French troop withdrawal further has shaped **Djibouti**'s foreign economic policies since 2000.[66] However, this issue may not be the focus in the context of the economic development in **Djibouti**. A subsection is dedicated to the main structural issue hampering the economic development in **Djibouti**, i.e. the over-reliance on a small services sector.

Similarly, **Bangladesh** faces a myriad of political challenges that shape its socio-economic landscape. One of the primary concerns is the persistent volatility in the country's political climate, marked by frequent internal power struggle, polarization, and strained relations between major political parties. The periods of political unrest, marked by street protests, strikes, and sporadic violence, have often disrupted economic activities and investor confidence, hindering sustained economic growth. The political challenges impede the formulation and implementation of consistent, long-term development policies, impacting the overall stability and progress of the country's economy.[67]

3.2 Underdeveloped Financial Sector

The financial systems in many LDCs exhibit greater fragility compared to those in industrial nations, significantly impacting their economic performance. This fragility introduces microeconomic inefficiencies in channeling savings into investments, limiting economic growth. It may also hinder the efficiency of payment systems, increasing transaction costs and reducing capital productivity, potentially exacerbating macroeconomic crises. Conversely, inappropriate macroeconomic policies can further weaken financial systems, contributing to their fragility. This can disrupt macroeconomic equilibrium, creating uncertainty, lowering output and diminishing welfare.[68] LDCs typically have a weak formal financial infrastructure, with the vast majority of their populations financially excluded, especially in rural areas where the economy mainly depends on agriculture. The financial sector's weakness is a symptom and cause of poor economic performance.

High inflation rates and a high-risk premium will threaten the financial sustainability of the private sector. When economic development picks up, countries become increasingly susceptible to rapid expansion in indebtedness as investors seek to benefit from the economic boom. When this exposure becomes international, the risk of foreign exchange will increase. There are gradual stages of financial risk, and each of the three LDCs in our report is exposed to some of them to varying degrees.

62 UNDP, 'Afghanistan Socio-Economic Outlook' (2023).

63 Tafesse Olika, 'Djibouti's Foreign Policy Change from Survival Strategy to an Important Regional-Power Player: Implications for Ethio-Djibouti Relations' (2018) 14 Ethiopian Journal of the Social Sciences and Humanities.

64 David Styan, 'Briefing Paper Djibouti: Changing Influence in the Horn's Strategic Hub Djibouti: Changing Influence in the Horn's Strategic Hub Red Sea Golfe de Tadjoura' [2013] Chatham House.

65 Oneko, S., "Arab Gulf States in the Horn of Africa: What role do they play?", (2018), (DW) https://www.dw.com/en/arab-gulf-states-in-the-horn-of-africa-what-role-do-they-play/a-45602930 accessed 13 January 2024.

66 Tafesse Olika, Djibouti's Foreign Policy Change from Survival Strategy to an Important Regional-Power Player: Implications for Ethio-Djibouti Relations, Ethiopian Journal of the Social Sciences and Humanities (EJOSSAH):V. 14, No. 2, 2018

67 SME Finance Forum, 'MSME Finance Gap' (2022) accessed 13 January 2024.

68 Roberto Zahler, 'Strengthening the financial experience in less developed countries: the Latin American experience', (1999), Bank for International Settlements.

3.2.1 Weak Financial Infrastructure

Poor financial infrastructure in many developing countries represents a significant obstacle for financial institutions to extend their offering of credit, savings and payment services to underserved segments of the population. It also adds risk to the financial system because poor payment and settlement systems can increase the adverse effects of financial crises, while strong credit growth and no credit bureaus can cause it. Credit bureaus, the enforcement of collateral and functioning payment, securities settlement and remittance systems are essential components of the financial infrastructure on which every developed market can rely, frequently do not exist, or are not sufficiently developed in emerging markets, especially in the LDCs. These key components are fundamental to increasing access to finance, further developing the transparency of governance systems and preserving financial stability.

In practice, establishing payment and remittance tends to be more straightforward in comparison to securities settlement systems. Payment systems primarily facilitate transactions among financial institutions, and it will be apparent in subsequent sections that most LDCs have implemented a form of national switch for local money transfers. Conversely, securities settlement systems involve the handling of securities traded in the capital markets. The extent to which a country's financial system is developed can be gauged by the proportion of its securities that can be settled through a central depository. This feature is largely lacking among LDCs.

Collateral management and enforcement are essential assurances for financial institutions. If financial institutions are unable to accurately assess the value of collateral and cannot effectively enforce the collateral in the case of default, they may resort to charging customers high interest and imposing strict loan acceptance criteria, thereby rendering financial facilities inaccessible for most. Credit bureaus play a vital role in establishing customer profiles and serve as essential references. Their significance is such that the extent of credit bureau coverage corresponds with the level of development of the financial sector. Consequently, the presence and effectiveness of credit bureaus serve as indicators of the development of an economic system.[69]

It could be argued that fintech solutions, especially e-payment services, can solve many of the issues. However, fragmentation between e-payment systems may create its own unique set of problems. This includes interoperability and cross-payment among accounts from different providers.

In 2011, the **Afghanistan** Payment System (APS), named as the country's national switch, was established as a safe and secure way for the government, entities and individuals to digitally transfer money. Nevertheless, the infrastructure for this system was not finalized and is still fragmented and inefficient. Fintech solutions, particularly e-payment services, will offer potential remedies to many financial challenges. Within a different effort, the initiative by the UNCDF and the UNDP to digitalize payment by International Non-Governmental Organizations (INGO) to **Afghanistan**'s beneficiaries used six different digital payment solutions, including mobile wallets, debit cards, e-vouchers, virtual accounts, QR codes and AfPay cards. They were selected from seven different financial service providers (FSPs), including two banks (Ghazanfar Bank and Islamic Bank of **Afghanistan**), two payment institutions (Refah Payment Services and HesabPay) and three mobile money operators (M-Paisa, MyMoney and MoMo). Other development partners are using similar types of digital financial services (DFS). The pilot implementation highlighted some barriers that prevented beneficiaries from using the proposed DFS. They include:

- Lack of IDs to comply with KYC requirements- According to the **Afghanistan** Central Statistics Organization, in 2019, only 47 percent of men had a national identification card (eTazkiras) compared to 17 percent of women. However, an estimated 10,000 eTazkiras are distributed each day.
- Low ownership of mobile phones - According to the International Telecommunication Union (ITU), only 66 percent of men and 31 percent of women owned a mobile phone in 2021. However, 9.23 million of the 27.49 million phones in **Afghanistan** are smartphones, and ownership is increasing by 7 percent per year.

69 ibid.

- athe population has Global System for Mobile (GSM) coverage, which includes coverage of both 2G, 3G, and 4G GSM networks, mobile network coverage is limited to 34 provinces with ongoing efforts from the Afghan Telecom company to create about 280 sites in 18 provinces and 320 districts worth 27.5 million US dollars. Efforts are underway to improve mobile network coverage in these areas, and Internet access is increasing by 9 percent annually.
- People's financial and digital capabilities and awareness about mobile money services are quite low, although they are picked up much faster by the new generation.

In **Djibouti**, the Islamic finance sector is relatively small in scope, with 18 percent of Islamic Banking Shares in 2019 (IFSB,2020).[70] The industry is primarily made up of Islamic banking and Islamic microfinance institutions. the banking industry serves as the financial system's primary driver. Three of the 13 banks are Islamic banks, and about 20 percent of their clients already use Islamic financial products and services. Authorized financial institutions, microfinance organizations, and insurance firms are all included in the financial industry. Due to the country's low level of internet connectivity and a lack of institutional and technological competence, **Djibouti**'s financial sector is underdeveloped in terms of digital finance products and fintech.[71] There are currently no active Islamic private pension operators, Islamic equities or Sukuk markets.[72]

In both **Afghanistan** and **Djibouti**, there is no capital market sector to mention. Since developing a formal financial system requires significant investment and a certain level of economic development that LDCs cannot currently attain, this report aims to provide a more viable proposal through Islamic microfinance and technology with the objective that these industries may grow to be able to catalyze the entire economic growth.

In 2022, the mobile wallet named Binimoy has seen the day light in **Bangladesh**. The platform works on establishing digital financial transactions, providing a timely initiative among the far-reaching steps taken by the government to build a digital **Bangladesh** initiative. It offers instant money transfers between banks, mobile financial services (MFS) operators, and payment service providers (PSPs). However, the lack of interoperability remains a challenge for improving sustainability of mobile money services, and then fostering an open digital ecosystem that promotes financial inclusion.

Despite having a thriving but still underdeveloped banking sector, **Bangladesh**'s capital market is relatively small and illiquid. Regulatory and Supervisory Authorities (RSAs), including the **Bangladesh** Bank (BB), have successfully implemented reforms in the past, contributing to the rapid expansion of the banking industry. However, the capital market continues to face structural problems such as a lack of confidence, limited instruments, and general inefficiency. Paradoxically, these challenges are among the reasons why the country's microfinance sector is quite developed and boasts an e-payment system serving a considerable portion of the population. Additionally, its microfinance sector stands out as a pioneer among all LDCs. However, several infrastructure components remain underdeveloped, and rural areas generally lack access to formal financial services.[73]

The issue of infrastructure is intertwined with other issues like literacy and weak distribution channels of financial institutions. The paradoxical nature stems from the fact that there is no commercial incentive for financial institutions, including microfinance institutions, to set up operations in remote areas due to low levels of income. However, their income levels can only improve with financial services. Therefore, the issue cannot be addressed without a reduction in the cost of financial services or an outside subsidy.

70 Islamic Financial Services Board, 'Islamic Financial Services Industry Stability Report 2020', (2020).

71 UNDP UNCDF, "Interoperability of FSPs Afghanistan", (2023); McKinsey & Company, "Fintech in Africa: The End of the Beginning", (2022).

72 IFSB, 'Islamic Financial Services Industry Stability Report 2023' (2023).

73 Chu V Nguyen, Anisul M Islam and Muhammad Mahboob Ali, "The Current State of the Financial Sector of Bangladesh: An Analysis", (2011).

3.2.2 Hinderances to Microfinance in LDCs

Significant advancements have been made in recent decades towards establishing a commercially viable microfinance sector capable of meeting global demands. Key challenges identified in the microfinance sector in LDCs include[74] (i) inappropriate donor subsidies, (ii) regulatory and supervisory challenges, (iii) limited savings mobilization by MFIs, (iv) management capacity in MFIs, (v) institutional inefficiencies, (vi) adoption of rural and agricultural microfinance methodologies.

Issues linked to rural areas may explain the slow development of the microfinance sector. In the context of **Afghanistan**, the results of the Focus Group Discussion (FGD) indicate that residents of rural regions prefer Village Saving Groups (VSGs) to meet their financial needs. Many of them avert MFIs due to their stringent requirements to approve debts. These include financial guarantors, collateral, Shura,[75] high-interest rates and challenges related to the implementation of products such as Murabaha and Salam

Financial guarantors, typically community members associated with the client, are crucial in microfinance, but some MFIs require them not to reside in the same area as the client. However, fees charged by certain guarantors can increase the overall loan cost, exacerbating challenges for impoverished MFI beneficiaries who lack valuable collateral. Additionally, loan approval often depends on local Shuras, posing sensitivity issues for borrowers, especially women entrepreneurs in rural areas. The high informal interest rates charged by MFIs, ranging from 14 percent to 21 percent as revealed in focus group discussions (FGDs), coupled with short loan maturity periods, further hinder loan repayment for beneficiaries. Furthermore, the suitability of Murabaha financing methods is questioned, particularly regarding the alignment of repayment schedules with the harvest season. Lengthy documentation and approval processes, lasting up to a month, alongside a lack of procurement skills among MFIs, compound the borrowing challenges faced by clients.

For the **Djiboutian** case, evidence suggests hindrances of microfinance services to high-interest rates, non-efficient use of loans, over-indebtedness,[76] disparate treatment of men and women in lending conditions[77] and the exacerbation of inequalities between women.[78] More importantly, lack of financial resources is the major obstacle to microfinance as the relations between commercial banks and microfinance actors are limited to simple transactions (e.g. deposits, withdrawals and transfers). Commercial banks do not provide credit lines for microfinance activities in **Djibouti**, nor do they recover refinancing.

In **Bangladesh**, the microfinance sector encounters its own set of challenges. These include a lack of proper market research before investment, which often leads to unsuccessful ventures due to mismatched demand for microloans. Additionally, profit-driven motives have overshadowed the original social mission of microfinance, leading to unethical practices and stiff competition among institutions. Insufficient borrower assessments further compound the issue, contributing to loan default rates. Despite technological advancements offering potential solutions, the sector has been slow to adopt software solutions to streamline operations and enhance efficiency. Addressing these challenges is crucial to ensuring the sustainable development of microfinance in **Bangladesh**.[79]

3.2.3 Low Financial/Digital Financial Literacy

Financial literacy is an essential condition for engaging in financial services and, without it will be difficult to promulgate financial services. It is typically understood as a person's capacity to comprehend financial concepts and the aptitude to manage financial resources.[80]
The main objective of financial literacy is to

74 Anita Campion, 'Challenges to Microfinance Commercialization' (2002) 4 Journal of Microfinance / ESR Review.

75 Shura is a local custom in Afghanistan whereby a group of community leaders gather to discuss and resolve communal issues.

76 Dina Chhorn, 'Microfinance Illusion, Poverty and Welfare in Cambodia' (2021) 26 Journal of the Asia Pacific Economy 694, https://doi.org/10.1080/13547860.2020.1826074

77 Isabelle Agier and Ariane Szafarz, 'Credit to Women Entrepreneurs: The Curse of the Trustworthier Sex' (2011).

78 Isabelle Guérin and Jane Palier, Microfinance Challenges: Empowerment or Disempowerment of the Poor (Institut Français de Pondichéry 2004).

79 Southtech, Why Some Microfinance in Bangladesh Fail Miserably (southtechgroup.com), 2019.

80 International Communication Union, 'Digital Financial Services (DFS) Glossary', (2017).

educate people on how to earn, spend, save, borrow and protect their money. Individuals with sound financial literacy will have the tools and resources they need to be financially secure. Lack of financial literacy can result in various hazards, such as building up unmanageable debt due to careless spending or a lack of long-term planning. This can result in bad credit, bankruptcy, home foreclosure, or other unfavorable outcomes.[81] Financial inclusion is directly affected favorably and significantly by financial literacy.[82] Accordingly, understanding digital financial literacy involves knowledge of digital financial products and services, digital financial risks, and consumer rights and redress procedures. This is essential to navigate the increasingly complex digital finance landscape, where new investment and savings options are emerging, and the risks of online fraud and financial blunders are prevalent.[83] Overall, the results point to social networks as a full mediator of the impact of financial literacy on the poor's ability to access financial services through microfinance institutions in developing nations. The conclusion is consistent with earlier findings that LDCs› financial literacy begins with the schooling years. Studies also demonstrated that education quality is as important as the length of education.[84]

Financial/Digital Financial literacy issues are relevant to 45 LDCs worldwide. Less educated households are more likely to make wrong financial decisions.[85] Due to a lack of financial literacy in LDCs, poverty cycles are frequently passed down through generations. Therefore, low financial literacy is a crucial issue that needs to be addressed.

Afghanistan is one of the LDCs facing low financial literacy. Only 14 percent of people in the nation are financially literate, according to 2015 World Bank data.[86] This contributes to a low level of financial inclusion because of supply and demand limitations, as reported by DAB.[87]

"Awareness and acceptance have been a challenge, but we have increasing levels of both," says an interviewee among market players in **Afghanistan**. Financial literacy is affected by the poor infrastructure and most of **Afghanistan**'s population resides in rural areas with no proper access to financial education. TheThe limited access to financial services in rural areas is a primary factor contributing to low financial literacy. It stemms from a lack of interaction with financial institutions and their offerings. The problem becomes more severe for women. It only stands to exacerbate as reports indicate that women's access to university education and training programs is becoming increasingly limited in the aftermath of the August 2021 political change in the country.

Corroborating that, another interviewee explained that their e-money service is easy and user-friendly: "The application is not only for smartphones, but it can also be applicable in non-smartphones as well. It is simple and easy to use. Most of the customers are men because they visit the branches of the company. It also depends on the literacy rate. The literacy rate among women is low in **Afghanistan**." This confirms the results of the UNDP Report[88] on the obstacles to women financing. Further corroboration was obtained from other interviewees.

In **Bangladesh**, a financial literacy rate of 28 percent was recorded in 2019.[89] Although the literacy rate has increased, the overall development remains modest. Additionally, the gender disparity in financial literacy is wider, especially in rural areas. The **Bangladesh**

81 True Tamplin, 'Why Financial Literacy Is Important and How You Can Improve Yours', (Forbes, 2023) https://www.forbes.com/sites/truetamplin/2023/09/21/financial-literacy--meaning-components-benefits--strategies/?sh=41b74b8168cd accessed 3 December 2023.

82 Ocident Bongomin and others, 'Exponential Disruptive Technologies and the Required Skills of Industry 4.0' (Hindawi Limited, 2020).

83 Development Asia, 'Why We Need to Promote Digital Literacy' (Development Asia, 16 July 2019).

84 Media Wahyudi Askar, Bazoumana Ouattara and Yin-Fang Zhang, 'ADBI Working Paper Series FINANCIAL LITERACY AND POVERTY REDUCTION: THE CASE OF INDONESIA Asian Development Bank Institute' (2020) https://www.adb.org/publications/financial-literacy-poverty-reduction-case-

85 Lusardi and Mitchell (n 8).

86 Swiss Capacity Building Facility, 'Innovating Financial Inclusion' (2020) <https://scbf.ch/> accessed 3 December 2023.

87 Da Afghanistan Bank, 'National Financial Inclusion Strategy 2020-2024', (2020).

88 UNDP, 'Challenges to Women Entrepreneurship in Afghanistan: Focus on Trade and Access to Finance' (2023)

89 a2i Innovate for all, 'Upscaling Financial Inclusion Through Financial Education: A Compilation of Initiatives in Bangladesh' (2019).

Bank has launched the following programs to promote financial literacy in **Bangladesh**:[90] (i) hosting the School Banking to promote financial literacy, (ii) opening commercial bank credit disbursement programs for farmers, (iii) awareness campaigns for specific account holders, (iv) creatingcreating bank account for Non-Frills Accounts holder other than farmers for various government allowance disbursement, and (v) creating special websitesite for learning financial literacyliteracy.

Djibouti is also particularly affected by low financial literacy.[91] with a population of fewer than a million, 96 percent identifying as Muslims. Unfortunately, the financial literacy rate in the country was less than 20 percent in 2018, with less than 8 percent of the adult population having access to loan accounts in 2014 and the percentage of bank savings account holders not reaching 20 percent. One of the major obstacles facing businesses in the formal sector is access to loans.[92] Only 5% of businesses in the formal sector have access to bank finance. In terms of the quantity of bank accounts, bank branches, and ATMs, **Djibouti** falls short of several other nations in the area.

3.3 Sustaining the Rapid Growth

Few LDCs are experiencing rapid growth, often following the end of civil conflicts or upon reaching a reasonable level of political stability. However, the COVID-19 pandemic poses a challenge to sustainable development prospects in LDCs. Containment and lockdown measures have resulted in an economic slowdown for the group as a whole, practically impacting African LDCs. Persistent challenges such as low productive capacities limited economic diversification, dependence on natural resources and high trade costs continue to hinder achieving sustained economic growth and development.[93]
According to the World Bank, post-pandemic recovery has been disrupted in the short term by external factors like global economic conditions including inflation and uncertain outlooks resulting from the Russia-Ukraine conflict. It was also affected by internal factors, including local high inflation rates and vulnerabilities of the local financial sector.[94]

The recent updates offer a comprehensive depiction of the profound economic distress and instability following **Afghanistan**'s governance transition. A significant contraction in GDP, plummeting by 6.2 percent in 2022 following a staggering 20.7 percent decline in 2021, underscores the acute economic downturn. This downturn is pervasive across sectors: the services domain, a crucial contributor constituting nearly 45 percent of the GDP, witnessed a contraction of 6.5 percent, mirrored by a 6.6 percent decline in the agricultural sector and a 5.7 percent downturn in the industrial sector during 2022. This economic downturn corresponded with a tumultuous transition, pushing inflation to a zenith of 18.3 percent in July 2022, subsequently plunging into the deflationary territory from April 2023, signaling compromised economic robustness and diminished demand dynamics. While reduced food prices marginally improved household well-being, pervasive poverty persisted, significantly impacting the populace, particularly youth and women, with high unemployment rates exacerbating societal vulnerabilities. Moreover, trade complexities further compounded the economic predicament. Despite exports totaling $1.9 billion in 2022, imports surged to $6.3 billion, fostering a significant trade deficit. Import escalation by 32 percent in the initial seven months of 2023, notably in disparate sectors such as textiles, prepared food, vehicles, stone and glassware, and chemicals, intensified this asymmetry, augmenting economic strain. Revenue channels, primarily reliant on border taxes, accumulated AFN 193.9 billion ($2.2 billion) in 2022, albeit meager inland revenue despite heightened taxation efforts, delineating economic fragility. In parallel, budgetary allocations skewed prominently towards the security sector, truncating developmental expenditures and impeding long-term growth prospects. Additionally, the financial landscape

90 Bangladesh Bank, 'Survey on Impact Analysis of Access to Finance in Bangladesh', (July, 2019) https://www.bb.org.bd/aboutus/draftguinotification/guideline/financial_literacy_guidelines_draft.pdf.

91 Leora Klapper and Peter Van OudheUS$en, 'Financial Literacy Around the World: Insights from the Standard & POOR's Ratings Services Global Financial Literacy Survey', (2015), http://www.FinLit.MHFI.com.

92 Roda Mohamed Omar, 'Islamic Banking and Finance in Djibouti', (2021), http://acikerisim.karabuk.edu.tr.

93 UNCTAD, '7% Growth Target Eludes Most Least Developed Countries', (January 2022), https://unctad.org/topic/least-developed-countries/chart-january-2022.

94 Justin Damien Guenette, Philip George Kenworthy and Collette Mari Wheeler, 'Implications of the War in Ukraine for the Global Economy' (2022).

has been marred by liquidity woes and instability, with the pervasive use of informal Hawala channels for transactions compounding instability within the banking sector.[95]

Among the selected countries, **Bangladesh** has experienced a remarkable economic development tale. Over the past 15 years, its growth primarily stemmed from manufacturing, which generated numerous low-skilled jobs. Additionally, remittances and an expanding middle class have played pivotal roles in boosting private consumption. This growth has reduced poverty by over 50 percent decreasing from 49 percent in 2000 to 18.7 percent in 2022.[96] Extreme poverty rates also dropped significantly from 9 percent in 2016 to 5 percent in 2022.[97] However, to ensure sustained macroeconomic stability, it is crucial to fortify public financial management and reinforce the financial sector.

The country's economic growth has averaged 6 percent in the last decade. It also recorded an impressive 7 percent growth rate in 2021 and 2022. It aims to achieve high-income status by 2041, as expressed by the **Bangladesh** Vision 2041. However, historical trends suggest that sustaining rapid growth poses challenges, particularly in transitioning from a manufacturing-based economy to a services-oriented one. Data further indicates that middle-income countries face a higher risk of growth deceleration compared to low- and high-income countries,[98] especially as they approach a GDP per capita of $10,000-16,000.[99]

The Islamic financial sector in **Bangladesh** faces several critical challenges in the long run, including inadequate regulatory framework, a shortage of skilled workforce, and occasional shortcomings in financial services compared to its conventional counterparts.[100] Enhancing the Islamic financial sector in the country is crucial for facilitating the transition to a service-based economy, especially following substantial progress in the manufacturing sector.

While a middle-income trap is not supported by empirical evidence,[101] the ability to sustain growth actualized through rapid industrial transformation, low inflation, stronger exports, better quality education and reduced inequality for some countries.[102]

The UN General Assembly has rightly set **Bangladesh** to graduate from the LDC status and officially become a ‹Developing Country› by the end of 2026. This means that the country will be assessed on meeting at least two of the following three graduation criteria human assets; economic and environmental vulnerability; and income per capita. For this very reason, policymakers in **Bangladesh** need to prepare for the transition from middle-income targeted growth into high-income targeted growth. While there is still considerable room for growth in the manufacturing sector, it is prudent for the country to strategize for a transition to a service-based economy. The current cost advantage of labor in **Bangladesh** is expected to diminish in the coming years as wages rise, potentially leading to a loss of competitiveness—a phenomenon known as the middle-income trap. It refers to the case where growth is propelled by cheap labor until a stage where wages must be increased, which makes these countries lose their advantages while not gaining sufficient skills to compete with high-income counterparts.[103]

Hence, for the broader **Bangladesh**i economy, and specifically for Islamic finance, sustaining growth requires stronger infrastructure, investment in human capital and strengthening of the governance framework. The **Bangladesh** Vision 2041 seeks to account for that by envisioning a transition to a digital economy.[104]

95 The World Bank, 'AFGHANISTAN DEVELOPMENT UPDATE | Uncertainty After Fleeting Stability' (2023).

96 Bangladesh: Summary of the Statement of Her Excellency Bangladesh Prime Minister Sheikh Hasina. (2023, September 22). General Assembly. https://gadebate.un.org/en/78/bangladesh.

97 The World Bank, 'World Bank SME Finance' (Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital, 2023) accessed 28 November 2023.

98 Greg Larson, Norman Loayza and Michael Woolcock, 'The Middle-Income Trap: Myth or Reality?', (2016).

99 Barry Eichengreen, Donghyun Park and Kwanho Shin, 'Growth Slowdowns Redux', (2014), 32 Japan and the World Economy 65.

100 Fitch Ratings, 'Islamic Finance Growing in Bangladesh; Structural Issues Persist', (23 November 2022) https://www.fitchratings.com/research/islamic-finance/islamic-finance-growing-in-bangladesh-structural-issues-persist-23-11-2022 accessed 21 November 2023.

101 Fernando Gabriel Im and David Rosenblatt, 'Middle-Income Traps: A Conceptual and Empirical Survey' [(2013]) World Bank Group Policy Research Working Paper.

102 Larson, Loayza and Woolcock (n 37).

103 Larson, Loayza and Woolcock (n 37).

104 General Economics Division, 'Making Vision 2041 a Reality Perspective Plan of Bangladesh' (2020)

This shift is particularly relevant for Islamic banking, which has attained a market share of 25 percent. To grow beyond that market share, Islamic finance must provide superior and quality services using technology as the main enabler and making the user experience a central objective.

After experiencing a rebound in 2021, **Djibouti**'s economic activity has decreased since the beginning of 2022. Throughout the year 2022, the GDP growth rate stood at 3.6 percent, making a decline from 4.3 percent in 2021. Various factors have contributed to this downturn, including the war in Ukraine, port restrictions in China in the first half of 2022, rising prices, a severe drought, and depressed demand in Ethiopia. These developments primarily account for the tertiary sector's diminished contribution, which has been the primary driver of supply-side growth, while the private sector of domestic demand appears to be maintaining stability in the face of high inflation[105]. However, in 2023 the country witnessed a strong rebound in activity. strengthened by the construction industry and higher-than-expected port traffic, which increased at a rate of 31 percent at the end of September 2023. Furthermore, November 2023 saw a slowdown in inflation to 3.6 percent, attributed partly to reduced cheaper energy and telecommunications expenses[106]. GDP growth is therefore projected to accelerate to 6.2% in 2024 and this recovery is expected to last during 2025.

Djibouti's economy is characterized by a high unemployment rate (47 percent in 2024)[107] and a high dependency on a services sector that employs a small number of local professionals. **Djibouti** is strategically located at the Bab al-Mandab Strait.[108] Moreover, better regional connectivity, more trade, and improved access to energy and digital services are expected to significantly contribute to economic growth and poverty reduction. Some of the most important global trade routes, especially oil exports from neighboring GCC countries, pass through the strait. 7.8 million barrels of combustibles pass through the strait daily. This translates to 12 percent of sea-shipped oil and 8 percent of sea-shipped Liquified Natural Gas (LNG).[109] Therefore it is an attractive destination for international shipping companies as well as military outposts. This, coupled with its small area and population, created a services sector dedicated to shipping and military posts.[110] With these conditions, the economy has become dependent on a services sector that is yet able to employ the country's untrained labor force.[111] There is great potential for **Djibouti** to benefit from its strategic location especially as neighboring Ethiopia continues its rapid growth. However, as this potential is realized, other opportunities[112] should be seized to diversify the economy, especially considering the untapped marine resources, the tourism potential that is yet to be explored, and renewal energy opportunities including geothermal, solar and eolian energy sources.[113] The unemployment challenge stems from the insufficient training available for the local workforce to meet the demands of the services sector. Consequently, this contributes to a weak financial sector and limited financial inclusion, as a significant portion of the adult population remains outside formal employment and, therefore, does not perceive financial services, especially digital finance, as essential or beneficial.[114]

One of the recommendation areas of this report is the development of MSME financing, which

105 World Bank (2022), Bulletin de conjuncture économique pour Djibouti.

106 IMF Press Release N 24/25. Available on: https://www.imf.org/en/News/Articles/2024/01/25/pr2425-djibouti-imf-staff-completes-2023-article-iv-mission

107 The World Bank group, Djibouti Country Economic Memorandum, 'Djibouti beyond the ports and the bases: A path to properity for All', (2024), accessed 26 March 2024, http://documents1.worldbank.org/curated/en/099013124082525843/pdf/P17794913d0f7c0d319c7d125f26432112d.pdf

108 Bab el-Mandeb Strait, Arabic Bāb al-Mandab, Strait between Arabia (northeast) and Africa (southwest) that connects the Red Sea (northwest) with the Gulf of Aden and the Indian Ocean (southeast). The strait is 20 miles (32 km) wide and is divided into two channels by Perim Island; the western channel is 16 miles (26 km) across, and the eastern is 2 miles (3 km) wide. Please look for details: Bab el-Mandeb Strait | Map, Location, & Facts | Britannica

109 Ahmad Ghaddar, 'Houthi Attacks in the Bab Al-Mandab Strait Hit Global Trade' (Reuters, 19 September 2023).

110 The World Bank Group, 'Djibouti Overview: Development News, Research, Data' (2023) https://www.worldbank.org/en/country/djibouti/overview accessed 23 December 2023.

111 AfDB, 'Djibouti Economic Outlook | African Development Bank Group - Making a Difference', (2023), accessed 23 December 2023, https://www.afdb.org/en/countries-east-africa-djibouti/djibouti-economic-outlook.

112 ibid.

113 The World Bank Group, 'Djibouti Overview: Development News, Research, Data' (n 45).

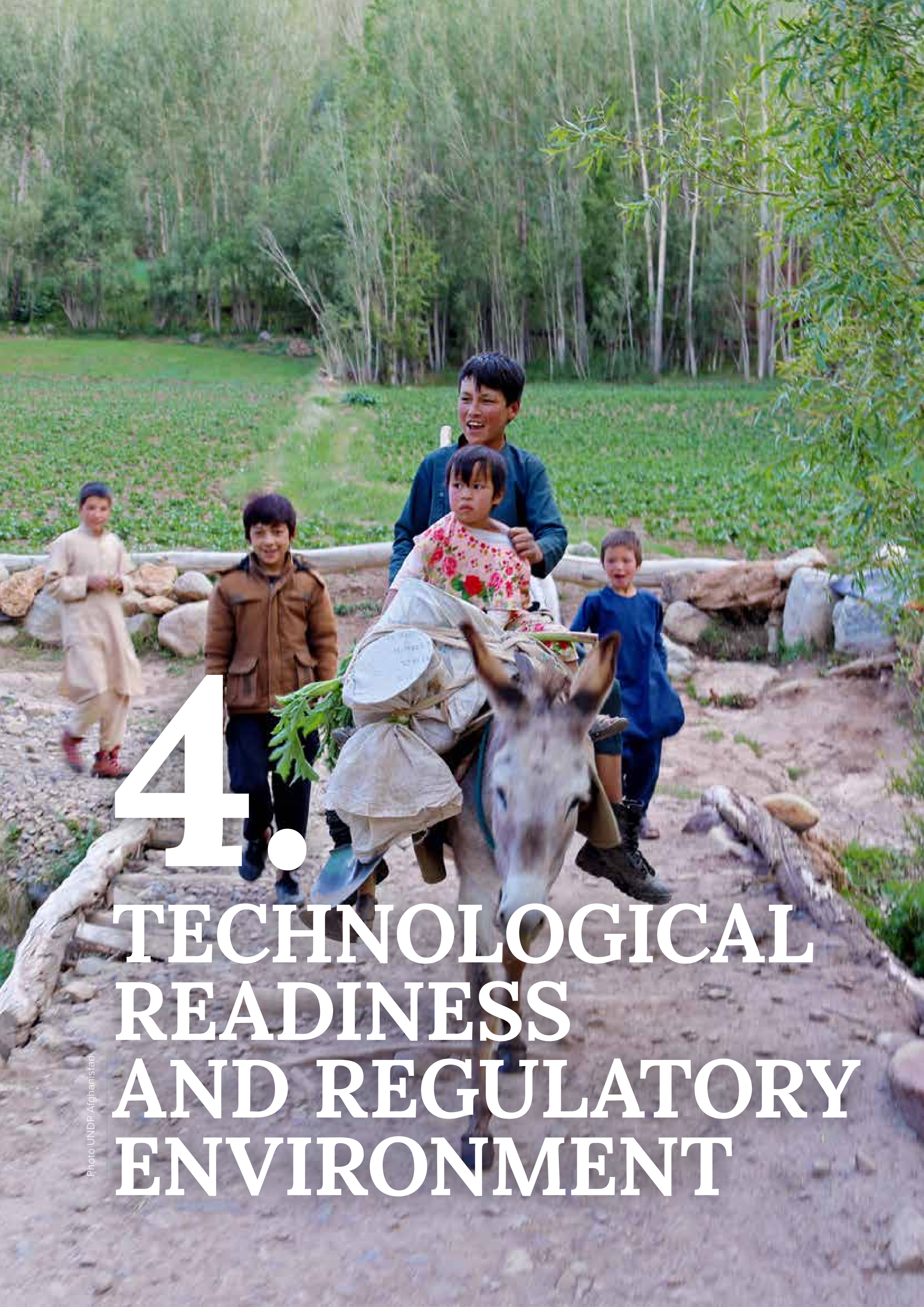
114 A2F Consulting, 'Djibouti MSME Finance Needs Assessment & Policy Recommendations Final Report' (2021) <www.a2f-c.com>.

is crucial given the potential for SMEs to offer various services essential for the shipping and trade sectors. To achieve this, governments and development agencies should prioritize training and capacity-building initiatives aimed at equipping local industries with the necessary knowledge and expertise to deliver high-quality services to international firms operating within the country. Failure to do so may result in the outsourcing of these services to foreign labor.[115]

KEY HIGHLIGHTS

- **The pandemic has had a devastating effect** on many communities in LDCs, with poverty rates increasing and overall economic growth slowing down.
- **Many LDCs are still struggling to provide basic services** such as clean water, access to sanitation and access to energy.
- **Each country has a unique set of challenges.** For some, there are international sanctions and political instability, and for others, there is a lack of a skilled labor force and reliance on a single sector.
- **Access to finance and financial literacy** are urgently needed to kick-start the efforts to address severe economic shortcomings.

115 Global Partnership for Financial Inclusion, 'G20 Financial Inclusion Indicators | Djibouti | The World Bank', (2011) <https://datatopics.worldbank.org/g20fidata/country/djibouti> accessed 3 December 2023.



4. TECHNOLOGICAL READINESS AND REGULATORY ENVIRONMENT

Photo UNDP Afghanistan

4. Technological Readiness and Regulatory Environment

Technological readiness pertains to an entity's preparedness, encompassing individuals, organizations, or societies, to effectively embrace, adopt and utilize technology within their operational framework. Therefore, this chapter seeks to assess a multifaceted evaluation, incorporating skill sets, infrastructural capacity, and the willingness to embrace technological advancements within three selected countries. Furthermore, it also analyses the regulatory environment which delineates the overarching framework of laws, policies, standards, and guidelines governing the integration, deployment and governance of technology within the countries. It outlines the ethical, legal and operational boundaries, shaping the landscape within which technological innovation operates. In the end, understanding the landscape of technological readiness and regulatory environment enables robust compliance and risk management, ensuring sustainable and lawful business activities.

4.1 Determinants of Fintech Adoption

Like any other product, Fintech services are spread by word of mouth. People tend to mimic others and build trust after seeing them using fintech. The literature suggests a positive relationship between environmental drivers and trust in consumers' intention to use fintech services, including Islamic finance transactions.[116] Furthermore, with the use of technology, the development of Islamic finance in LDCs will gain significant momentum.

The level of that development will most likely depend on the role of the government. Authorities have a significant role to play in mainly three aspects: (i) engagement with fintech operators to understand the regulatory concerns and the risks involved, (ii) partnership with other governments and international organizations to research and design policies,[117] and (iii) stimulating fintech development by mandating the use of fintech solutions for some of the public services.[118]

Most success stories of fintech technologies happened in developing countries that were suffering from an inefficient financial sector. In these countries, the development of legacy technologies for financial services was considered costly and inefficient due to the advancement of new cheaper and more efficient technologies.[119] This, however, does not mean that the countries that lead innovation in financial technology are necessarily developing countries. They benefit the most from fintech by increasing financial inclusion and diversifying financial services. However, countries that lead global fintech development in terms of volume of transactions and number of innovations are developed countries as they have the technological readiness, investment resources, and innovation capacity necessary for taking a leading position in the industry.

Although there are more mobile phone users today, fintech adoption rates vary across groups of users. First-time fintech users are commonly influenced by existing users who have experienced benefits from the technology. In a study examining factors affecting the adoption of mobile wallets in developing countries, researchers found that a user's perceptions

116 Kholoud Bajunaied, Nazimah Hussin and Suzilawat Kamarudin, 'Behavioral Intention to Adopt FinTech Services: An Extension of Unified Theory of Acceptance and Use of Technology', (2023), 9 Journal of Open Innovation: Technology, Market, and Complexity.

117 KPMG Poland, 'Governments' Role in Fintech', (2017) https://kpmg.com/pl/en/home/insights/2017/05/governments-role-in-the-evolution-of-fintech.html accessed 24 December 2023.

118 GGF, 'Fintech Uses in Public Sector and Government to Improve Services' (Global Government Fintech, 2023) https://www.globalgovernmentfintech.com/how-is-fintech-being-used-in-government-and-the-public-sector/ accessed 24 December 2023.

119 Alex Clere, 'Impact of Fintech on Developing Countries | FinTech Magazine', (Fintech Magazine, 9 May 2023) https://fintechmagazine.com/articles/how-emerging-markets-will-reshape-the-future-global-economy accessed 24 December 2023.

of usefulness and user-friendliness had a significant positive correlation with the ongoing use of mobile wallets.[120] Religious concerns are shown to be a factor in the choice of engaging in certain financial transactions. Many segments of society tend to avert certain financial institutions mainly due to religious concerns and inaccessible convenient financial tools according to their needs. The principles that govern Islamic fintech benefit the non-bankable because financial stakeholders tend to behave differently within their religious obligations.

Based on our interview with market players in **Afghanistan**, a large number of people avoid using conventional banks or financial institutions because of sensitivity towards interest. Customers are becoming more comfortable using mobile money solutions, and they are more widely adopted. Fintech solutions are an excellent opportunity for financial inclusion because people do not normally go to the bank but instead use a SIM Card for their mobile wallet. Another area of readiness involves local capabilities to develop technological solutions by talents from the country. Most applications used in **Afghanistan** are still developed in India, indicating the need to develop local talent to support the expansion of fintech services.

In **Bangladesh**, levels of technological readiness are comparatively higher than those in **Afghanistan**. In practical cases, user experience tends to significantly influence the rate of adoption of a particular service. This explains why some of the payment apps made by local Islamic banks have not been able to get a market share, according to our interviews with market players.

Studies and surveys of the **Djiboutian** market show a low rate of digital financial services among many participants, particularly among MSME founders.[121] Reasons cited included weak financial awareness programs, especially for digital solutions. Most respondents in the study conducted by the World Bank in collaboration with Agence Française de Dévelopment stated that they do not see any advantage to using any of the digital means of payment including credit cards, points of sale, and mobile payments.[122]

4.2 Internet and Mobile Phone Penetration

In **Afghanistan**, according to the International Telecommunication Union (ITU), 66 percent of men and 31 percent of women owned a mobile phone in 2021 (ITU, 2021). However, 9.23 million of the 27.49 million phones in **Afghanistan** are smartphones, and ownership is increasing by 7 percent annually. Although 68.2 percent of the population has Global System for Mobile (GSM) coverage, including coverage of both 2G, 3G and 4G4 GSM networks, mobile network coverage is limited or non-existent in areas outside the major cities. Efforts are underway

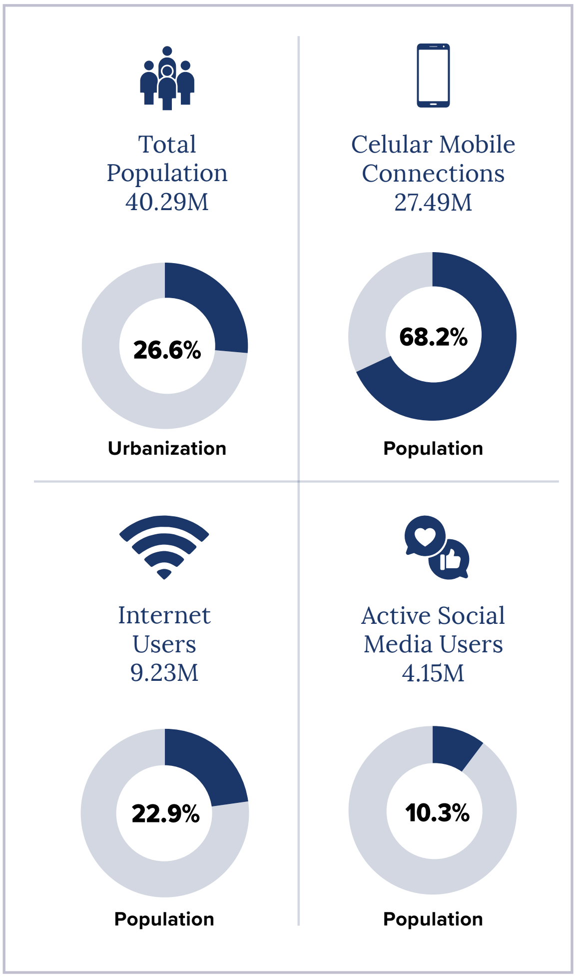


Figure 12

Essential Digital Statistics for Afghanistan

Source: DataReportal (2022)

120 Ajimon George and Prajod Sunny, 'Why Do People Continue Using Mobile Wallets? An Empirical Analysis amid COVID-19 Pandemic' [2022] Journal of Financial Services Marketing.

121 The World Bank Group and Agence Française de Dévelopment (n 51).

122 ibid.

to improve mobile network coverage in these areas, and internet access is increasing at 9 percent per year.

As a result of the prolonged conflicts, sanctions, and concentration of population in rural areas, internet and mobile phone penetration rates are still comparatively low. Only 22.9 percent of the population has access to the internet, which is too little for community financial technology. Coupled with a social media penetration rate of 10.3 percent, such a condition is strengthened by an FGD 6 finding stating that internet packages are still expensive and not affordable to most people.

In addition, people's financial and digital capabilities and awareness about mobile money services are quite low. Although it is rapidly picking up among the young generation (**Afghanistan** has the youngest population in the world outside sub-Saharan Africa), major Digital Financial Services (DFS) providers lack the appetite to go to the last mile. In the absence of a strong formal financial system, Afghans tend to trust the Hawala system, a 200-year-old honor-based network of money transfer providers, which, despite being informal, is witnessed to be convenient and efficient for the people. While efforts have been invested in establishing APS, a lack of interoperability across Financial Service Providers (FSPs) undermines the efficacy of digital disbursements. A deficiency in harmonized efforts and collaboration among FSPs, donors, and governmental entities has been noted, contributing to the prevailing challenges in this domain.

These conditions, including the lack of formal identification for some beneficiaries, hinder scaling up digital payments. In addition, mobile adoption rates are still low in rural areas and among traditionally underrepresented groups, including women, refugees and persons with disabilities, despite their rapid growth. This translates to very modest numbers for the usage of mobile payment in **Afghanistan**. In 2017, only 9 percent of Afghans had received a digital payment, and among them, only 2.7 percent were women.[123] According to the 2021 Findex data, the situation has worsened for women, with the proportion of women receiving digital payments falling to 1.6 percent.[124]

This, however, does not mean that mobile coverage is not widespread. In fact, according to our interviews with market players, one operator covers all 34 provinces of **Afghanistan**. This provides a unique opportunity for Islamic microfinance as the experience that the drivers of e-money are usually telecom companies. They also expressed willingness to partner with MFIs to develop their services.

According to the **Bangladesh** Telecommunication Regulatory Commission (BTRC), there were 63 million mobile phone subscribers in **Bangladesh** in 2011, increasing to 143 million in 2017,[125] reaching 178.61 million mobile phone subscribers and a 31.5 percent internet penetration rate as of August 2021. Smartphone penetration rate has reached only 50 percent despite a 95 percent 4G coverage rate. However, this rate is predicted to reach 59 percent by 2025.[126] Among the three focus LDCs, **Bangladesh** records the highest number in terms of internet and mobile phone penetration rates.

For **Djibouti**, the previously mentioned issues of sluggish economic growth, overreliance on one sector and high unemployment rates exacerbate, in turn, other issues like low internet penetration rate and low technological literacy. The mobile phone and internet penetration rates are 43.5% and 55.7% respectively[127]. The cost of these services is still prohibitive to most **Djiboutians**.[128] Furthermore, rural and urban households do not have equal opportunities for access to the internet (2 percent compared to 5 percent), and mobile telephones (20 percent compared to 80 percent). Similarly for female-headed households for access to the internet (20 percent compared to 25 percent for male-headed households), to mobile telephones (67 percent compared to 78 percent)[129].

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123 UNDP UNCDF, 'Interoperability of FSPs **Afghanistan**', (2023).

124 The World Bank (n 3).

125 Syed Magfur Ahmad and Abdullah Al Mamun, 'Opportunities of Islamic FinTech: The Case of **Bangladesh** and Turkey' (2020), 2 CenRaPS Journal of Social Sciences 412.

126 Forbs, 'Rise Of The Digital Operator In **Bangladesh**', (Forbs, Small Business, July 2022 https://www.forbes.com/sites/forbesbusinesscouncil/2022/07/29/rise-of-the-digital-operator-in-Bangladesh accessed 28 November 2023

127 AfDB, Country Strategy Paper 2023-2027, (2022), **Djibouti** - Country Strategy Paper 2023-2027 | African Development Bank Group (afdb.org)

128 AfDB, 'Horn of Africa Banking Forum' (2019).

129 **Djibouti** Gender Profile, 2019, AfDB — UN Women.

4.3 Regulatory Environment

Regulation has always followed innovation and not the other way around. Most countries are still choosing which path to follow: to adapt existing regulations to fintech services, to create bespoke regulations for fintech, or to arrange test environments through sandboxes.[130] Regulatory authorities make the choice after considering the local environment. Nonetheless, the fintech regulatory environment needs to have a few essential components mainly related to anti-money laundering and terrorism financing, banking regulations, cyber security, national ID registry and privacy laws. It is worth noting that many LDCs, including the focus countries of this report, lack on this front. Based on the FGD conducted with financial professionals from the three LDCs, no specific regulation has yet been introduced for fintech services other than e-money.

Cybersecurity is a critical concern, with increasing risks of cybercrime and fraud that necessitate robust regulatory measures to protect consumer data and financial transactions, especially in the implementation of fintech solutions for LDCs within the OIC. As these countries increasingly rely on digital financial services, they become more vulnerable to cyber threats. To protect consumers and maintain trust in the ecosystem, strong cybersecurity procedures are essential such as implementing data protection laws, establishing secure digital identification systems, and continuously monitoring and managing cyber risks. According to the World Economic Forum (WEF), cybersecurity is fundamental to ensuring that consumers and businesses can leverage the benefits of fintech safely. This is necessary for economic recovery and development, particularly in a post-pandemic world where digital financial services are becoming more prevailing[131].

ITU has launched projects to enhance cybersecurity in LDCs, aiming to strengthen their capabilities to respond to cyber risks. These initiatives focus on developing nationwide cybersecurity strategies, improving legal and regulatory frameworks, and building technical expertise. Such efforts are designed to maximize the socio-economic benefits of access to ICTs in a secure environment, thereby supporting sustainable development[132]. Furthermore, the rapid digitalization of financial institutions has amplified cybersecurity challenges. The increasing number of cyberattacks highlights the need for effective cybersecurity solutions that go beyond mere compliance. As fintech continues to grow, maintaining robust cybersecurity practices is essential for protecting financial data and ensuring the resilience of digital financial services[133]. OIC LDCs must enhance their capabilities to address new challenges, reduce vulnerabilities, and minimize damage from cyberattacks. It is essential for all public and private entities to operate with confidence in the digital environment, manage trusted data effectively, and ensure the protection of privacy[134].

Fintech sectors face various common regulatory challenges in LDCs that impede its growth and integration into the global financial ecosystem such as follows. First is the lack of a well-defined regulatory framework, which creates significant uncertainty for fintech startups and investors. This regulatory ambiguity makes it difficult for companies to navigate licensing processes and comply with ever-evolving rules. Second is, LDCs have limited technological infrastructure and low levels of digital literacy among the population add layers of complexity, restricting fintech adoption and effectiveness. Finally, the political and economic instability in these countries further complicates the regulatory landscape, deterring foreign investment and making it challenging to establish a stable operational environment for fintech companies[135].

The chief of fintech regulations in **Afghanistan** is the Electronic Money Institutions (EMI). It applies to all e-money providers in **Afghanistan**,

130 Parma Bains and Caroline Wu, 'Institutional Arrangements for Fintech Regulation', (2023), 2023 IMF Fintech Notes 1.

131 WEF (2020), The Great Reset requires FinTechs – and FinTechs require a common approach to cybersecurity, https://www.weforum.org/agenda/2020/07/great-reset-fintech-financial-technology-cybersecurity-controls-cyber-resilience-businesses-consumers/

132 https://www.itu.int/en/ITU-D/Cybersecurity/Pages/CYBLDC.aspx

133 Barnes, Angela (2022), Cybersecurity in Fintech: Challenges and prospects, https://capital.com/cybersecurity-in-fintech

134 IsDB (2020), Information and Communications Technology (ICT) Sector Policy, Jeddah, https://www.isdb.org/sites/default/files/media/documents/2020-01/Information%20and%20Communications%20Technology%20%28ICT%29%20Sector%20Policy.pdf

135 EMTECH (2024), The Current State of Fintech Regulation: Challanges and Opportunities, https://emtech.com/the-current-state-of-fintech-regulation-challenges-and-opportunities/

even if they are domiciled outside the country. It exempts banking institutions, which shall be licensed under a separate regulation. It also exempts all institutions that acquired licenses before the issuance of the regulation. At first, these suggest the key issue of the conflicting regulations which require more attention for the government to look deeper into its own regulatory landscape while collaborating continuously with other agencies and experts on this matter. Second, according to interviews with market players, despite the obstacles mentioned, the de facto government is encouraging investors to return to **Afghanistan**. Rather than solely offering credit facilities, they emphasize the importance of providing security and personal protection to foster confidence and trust in the business community, recognizing their significance for economic growth. As the formal financial system navigates these changes towards Islamic finance, informal financial networks continue to operate, adding complexity to the overall situation. **Afghanistan**'s economic landscape is in flux, underscoring the need to find practical and context-specific solutions to ensure progress and stability. Thirdly, a specific issue for **Afghanistan** involves international sanctions. Actors in the fintech space need to vet their beneficiaries when transferring international aid to avoid being sanctioned. Nonetheless, the market players who participated in the interviews seem to agree that the existing body of regulation is sufficient. The following table highlights the relevant regulatory fields and their corresponding regulations in **Afghanistan**.

In **Bangladesh**, **Bangladesh** Bank is the supervisory and regulatory authority for banking institutions, while the Microcredit Regulatory Authority (MRA) is responsible for all microlenders. Scepticism surrounding the development of Islamic financial institutions has been dispelled.[136] Moreover, Islamic finance has recently been shown to be important in attracting a significant part of the voluntarily financially excluded. Fintech services are governed by both the **Bangladesh** Bank and **Bangladesh** Telecommunication Regulatory Commission (BTRC).). Interviewees among **Bangladeshi** market players indicated three separate aspects of policy and regulations when it comes to digital financial institutions: (i) Digital Bank (DB), a digital bank shall obtain a license from **Bangladesh** Bank under Section 31 of the Bank Company Act 1 (BCA) 1991 and must comply with the provisions of **Bangladesh** Payment and Settlement Systems Regulations 2014 to carry out banking business in **Bangladesh**, (ii) Islamic microfinance institutions need to obtain a license from the Microcredit Regulatory Authority (MRA), and (iii) Third, the Vision 2041, one of the priority agendas of the current government is the implementation of a Digital **Bangladesh**.[137] The table below lists fintech-enabling regulations in **Bangladesh**.

In **Djibouti**, there are no specific regulations for Islamic microfinance. There are two financial regulations in **Djibouti**, the first is ''Loi n°111/AN/11/6ème L relative à la lutte contre le

CLUSTER	CORRESPONDING REGULATIONS
Anti-Money Laundering	Amendments to the Anti-Money Laundering and Proceeds of Crime
Digital ID	Population Record Art 1
Electronic Money	Electronic Money Institutions Regulation 2021
CDD	Amendments to the Anti-Money Laundering and Proceeds of Crime
Cyber Security	Cyber Crime Code Section 12
Electronic Payment/ Transactions	Electronic Money and Payment Regulation 2021
Digital Banking	Regular Banking

Table 2

Fintech Enabling Regulations in Afghanistan

Source: (World Bank, 2023)

136 **Bangladesh** Bank, 'Developments of Islamic Banking in **Bangladesh**' (2022)

137 http://oldweb.lged.gov.bd/uploadeddocument/unitpublication/1/1049/vision%202021-2041.pdf

CLUSTER	CORRESPONDING REGULATIONS
Anti-Money Laundering	Money Laundering Prevention Act, 2012
Digital ID	National Identity Registration Act 2010, Sec. 5
Electronic Money	**Bangladesh** Payment and Settlement System Regulation, 2014
CDD	Money Laundering Prevention Act, 2012
Cyber Security	Information and Communication Technology Act 2006
Electronic Payment/Transactions	The Information and Communication Technology Act, 2006
Data Protection	Digital Security Act, 2018
Digital Banking	Regular Banking

Table 3

Fintech Enabling Regulations in Bangladesh

Source: (World Bank, 2023)

terrorisme et autres infractions graves'', which covers anti-money laundering, cyber security, and digital banking,, and the second is Law No. 112/AN/11, which covers CDD. However, there is no legislation on electronic money and electronic payment in **Djibouti** (World Bank, 2022). **Djibouti** regulations on Islamic fintech are facing some challenges: (i) lack of adequate regulations, (ii) a widespread perception that microfinance operations in the country do not conform to Sharia, and (iii) lack of standardization of Islamic finance practices due to differences among the schools of Islamic thought. (IRTI, 2018)

Based on the findings, all LDCs lack specific regulations for pure fintech services such as crowdfunding. This will include the regulatory framework for its legal operation, robust Anti-Money Laundering procedures, and also clear mechanism to protect investors. They are important in enabling the fintech services operate within framework that protects investors and consumers, maintains financial integrity and promote trust in the fintech ecosystem. Many startups are still navigating the uncertainties of existing regulations. Another particularly important finding isisthat regulatory development and policymaking are only passive activities seeking to prevent

CLUSTER	CORRESPONDING REGULATIONS
Anti-Money Laundering	Loi n°111/AN/11/6ème L relative à la lutte contre le terrorisme et autres infractions graves (Chapter 3).
Digital ID	Decret No. 2015-345/PR/MI
Electronic Money	No Legislation Identified
CDD	Law No. 112/AN/11
Cyber Security	"Loi n°111/AN/11/6ème L relative à la lutte contre le terrorisme et autres infractions graves" covers anti-money laundering, cyber security and digital banking (Chapter 4)
Electronic Payment / Transactions	No Legislation Identified
Data Protection	No Legislation Identified
Digital Banking	No Legislation Identified

Table 3

Fintech Enabling Regulations in Bangladesh

Source: (World Bank, 2023)

malpractice. It should take a proactive approach to integrating fintech services into the public sector like postal offices, license payments, passport offices, etc.

4.4 Shariah Compliance through ShariahTech

The key difference between conventional and Islamic financial institutions is the objective of adherence to Sharia principles. Financial institutions seeking to become Sharia-compliant must establish a system to certify, verify and audit their Sharia compliance. From previous experience, countries have learned that this system needs support from the regulatory and supervisory authorities. Sharia governance standards are to be developed in addition to systems to build professional Sharia capacity. There also need to be institutions specialized in formulating Sharia standards to unify the practice at least locally, if not internationally. The integration of technology in Shariah-compliant finance, referred to as ShariahTech, can enhance these governance processes, ensuring efficient, transparent, and compliant operations within IMFIs.[138]

The current Sharia governance framework lacks specific guidelines for supervising Sharia compliance with fintech operations. Regulators, particularly in OIC countries, need to address this gap to ensure consumers› confidence in these services. Future regulations should focus on consumer protection, market conduct, and the impact of technology on financial market stability in alignment with Sharia principles promoting public welfare (Maslahah). Islamic fintech firms operating under this framework should also adhere to service standards, transparency, funding, and reporting requirements. Proper Shariah governance is crucial for ensuring fintech operations fully comply with Sharia, thereby minimizing compliance risks and potential disputes.[139]

Based on the results of FGDs, focus LDCs do not have any formal system for Sharia governance, i.e. there is no requirement by the regulatory authorities to adopt a specific governance structure. Most institutions rely on individual Fatwa and operate without formal guidance or regulations that specify the scope of legality for their Sharia transactions. Sharia compliance adds another layer of regulation. As LDCs improve their financial infrastructure, Sharia governance should be considered by establishing institutions, standard setters, supervisors, auditors, etc.

In **Afghanistan**, the abrupt change of regime in 2021 meant that many conventional financial institutions had to either close or transform their operations in a challenging environment. The current de facto government has been trying to implement Islamic law as official law. Consequently, the financial system should be based on Islamic principles. As a result, interest-based financial institutions, including conventional banks, microfinance, insurance, etc., are prohibited from operating in the country. Therefore, the political context provides a great opportunity for developing Islamic microfinance with fintech or Islamic micro-fintech in **Afghanistan** to promote financial inclusion.

As stated by interviewees, Sharia governance in **Bangladesh** has a unique feature, with Non-Governmental Organizations taking the role of issuing independent Fatwa for Islamic finance. The Central Sharia Board for Islamic Banking and Finance (CSBIB) has issued guidelines on conducting Islamic banking in addition to relevant and proper criteria for the members of Sharia Boards.

Bangladesh ranked 14th in the 2020 Islamic Finance Development Index (IFDI). It also ranked 5th for Sharia governance indicators, broadly demonstrating its Sharia governance frameworks for Islamic finance. This may have been because **Bangladesh** had the most Sharia scholars representing Islamic Finance Institutions in 2020, with a total of 190 scholars. **Bangladesh**'s Securities Exchanges and Commission plans to establish a centralized Sharia committee. **Bangladesh** has opportunities for Islamic fintech in creating emerging Islamic finance markets.

Islamic banks in **Djibouti** are subject to the same legal and regulatory standards as conventional banks, and they are exclusively governed and overseen by the Banque Centrale

138 Md. Kausar Alam, Fakir Tajul Islam and Mahfuza Kamal Runy, 'Why Does Shariah Governance Framework Important for Islamic Banks?' (2021) 5 Asian Journal of Economics and Banking; Bangladesh Bank, 'Developments of Islamic Banking in Bangladesh' (2022)

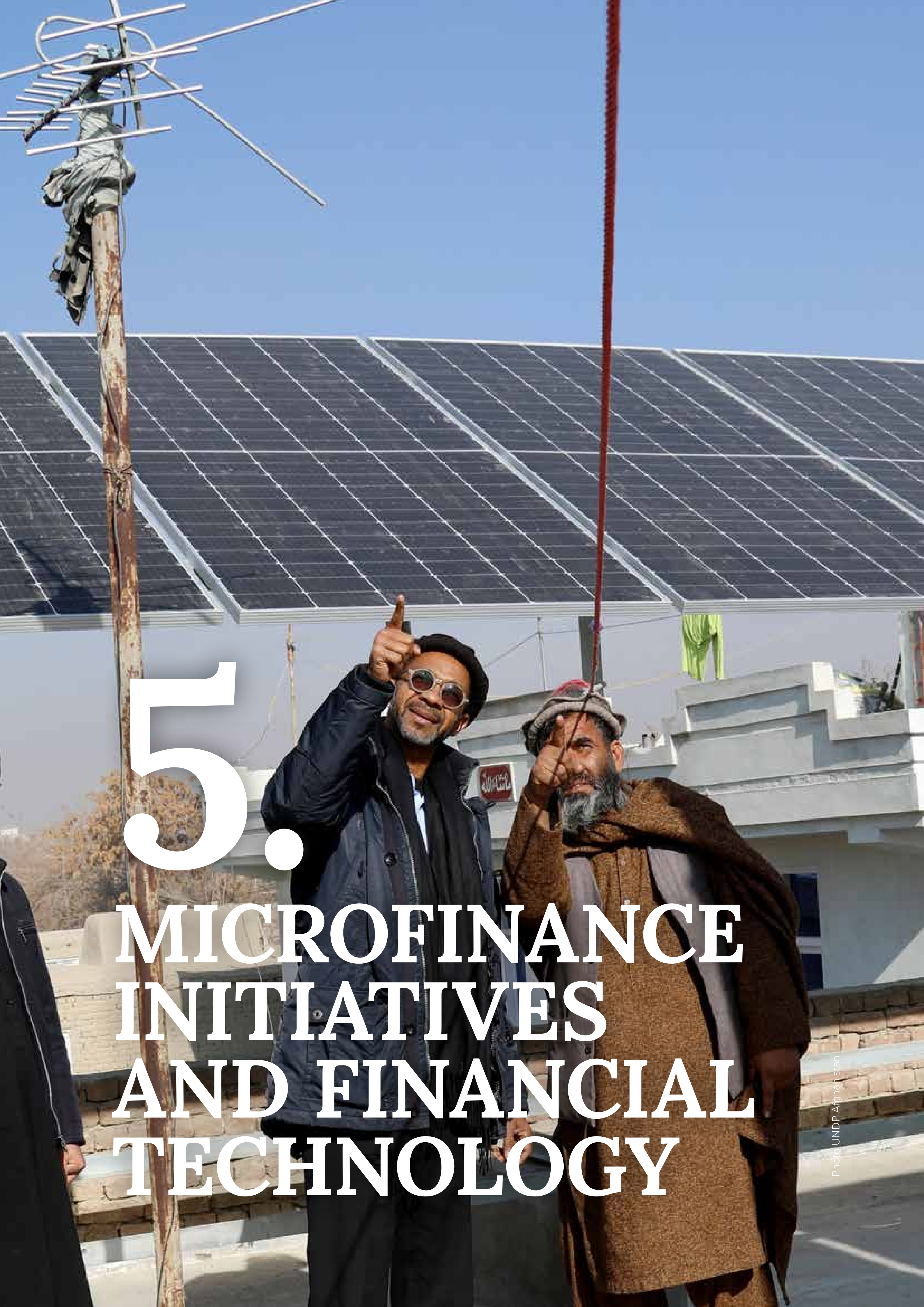
139 Mohamad Akram Laldin, 'Fintech and Shariah Governance' [2017] IFN Correspondence Reports.

Djibouti (BCD). In January 2011, **Djibouti**'s central bank introduced a regulation permitting the creation of Islamic banks within the same regulatory framework of conventional banking. Yet, to better facilitate Islamic banking practices, the government took further steps in 2015 by forming the National Shariah Committee (NSC). This independent body operates within the Central Bank of **Djibouti** but falls directly under the President's leadership. Its establishment aimed to enhance governance in Islamic finance, ensuring compliance with Shariah principles in product development, procedures and auditing.

In general, as most fintech services involve fund transfers, Sharia compliance is currently not a major concern for existing fintech services. It may become a concern once fintech services venture into the realm of financing.

KEY HIGHLIGHTS

- **An enabling regulatory framework** is a prominent component of a country's preparedness for adopting technology.
- **Technologies spread organically** through word of mouth and other marketing activities.
- **Religious and ethical considerations** play a part in the rate of adoption of any financial services, which creates a need for Shariah compliance services for which technology can be used in the form of Sharia-tech.
- **In many LDCs, internet access is still limited and expensive,** which, in turn, limits the development of fintech.



5. MICROFINANCE INITIATIVES AND FINANCIAL TECHNOLOGY

Photo: UNDP Afghanistan

5. Microfinance Initiatives and Financial Technology

The microfinance concept that originated in **Bangladesh**, has since been adopted in numerous LDCs and other developing countries. Its significance is twofold. Firstly, microfinance is inclusive, extending financial services to remote and predominantly impoverished regions. Secondly, it is sustainable, largely because it finances often agrarian and environmentally friendly activities. This dual benefit of inclusivity and sustainability is a key aspect of the impact and growth of microfinance globally.

Recent technological developments also present additional opportunities to grow microfinance beyond small loans and limited reach in rural areas. It promises to provide an opportunity for microfinance customers to access a wider suite of services to break the barrier for LDCs into more rapid and diverse growth. This section shall further explore the role of technology-based microfinancing in the financial sector development.

5.1 Microfinance's Role in Economic Development

The introduction of inclusive financial systems has gained popularity, particularly among donors and financial institutions targeting poverty.

Microfinance in **Afghanistan**, both due to its existing size and outreach, has significant potential for economic empowerment through facilitating access to finance. According to the figures as of Q2 2021 before the recent political turmoil, seven existing microfinance institutions (MFIs) in **Afghanistan** reached 963,371 active clients; thereby, these institutions had the potential to touch the lives of roughly more than 7-8 million Afghans (18% of the total population).[140] When we consider the non-financial activities of MFIs carried out to develop the clients› capacity along with main financial offerings (micro-credit and micro-savings), their supporting role and importance for the economic development of the society become more certain.

Bangladesh holds a pioneering position when it comes to microfinance. A **Bangladesh**i national, Muhammad Yunus won a Nobel Peace Prize for his role in developing microfinance. Grameen Bank has played a pivotal role in reducing poverty and empowering women in **Bangladesh** by offering unsecured microfinance to the community. As a leading microfinance institution, Grameen Bank has established its presence in 94 percent of the country's villages, and it has effectively served 45 million impoverished individuals in **Bangladesh**, with 98 percent of the beneficiaries being women.[141] Although conventional microfinance is regarded as a success story in **Bangladesh**, the full potential is yet to be reached due to some voluntary financial exclusion as a large portion of the population averts conventional financial services for religious reasons.

Implementing Islamic microfinance in **Bangladesh** has the potential to enhance financial inclusion among un-bankable individuals, ultimately reducing poverty and inequality. The implementation of Islamic microfinance can provide an ethical and inclusive financial system that aligns with religious beliefs and values. By incorporating principles such as Zakat (charitable giving) and profit-sharing, Islamic microfinance can effectively empower marginalized individuals and communities, offering them sustainable pathways out of poverty. With a 90 percent Muslim population, **Bangladesh** is the third largest Muslim country in the world. However, Islamic microfinance has yet to realize its full potential. It accounts for only 3-5 percent of the microfinance sector in the country. The reasons for this limited development of Islamic microfinance in **Bangladesh** are multifaceted

140 According to the "United Nations, Department of Economic and Social Affairs, Population Division (2019). Database on Household Size and Composition 2019." average household size (number of members) in Afghanistan is eight. Hence, the MFIs could have the potential to reach 7,706,968 (963,371 X 8) indirectly.

141 Grameen Bank, 'Grameen Bank Introduction' accessed 14 January 2024

and include: a lack of visionary leadership, negative attitudes from some conservative religious leaders, insufficient motivation from top management of Islamic banks, absence of clear guidance from regulatory authorities, limited availability of appropriate financial instruments, inadequate funding, ineffective utilization of Zakat funds, and shortage of trained professionals in the industry. Despite this potential, Islamic microfinance in **Bangladesh**, faces the following challenges: (i) the lack of enabling policy and regulatory environment, (ii) ensuringensuring Shariah compliance, (iii) ensuringensuring the sustainability of Islamic microfinance products, (iv) the absence of product diversification, (v) limitedlimited assets, (vi) lack of proper government support, (vii) shortageshortage of experts in Islamic microfinance and (viii) lacklack of Islamic Microfinance Institutions in rural areas.[142]

Adopting an Islamic microfinance model can promote financial inclusion in impoverished communities and contribute to poverty reduction and inequality alleviation. Unlike conventional microfinance models, this model incorporates distributive and risk-sharing mechanisms, enhancing its effectiveness in addressing the needs of marginalized populations. The experience of interest-based microfinance has shown that it can help the underprivileged receive a break in terms of their income. However, without graduation to formal financial services, the income levels of those beneficiaries will remain within the region of micro-income. It is, therefore, important to make channels that transfer customer accounts from microfinance into formal finance.

Djibouti has numerous potential opportunities to benefit from the development of Islamic Microfinance. With a significant portion of the **Djibouti** population having limited access to finance, including microfinance products and services, there exists a chance to expand the reach of this sector further, thereby enhancing financial inclusion. Islamic microfinance presents itself as a valuable tool to address this gap. Additionally, the widespread rejection of conventional microfinance products globally due to Sharia-compliance issues highlights the potential for **Djibouti** to meet the rising demand for Sharia-compliant microfinance products, thus positioning itself as a leader in the Islamic finance sector. Moreover, leveraging existing informal financial practices in **Djibouti**, such as savings clubs, can serve as a foundation for innovative savings products offered through regulated financial institutions, including Islamic microfinance entities. Furthermore, **Djibouti** stands to benefit from the support of various international institutions, including the IsDB and UNDP, which have consistently supported the country's microfinance sector, thereby contributing to its overall economic development.[143]

According to the World Bank, **Djibouti** could enhance its economic resilience and foster diversification by leveraging the potential of microfinance which entails reforming the microfinance sector by restructuring the CPECs (opening to private capital, partial privatization of administration and management, etc.) and opening the sector to private MFIs. Also, as part of the World Bank recommendations, product diversification and increase of coverage essentializes supporting the development of the Islamic microfinancing sector through inclusion in risk-sharing mechanisms, a particularity of Islamic financial structures that extends access to financial services and builds institutional capacity to increase financial inclusion and SME financing[144].

5.2 The Role of Islamic Fintech in Developing Financial Systems

Fintech services are growing globally, especially in developing countries. Revenues are expected to grow sixfold this decade from $245 billion to $1.5 trillion. The growth of fintech is expected to account for the majority of the growth of the whole financial industry.[145]

Although Asia accounts for most of the growth of fintech services among developing markets, the African continent is making strides in this field. Almost 10 percent of all transactions in Africa are made using fintech, generating a

142 Muhammad, N. M, (2022), 'Islamic microfinance in Bangladesh: opportunities and challenges'. Asia Proceedings of Social Sciences, 9(1), 161-162.

143 UNDP (2022), Assessment Study on Islamic Microfinance in Djibouti.

144 World Bank (2024), Djibouti Country Economic Memorandum:Djibouti beyond the ports and bases: Apath to prosperity for all. Available on: https://documents.banquemondiale.org/fr/publication/documents-reports/documentdetail/099013124082525843/p17794913d0f7c0d319c7d125f26432112d

145 Deepak Goyal and others, 'Global Fintech 2023: Reimagining the Future of Finance' (2023).

revenue of approximately $ 4-6 billion. In the space of only one year from 2021 to 2022, the number of tech startups on the continent tripled to 5,200, half of them fintech.[146] According to estimates from McKinsey, financial services in Africa are projected to grow by 10 percent annually, reaching a volume of $230 million by 2025.[147]

Fintech is counted on to expand the reach of Islamic microfinance. It provides individualized options and financial services that are more affordable.[148] Fintech's role in increasing financial inclusion is well-established as it makes it significantly more accessible and convenient to open bank accounts, transfer money and make payments. This report aims to highlight other advantages regarding ease of finance and making it more affordable.

The most significant advantage of fintech would be the availability of data. This solves some of the most intrinsic issues for financial services, i.e., asymmetry of information, management of adverse selection and moral hazard risks. In practice, it would make the KYC (Know Your Costumers) tasks significantly easier. Customer profiles can be studied based on their cashflows. Linked with information about the origins and destinations of cashflow, an accurate picture can be drawn of the customer's ability to re-pay. This will help in the decision-making process about an SMEs, MSMEs and households› creditworthiness. A significant barrier to SME financing can be removed by unlocking limitless abilities to grow the economy, developing new industries and creating many job opportunities.

As we observed earlier with APS in **Afghanistan**, central banks act as facilitators for the co-integration of payment systems. This enables them to collect data on the movement of cash throughout the economy and leverage the data collected to enhance the financial infrastructure in the country. Central banks and other government agencies can improve economic planning and policymaking with data. Most importantly, with data, the use of funds can be traced upon request to ensure that microfinance facilities are not abused. There were documented cases of microfinance facilities being overused to create unsupportable indebtedness, worsening the condition of the beneficiaries instead of improving them.[149]

The ability to track cashflows will enable the approval of financing remotely, which is the next big step for fintech. Thus far, most of fintech's success has been payments and fund transfers. According to market players, dominant services are still limited to cash-in, cash-out, top-up, international remittance payments, loan payment and repayment, merchant services (restaurants, etc.), mobile banking integrations and salary disbursement.

Applications for financing are mostly still made in person and hard documents. The ability to approve financing remotely will, for example, make conducting Murabaha financing easier. It may enable an arrangement of Murabaha as follows:

I. The beneficiary uses its mobile device to file an application remotely assisted with AI to fill the digital literacy gap.

II. Thanks to an automated process, the islamic MicroFinTech can verify the creditworthiness of a beneficiary via an API allowing access to Central Bank's credit rating system.

III. Based on central bank requirements, the Islamic microfintech service provider approvesapproves or not the Murabaha financing 'based'based on 'the'the creditworthiness.

IV. Since goods suppliers participate in the Islamic microfintech service, the fintech institution can channel the price of goods directly to the supplier and appoint them as agents to sell them to the beneficiary.

V. Since the beneficiary is also participating in the Islamic microfintech service, or at least in a service that belongs to the same ecosystem managed by the central bank, the fintech service can credit, with the debt of Murabaha, the beneficiary's account after they receive the goods from the supplier.

VI. Based on a protocol by the central bank, a plan to use the cashflow received by

146 McKinsey & Company, 'Fintech in Africa: The End of the Beginning' (2022).

147 McKinsey & Company (n 2).

148 Ahmad and Mamun (n 65).

149 Gavin Finch and David Kocieniewski, 'How Microfinance Pushes Poor Borrowers Deeper in Debt in Developing Economies' (Bloomberg, 2022) https://www.bloomberg.com/graphics/2022-microfinance-banks-profit-off-developing-world/ accessed 27 November 2023.

the beneficiary to pay their credit will be developed.

From the example above, when data is collected, the central bank will be able to provide detailed creditworthiness reports about the suppliers and beneficiaries. By extrapolating the usage of this facility, suppliers can request inventory financing, which can be made in the form of Mudharaba. Thereby, an SME financing scheme can be developed.

In addition, a portfolio of Mudharaba financing can be securitized and sold as units to investors through mobile applications. It can be used for liquidity management for all fintech institutions. A secondary market can be created to trade securitized Mudharaba portfolios. As a result, multiple products can be created using the fintech ecosystem, and access to those products can be made easier. Most importantly, the risk associated with Mudharaba and other partnership contracts can be mitigated and managed. Later, in section 5, a detailed proposal will be presented. It will be mainly for **Afghanistan** but can be adapted to other LDCs including **Djibouti** and **Bangladesh** with few modifications.

5.3 Opportunities for SME Financing

SMEs are well known to play a major role in economic development, particularly in developing countries.[150]

SMEs create jobs, develop new technologies, and sometimes even create new whole sectors making paradigm shifts and creating new economic revolutions. On average, 90 percent of all companies in any given economy are SMEs, and they employ approximately 50 percent of the worldwide workforce, contributing up to 40 percent of the GDP in emerging economies. Many SMEs, being unable to obtain credit financing, resort to MFIs or, in some countries, informal financial services (smaller than banks) with legal entities such as group-based lending and cooperatives.[151]

According to the International Finance Corporation (IFC), 40 percent of MSMEs in developing countries cannot meet $5.2 trillion of their financing needs, i.e. 140 percent of the current level of MSME lending.[152] The lending gap varies worldwide, with Latin America, the Caribbean, the Middle East, and North Africa regions having the highest gaps between financing demand and supply, reaching above 87 percent.[153] There is a consensus that financial technology can change this reality.[154] There are services unique only to fintech, including crowdfunding and peer-to-peer lending. The distinct feature of these services is that they enable the public to engage in investment and independently assess the opportunities.

SMEs depend on informal finance mainly in one of two scenarios: (i) informal finance is used as a last resort by SMEs that fail to access credit from the formal finance sector,[155] or (ii) there is low financial literacy and the absence of credit bureaus. New technologies, such as mobile fintech solutions including mobile saving accounts, online credit applications, peer-to-peer (P2P) lending and other methods, are effective in addressing poverty rates in many developing economies.[156]

The numbers on SME financing in **Afghanistan** highlight the large gap that should be bridged. In 2018, outstanding SME loans represented only 0.17 percent of the GDP, the lowest figure among similar economies in the region. Access to financial resources remains a significant obstacle for Afghan businesses, with a mere 3.9 percent of firms relying on banks for their working capital expenses and only 0.8 percent utilizing banks for investment purposes. However, there exists an estimated credit

150 The World Bank Group, 'Implementation Completion and Results Report on a Grant to the Islamic Republic of Afghanistan' (2021).

151 World Bank Group, 'World Bank SME Finance' (Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital, 2023) <https://www.worldbank.org/en/topic/smefinance> accessed 28 November 2023.

152 'Comprehensive New Data Reassesses the MSME Finance Gap in Developing Countries' (International Finance Corporation, 3 November 2017) accessed 14 January 2024.

153 World Bank Group, 'World Bank SME Finance' (Improving SMEs' access to finance and finding innovative solutions to unlock sources of capital, 2023) <https://www.worldbank.org/en/topic/smefinance> accessed 28 November 2023.

154 Mari Elka Pangestu, 'Fintech and Financial Services: Delivering for Development' (World Bank Blgos, 2023) <https://blogs.worldbank.org/voices/fintech-and-financial-services-delivering-development> accessed 28 November 2023.

155 Athenia Bongani Sibindi and Olipha Mpofu, 'Citation: Mpofu, Olipha, and Risk and Financial Management Informal Finance: A Boon or Bane for African SMEs?'

156 Reza Ashari Nasution, Devi Arnita and Dwine Fatimah Azzahra, 'Digital Readiness and Acceptance of Mobile Advertising' (2021) 29 Australasian Marketing Journal 95.

demand exceeding $4.7 billion for MSMEs, underscoring a substantial opportunity within the Afghan market.[157]

A similar story can be told about **Djibouti**'s MSME sector. SME loans account for only 12 percent of the small lending portfolio of the local financial sector. Many SMEs are not furnishing reliable financial statements. Many of them avoid formalizing their documentation due to an inefficient taxation system. With these conditions, banks are even more reluctant to provide financial services to entities without reliable documentation.[158] Although MSMEs in **Djibouti** benefit to a limited degree from lending services, they do have access to other finances. Nearly all SMEs have a bank account, while 58 percent of micro-enterprises have one. Formality predicts a high degree of confidence in an SMEs access to finance. 87 percent of formal businesses have a bank account, while only 22 percent of informal businesses have one. Moreover, access to loan accounts is significantly influenced by the size of the SME.[159]

Bangladesh has a thriving MSME sector. It accounts for 90 percent of the jobs in the private sector, contributes 25 percent of the GDP, and makes up 99 percent of all economic enterprises, as there are 7.5 million MSMEs registered in the country. Furthermore, 88 percent are categorized as micro-enterprises.[160] The demand for finance in the informal sector stands at 52 percent of the formal demand, amounting to a significant sum of $29 billion. However, when we focus on the estimated finance demand within the broader MSME segment, it soars to $57 billion. Regrettably, only 33 percent of this demand, equivalent to $19 billion, is presently met by available financial resources. This stark discrepancy between demand and supply creates a pronounced finance gap estimated at $39 billion, accounting for 67 percent of the potential demand.

Delving deeper into this finance gap, we observe that SMEs bear the brunt, constituting a substantial 93 percent of the overall gap, equating to $36 billion. This distribution aligns with the ownership pattern, with WMSMEs accounting for a mere 6 percent of the gap ($2.5 billion) compared to their male counterparts (94 percent or $36.4 billion). Furthermore, when we break down the finance gap by enterprise types, micro-enterprises exhibit a higher degree of unmet demand, with 86 percent ($2.8 billion) of their financial needs remaining unaddressed. Although comparatively lower, SMEs still grapple with a substantial 67 percent of unmet demand, accounting for $36 billion.[161]

Within the intricate interplay of gender and enterprises, WMSMEs confront a more substantial finance gap, tallying up to $2.4 billion, translating to a staggering 96 percent of their financial requirements going unfulfilled. The picture resembles male-owned SMEs, with a significant 95 percent facing a finance gap. Regarding constraints faced by enterprises, both SMEs and micro-enterprises find themselves in similar predicaments, with 48 percent of SMEs and 56 percent- of micro-enterprises reporting partial or complete constraints regarding access to finance. Moreover, a notable proportion of these enterprises, 32 percent of SMEs and 40 percent of micro-enterprises declare that they are fully constrained in their ability to secure the needed financial resources. WMSMEs mirror this pattern, with 42 percent reporting full constraints, while 33 percent of their male-owned MSME counterparts find themselves in the same challenging situation.[162]

5.4 Efforts to Develop Agriculture Finance through Bio & Agri-Tech

Agriculture is a significant contributor to the economic growth of most developing economies. It provides food security, reduces poverty, and generates significant employment. As of 2018, agriculture accounted for more than 25 percent of the GDP in developing countries, and it is estimated that 65 percent of poor working adults depend on agriculture for their livelihoods.[163] The agriculture sector in emerging markets often still relies on outdated tools and methods. This sector

157 Da Afghanistan Bank (n 32).

158 AfDB (n 67).

159 A2F Consulting (n 49).

160 The Daily Star, 'Fueling Growth: The Evolving Landscape of SME Financing in Bangladesh' (2023).

161 The Daily Star (n2).

162 Sidratul Muntaha, 'Women in Business: A Shifting Narrative' (Dhaka Tribune, 12 August 2023) https://www.dhakatribune.com/opinion/op-ed/322335/women-in-business-a-shifting-narrative accessed 21 December 2023.

163 The World Bank, 'Agriculture and Food: Development News, Research, Data' accessed 14 January 2024

faces numerous challenges, such as the high labor intensity of farming without modern equipment, limited access to data and markets, dependency on intermediaries, and difficulties in securing formal finance due to a lack of collateral and insufficient data for credit risk assessment. Additionally, the sector struggles to attract younger generations due to low-income prospects and is impacted by extreme weather events linked to climate change, which adversely affect crop productivity.[164]

In **Afghanistan**, The Agricultural Development Fund (ADF), under the coordination of the Ministry of Agriculture, Irrigation and Livestock, plays a vital role in supporting the financing of the agricultural sector. As explained earlier, the agricultural sector in **Afghanistan** significantly contributes to its GDP (36 percent of GDP in 2021).[165] Therefore, land utilization, the creation of new jobs and the technological development of the agricultural industry are some of the important agendas for economic recovery in **Afghanistan**.[166] The ADF has an intermediary position in the agricultural value chain for financial and non-financial institutions, and, has worked with banks, micro-finance institutions, credit unions and leasing companies. According to the Ministry of Finance, ADF resumed its operations in early 2023 with Islamic financing mechanisms.

Currently, ADF financing portfolio consists of 80 percent Islamic and 20 percent conventional loans. The remaining conventional loans will be converted gradually by deploying a Sharia supervisory board and Sharia advisors to adjust the financing contracts. The introduction of the new changes in **Afghanistan** is expected to have a significant impact, particularly on agricultural MSMEs in rural areas that are not already covered by financing. To date, an aggregate sum of 11 billion Afghanis has been allocated towards bolstering agricultural advancement, facilitating the prosperity of 60,000 farmers across 34 provinces. This sustained initiative aligns with the ADF program's inception in 2019. As per the benchmarks stipulated by the High Council, the ADF effectively dispensed $16 million to agribusinesses and financial intermediaries spanning diverse **Afghanistan** provinces, surpassing the targeted disbursement of $13.5 million by an impressive 19 percent Leveraging ADF loans, beneficiary agribusinesses witnessed a remarkable upsurge of 163 percent in export sales, outperforming the anticipated growth of 75 percent Similarly, while the domestic sales goal was also set at 75 percent the borrowers achieved a commendable augmentation, elevating domestic sales to 56 percent.[167] Therefore, ADF is an important element of the model to ensure the financing activities of MFIs, especially in rural areas. To keep pace with technological advances, the ADF is expected to develop technology-based products and applications, such as Shariah-compliant Agri-Tech. On the non-financial side, the ADF should provide technical assistance and training to MFIs and their clients in agribusiness. This will support the success of both micro-enterprises and MFIs and even the country's overall economy by creating new value chains.

In **Bangladesh**, The Agriculture Credit Program, launched by the **Bangladesh** Bank (BB) for the fiscal year 2010, requires all banks to actively participate in lending for a wide range of rural economic activities, both on and off the farm. Banks have access to refinancing alternatives from the **Bangladesh** Bank to help with this. The BB has committed a significant amount of Tk 11,500 crore (approximately $1 million) to its Annual Agricultural/Rural Credit Policy and Program for the fiscal year 2009-10. The BB has pioneered a refinance scheme of Tk 500 crore (approximately $458 thousand), channeled through NGO links - a first-of-its-kind initiative - to enhance institutional loan access for sharecroppers. The BB has built a sophisticated three-stage monitoring system to properly implement the agricultural loan program, demonstrating its commitment to ensuring the program's success. Furthermore, to increase financial inclusion, farmers can now create bank accounts for as little as Tk 10 (equivalent to $1), increasing access to formal banking services for this critical group.[168]

164 Homi Kharas, John W. McArthur and Izumi Ohno, Breakthrough: The Promise of Frontier Technologies for Sustainable Development (Brookings Institutions Press 2022)

165 The World Bank, Afghanistan Development Update, October 2023, Retrieved from https://thedocs.worldbank.org/en/doc/210d5f24dc33a3460beff3447fceadcf-0310012023/original/Afghanistan-Development-Update-20231003-final.pdf

166 ADF, 'The Agricultural Development Fund (ADF) Afghanistan' (The Agricultural Development Fund (ADF)) accessed 14 January 2024.

167 ADF, 'The Agricultural Development Fund (ADF) Afghanistan' (The Agricultural Development Fund (ADF)) accessed 14 January 2024.

168 Bangladesh Bank, 'Impact Assessment of Agricultural Credit Program for the Sharecroppers in FY16 Implemented by BRAC under Refinancing Scheme of Bangladesh' (2017).

Djibouti's agricultural industry is underdeveloped, hindered by its arid climate and limited arable land. This leads to a persistent food shortage, as agricultural output only meets 10 percent of the population's dietary needs. Climate change, prolonged droughts, the impacts of the COVID-19 pandemic, repercussions from the conflict in Tigray, and global events like Russia's invasion of Ukraine have further escalated food insecurity. These factors have driven up food prices and disrupted global supply chains. Despite government efforts to lower consumer costs through subsidies, "food and non-alcoholic drinks" prices rose by 10 percent in the initial five months of 2022. Anticipated figures show a rise in acute food insecurity from 132,000 individuals (March-June 2022) to 192,000 (July-December 2022). Development partners continue to focus on the agricultural sector for improvement.[169]

The **Djibouti** Emergency Food Security Crisis Response Project aims to establish a reserve of emergency food supplies to enable the government to swiftly address potential food shortages in the event of market disruptions, mitigating the adverse impact, especially on vulnerable populations. It is considered to provide support to about 8,000 households, encompassing farmers and livestock herders, by enhancing their access to clean drinking water and irrigation and implementing activities to restore their livelihoods. It is projected to reach to approximately 21 percent of **Djibouti**'s total rural population, with a focus on prioritizing households headed by women and young individuals. The project encompasses financing agricultural inputs to bolster crop and fodder production, establishing small greenhouses with drip irrigation to enhance agricultural yield and adapt to climate shifts, and providing essential resources for livestock farming.[170] The International Fund for Agricultural Development (IFAD) has launched multiple projects to support agricultural and food resilience in **Djibouti**. The Integrated Water Resources Management Project and Soil and Water Management Programme aimed to develop community-driven rural development through capacity building of grassroots beneficiaries, to diversify livelihood systems and to improve the management of natural resources.[171] In addition, the Intergovernmental Authority on Development (IGAD) has partnered with the IsDB to initiate The Drylands Project for **Djibouti**. With a budget of $15 million, it is aimed to assist the Ministry of Agriculture in "achieving sustainable livelihoods and improving community services such as community health services, education, livestock, fisheries, agricultural production in drylands and veterinary services."

Still, it is expected that challenges will be mainly related to the limited arable land, the dependency of local people on livestock and the low level of literacy. It can be inferred that for **Djibouti**, digital finance for agriculture may not be the most pressing need because of their specific conditions. For other LDCs with a significant amount of arable land, **Afghanistan** and **Bangladesh** included, the development of digital finance for agriculture may need new partnerships between previously unrelated actors.[172] For example, financing needs are usually community-based, and there is a need to introduce new relationships between agents and telco providers on one side and community leaders on another. Fintech service with the most potential in the agriculture sector would be digital payment solutions in addition to online marketing of produce. Financing needs may still need to rely on physical relations, considering the nature of supply chains in the sector.[173]

5.5 Status of Microfinance Initiatives

5.5.1 Microfinance in Afghanistan

At the outset, **Afghanistan** had more operational microfinance institutions. However, political changes, security issues, and various other factors have impacted the sector by shrinking the number of active players. Based on FGD findings, the ban on conventional microfinance affected the sector, and the

169 Federal Reserve, 'Consumer Price Inflation for Djibouti (DJIPCPIPCHPT) | FRED | St. Louis Fed' (2022) https://fred.stlouisfed.org/series/DJIPCPIPCHPT accessed 29 December 2023.

170 The World Bank Group, 'Development Projects : Djibouti Emergency Food Security Crisis Response Project - P178988' (2023) https://projects.worldbank.org/en/projects-operations/project-detail/P178988 accessed 29 December 2023.

171 IFAD, 'Country Strategic Opportunities Programme Djibouti' (2019) https://www.ifad.org/en/web/operations/w/country/djibouti accessed 29 December 2023.

172 IFC World Bank, Digital Financial Services for Agriculture - Handbook (2018).

173 IFC World Bank, Digital Financial Services for Agriculture - Handbook (2018).

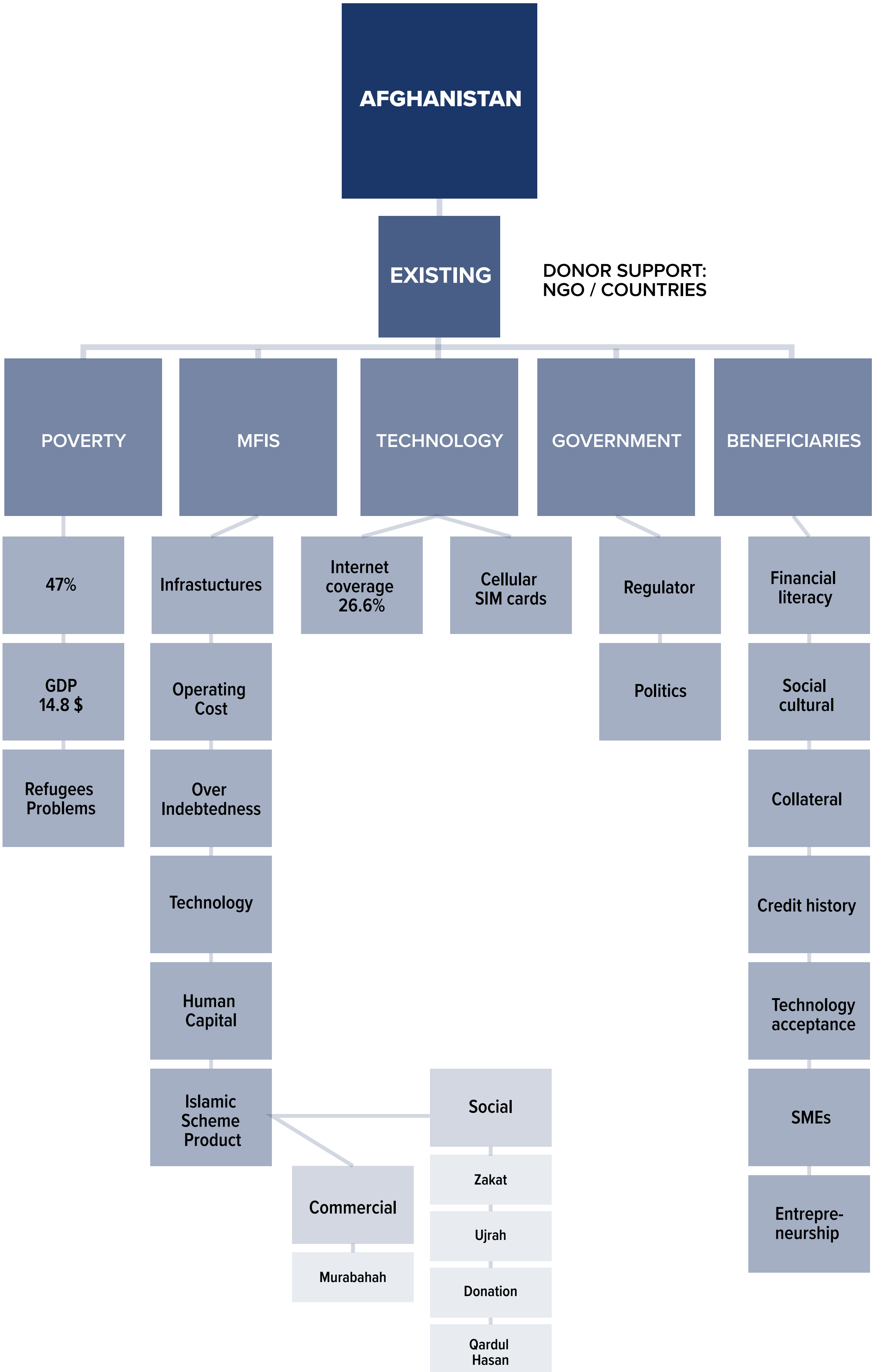


Figure 13

Afghanistan Microfinance Ecosystem

Source: AMA interview

drain of grants and support resulted from the evacuation of international organizations and foreign entities, was also a supplemental cause for cessation of activities by some MFIs.

The **Afghanistan** Microfinance Association (AMA) was established in 2005. It has been actively involved in advocating for legislation and fostering human capital development in the microfinance sector. However, the move towards an interest-free model has not been without challenges, especially for microfinance institutions that heavily relied on donor support. The abrupt withdrawal of aid has left many, including AMA, struggling to adapt to the new rules and requirements.

The country's microfinance sector began in the early 2000s with support from international donors to incentivize MFI to set up operations in remote areas. Fifteen MFIs were operational in 24 out of 34 provinces of **Afghanistan**. These MFIs have a total gross loan portfolio of about $1.2 billion and serve around 227,000 borrowers.[174]

MFIs in **Afghanistan** are facing a significant challenge since they have not been able to accrue interest on their outstanding loan portfolio since August 2021. Liquidity is currently one of the major challenges -possibly the most important since it directly affects their survival- faced by MFIs since the new regime only allowed MFIs to collect principal amounts from their outstanding loans by prohibiting the return (interest) part. Furthermore, the MFIs could not generate any new income because new loan disbursing is not permitted by the regime due to the non-Shariah-compliant nature of their products, except Murabaha and several products for FMFB-A. Consequently, there has been a notable decline in all key indicators within the sector. The portfolio-at-risk has surged to 31 percent well surpassing the sustainable threshold of 5 percent.[175] With no alternative income sources and a sharp drop in repayment rates, MFIs are grappling with substantial liquidity and solvency problems, mirroring the challenges seen in the banking sector. While the newly established body, Research Center for Islamic Banking and Contemporary Issues (RCIBCI), has recently endorsed Islamic lending products (Murabaḥa and Ijarah) for MFIs, their capacity to resume lending remains constrained due to these liquidity and solvency issues.

To address this challenge, there are also attempts to bring microfinance services closer to communities with the aid of telecom companies, as indicated by some market players in **Afghanistan**. For example, mHawala is a money transfer service by Etisalat **Afghanistan** used to transfer humanitarian aid, employee salaries, vendors, etc. As shall be discussed, most of the use of technology in microfinance is limited to money transfer. There should be concrete steps to simplify request submission, grant and loan approvals and procurements.

5.5.2 Microfinance in Bangladesh

The microfinance sector in **Bangladesh** comprises a mix of government-supported programs, non-governmental organizations (NGOs), and private entities. Grameen Bank, BRAC (formerly known as **Bangladesh** Rural Advancement Committee) and various other NGOs have been instrumental in extending financial services to the grassroots level.

The Islami Bank **Bangladesh** Limited (IBBL) is a private-sector Islamic bank and the first of its kind in South Asia. It provides Islamic microfinance services in **Bangladesh**, holding a significant market share of 78.4 percent among other Islamic microfinance providers.[176] IBBL developed the Rural Development Scheme (RDS), an innovative channel for Islamic microfinance that caters to the needs of the rural Muslim impoverished in **Bangladesh** who were previously excluded from conventional microcredit due to religious beliefs.[177] In the first year of operation, RDS served 3,334 individuals, totaling Tk 9.1 million disbursed and 84 percent of the beneficiaries were women. As of 2012, the RDS had expanded from four pilot branches

174 Azizuddin Sultani and Chandrashekhar. R, 'Role of Microfinance Institutions on Women Empowerment in Afghanistan' (2023) 14 IOSR Journal of Economics and Finance 30 www.iosrjournals.org.

175 The World Bank Group, 'Implementation Completion and Results Report on a Grant to the Islamic Republic of Afghanistan' (n 73).

176 UNDP, 'Scaling up Islamic Microfinance in Bangladesh through the Private Sector: Experience of Islami Bank Bangladesh Limited (IBBL)' (2017).

177 AFI, 'Estimated 40 Million People Could Stand to Access Formal Financial Services through Islamic Finance - Alliance for Financial Inclusion' (Alliance for Financial Inclusion) https://www.afi-global.org/newsroom/blogs/estimated-40-million-people-could-stand-to-access-formal-financial-services-through-islamic-finance/ accessed 3 December 2023.

to 13,378 villages across 61 of **Bangladesh**'s 64 districts, disbursing Tk 45086.32 million to 624,591 beneficiaries. Notably, 94 percent of the beneficiaries were women, and 41 percent of the recipients were aged between 18 and 30 years.[178]

Even though the majority of the population of **Bangladesh** is Muslim and has success of experiencing Islamic banking, Islamic microfinance accounts for only 3-5 percent of the total microfinance sector. It is noted that the conventional interest-based microfinance industry holds about 95 percent of the market share, leaving Islamic microfinance with a relatively small portion of around 5 percent This indicates a significant disparity between the two types of microfinances in the country. The reasons for this limited development of Islamic microfinance in **Bangladesh** include, as briefly mentioned above, a lack of visionary leadership, negative attitudes from some conservative religious leaders, insufficient motivation from top management of Islamic banks, absence of clear guidance from regulatory authorities, limited availability of appropriate financial instruments, inadequate funding, ineffective utilization of Zakat funds and a shortage of trained professionals in the industry. Addressing these challenges is crucial for unlocking the full potential of Islamic microfinance in **Bangladesh** and ensuring its broader impact on financial inclusion and poverty alleviation.

5.5.3 Microfinance in Djibouti

Microfinance was introduced in **Djibouti** back in the 1990s through several institutions, such as CARITAS. Still, it was only institutionalized in 2000 with the establishment of the Social Development Fund (Fonds Social de Développement (FSD). Since 2004, the government has recognized microfinance development as a critical sector in the Strategic Framework for the Fight against Poverty. Toward that end, **Djibouti'**s government has worked on structuring an efficient network of local microfinance institutions covering the entire territory and capable of providing financial and non-financial services adapted to the needs of the most disadvantaged. It has benefited from donors such as the Islamic Development Bank (IsDB). The government's commitment to the microfinance sector in **Djibouti** has been demonstrated through various measures aimed at developing and strengthening MFIs. These initiatives include enacting a microfinance law and establishing a national microfinance committee responsible for formulating an inclusive microfinance strategy covering economic, political and social aspects. Additionally, a national microfinance strategy has been adopted, outlining the goals and priorities for the sector from 2019 to 2023. In 2022, the country officially launched the National Financial Inclusion Strategy to accelerate the access of **Djibouti**an citizens and enterprises to affordable and useful financial services.

The ecosystem of the Islamic microfinance sector in **Djibouti** can be classified into four main groups: Microfinance Institutions and support entities, Commercial Banks, International Financial Institutions and regulatory authorities. Firstly, microfinance support institutions such as Agence Djiboutienne Development Social (ADDS) and microfinance institutions such as People's Savings and Credit Unions (CPEC), and the Islamic Microfinance Pilot Unit (IMPU) play a fundamental role in offering financial aid to impoverished people. Secondly, commercial banks also play a role in the microfinance ecosystem in **Djibouti**. While their involvement may be more limited compared to specialized IsMFIs, commercial banks, such as Banque Al Baraka **Djibouti**, Banque de **Djibouti** Orient SA and Salam African Bank, may provide basic financial services such as deposits, withdrawals, and transfers. Thirdly, International Financial Institutions, such as the African Development Bank and the Islamic Development Bank, provide funding and technical support to microfinance institutions. Finally, regulatory authorities, like the Central Bank and the Ministry of Finance, establish and enforce the necessary regulations and guidelines to ensure the stability, transparency and soundness of the microfinance industry.

Public authorities such as the Central Bank of **Djibouti** (CBD) and Agence Djiboutienne de Development Social (ADDS) have been tasked to supervise the growth of the microfinance sector. The government has also collaborated with the IsDB and the African Development Bank (AfDB), which provide financial support, capacity building and other forms of assistance to MFIs.

178 M Mizanur Rahman, M Jafrullah and Anm Tawhidul Islam, 'RURAL DEVELOPMENT SCHEME OF ISLAMI BANK BANGLADESH LIMITED (IBBL): ASSESSMENT AND CHALLENGES', vol 16 (2008).

The microfinance sector in **Djibouti** has experienced a gradual evolution since its introduction through the Fonds Social de Développement (FSD) project. Currently, microfinance services are provided by one conventional Credit and Saving Institution operating via three main subsidiaries (CPEC de **Djibouti** ville, CPEC du Sud, and CPEC du Nord) and one Islamic Microfinance Pilot Unit (IMPU) (Unité Pilote de Microfinance Islamique). It is worth noting that while only 4 percent of the population utilizes microfinance services, a significant portion of the population, approximately 70 percent, remains excluded from regulated financial services. This also affects MSMEs as they account only for 1 percent of the loans provided by the "Caisses Populaires d'Épargne et de Crédit (CPEC)".

In 2019, the Islamic Microfinance Pilot Unit launched a program to cater to the financial needs of SMEs through Murabaḥa. In addition, the UNDP and ICPSD have been providing technical assistance and conducting studies to aid the country in furthering its strategy to strengthen SME financing. Training programs and collaborative agreements were signed with three local Islamic banks. Moreover, three Islamic banks from **Djibouti** (Salaam African Bank, Saba African Bank and East Africa Bank) signed a fund management agreement with the **Djiboutian** government to develop and offer Islamic microfinance in their banking system.[179] The microfinance sector is growing, but access to financing remains very limited.[180] There is a widespread reluctance to engage in fintech services. Even though 24 percent of the adult population holds an account in a financial institution, only 5 percent received a government payment or a private sector wage into an account.[181] In terms of borrowing, only 12.5 percent borrowed formally, including using a credit card; in counterpart, 54 percent borrowed money informally from a savings club or family and friends, and 12.5 percent borrowed formally, including using a credit card. The ecosystem of the Islamic microfinance sector in **Djibouti** can be seen in the following figure.

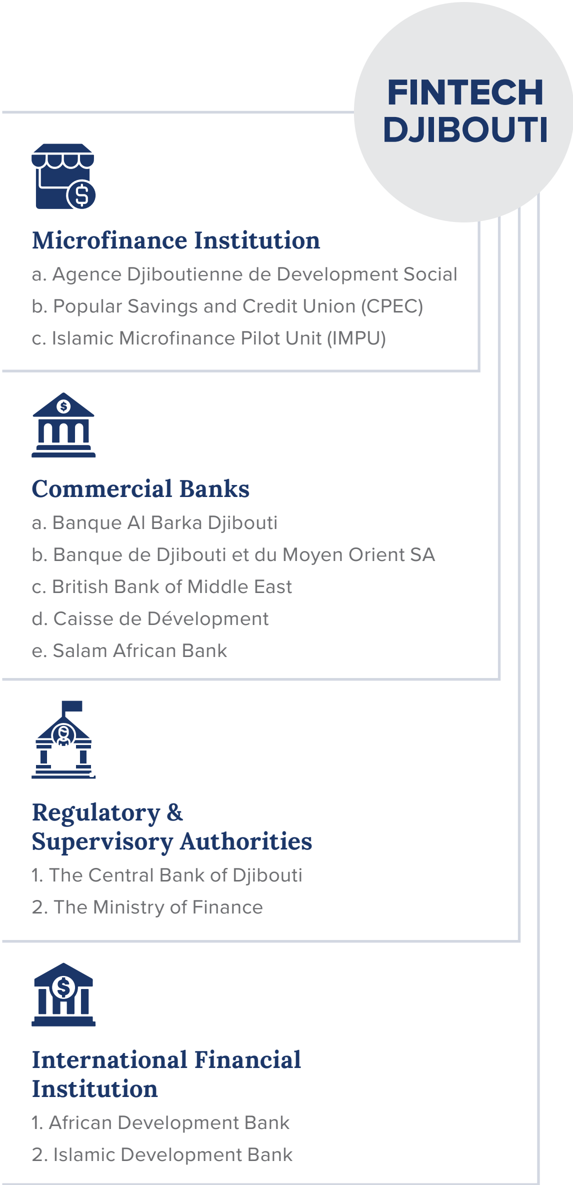


Figure 14

Fintech Enabling Regulations in Djibouti

Source: UNDP (2022)

The Caisse Populaire d'Epargne et de Crédit de Djibouti (CPECD)

The **Djibouti**'s Caisse Populaire d'Epargne et de Crédit (CPEC) is the primary microfinance institution of **Djibouti**, established in 2008. After two years of operation, the CPEC and Caisse Nationale d›Epargne et de Crédit (CNEC)

179 GIFIIP, 'Enhancing the Economic Resilience of Vulnerable SMEs in Djibouti through Technical Assistance and Capacity Development in Islamic Finance - GIFIIP' (2023) accessed 15 December 2023.

180 Global Partnership for Financial Inclusion (n 50).

181 Demirgüç-Kunt, Asli, Leora Klapper, Dorothe Singer, Saniya Ansar. 2022. The Global Findex Database 2021: Financial Inclusion, Digital Payments, and Resilience in the Age of COVID-19. Washington, DC: World Bank.

funds decided to merge the narrowness of the national market, and the strong competition between the two institutions of microfinance pushed the authorities to proceed with their merger and, therefore, to retain only one. The institutional merger of the two funds gave birth in April 2010 to the new fund called Caisse Populaire d'Epargne et de Crédit de **Djibouti** (CPECD). There are 3 CPECDs, one in the city of **Djibouti** (the largest), CPECD North and CEPECD South. All of them suffer from governance issues and a lack of financial sustainability. For example, the CPECD has been under receivership by the central bank due to management problems. Regardless of its problems, participation in the CPEC of **Djibouti** surpassed 14,000 in 2014, comparable to 2-3 percent of the country's adult population. The balance of credit circulated by the institution is still insignificant (under 0.2 percent of the total bank credit) inferable from a lack of financial resources. This is because the relations between commercial banks and microfinance actors are limited to current operations (e.g. deposits, withdrawals and transfers). Commercial banks do not provide credit lines for microfinance activities, nor do they cover refinancing.

The Djiboutian Social Development Agency (ADDS)

The **Djibouti**an Social Development Agency's (ADDS) role is to structure and institutionalize microfinance activities and provide financial and logistic support through donors and partners for the sector's development. The IMPU was established in Balbala, **Djibouti** in 2012 through a collaborative effort between the government agency ADDS and the IsDB.

The Islamic Microfinance Pilot Unit

The Islamic Microfinance Pilot Unit was established in Balbala, **Djibouti**, in 2012 through a collaborative effort between the government agency ADDS and IsDB. To commence its operations, the pilot unit obtained a temporary license from the CBD and began offering Murabaḥah products exclusively in December 2019. As part of the collaboration between the Government of **Djibouti** and the ADDS, a grant of $1 million was provided to finance the microfinance project. Over 75 percent of this grant has already been disbursed. Furthermore, ADDS officials have approached the IsDB to seek technical assistance in transforming the microfinance unit into a fully-fledged Islamic microfinance institution.

Initially, the Balbala project has targeted five popular neighborhoods around the Balbala district (Old Balbala, Quarawill, Bahache, Cheick Osman and Cheick Moussa), with 20 percent of funding going to the other five regions. The pilot unit aimed to provide integrated financial aid for the poor, especially women and unskilled young people.

Governmental structures

The public authorities have clearly defined a legal and regulatory framework to promote the development of the microfinance sector in **Djibouti**. It also enabled the establishment of a Reflection Committee on Microfinance (CREM) (comité de Réflexion sur la Microfinance), which is placed under the supervision of the Central Bank of **Djibouti**. Due to the absence of credit lines between banks and microfinance institutions in **Djibouti**, several international donors[182] participate directly or indirectly in financing microfinance activities.

The financial structure of the Caisse Populaire d›Epargne et de Crédit de **Djibouti** (CPECD) remains quite fragile. It generates deficit results, especially when it does not receive subsidies from the state through the ADDS and international donors.[183] Consequently, the low financial resources of the CPECD significantly impact the loan portfolio, which translates to a limitation in the number of microfinance loans.

Islamic microfinance assets represent only 4 percent of all microfinance assets in **Djibouti**. Data shows that 79 percent of financings are less than $1.700, 18 percent are between $1.700

182 The United Nations Development Program (UNDP); The African Development Bank (AfDB); The Islamic Development Bank (IsDB); The International Fund for Agricultural Development (IFAD); The United Nations High Commissioner for Refugees (UNHCR); The World Health Organization (WHO); The World Food Program (WFP); The United Nations Organization for the Fight against AIDS (UNAIDS); The United Nations Population Fund (UNFPA).

183 Ibrahim Robleh (2015), Microfinance et réduction de la pauvreté : le cas de Djibouti, Economies et finances. Université de Picardie Jules Verne.

to $5.600, and only 3 percent get financing between $5.600 and $14.000.[184]

Despite its importance, financial inclusion remains very low, with only 30 percent of the adult population having access to financial services. As of 2020, only 26 percent of adults had a bank account,4 percent were customers of CPEC, the country's microfinance institution and only about 10 percent of adults officially have an outstanding loan from a commercial bank.[185]
One of the factors contributing to the limited financial inclusion in **Djibouti** is the lack of appeal of traditional financial institutions to the unbanked population. Given that the microfinance business model specifically addresses the requirements of low-income households and micro-enterprises, it would be challenging to enhance financial inclusion without leveraging microfinance.

5.6 Examples of Fintech Initiatives

The impacts of Islamic fintech on Islamic social finance have increased the reach and diversifying product offerings. Examples include the development of a model to enhance social justice through Zakat in **Bangladesh** by utilizing donation-based crowdfunding. Integrating Zakat into a donation-based crowdfunding model is an innovative Islamic fintech approach that can contribute towards improving the socio-economic potential of Zakat in **Bangladesh**. Below are detailed examples of digital finance.

5.6.1 Digital Finance in Afghanistan

Our interview with market players from **Afghanistan** indicated that despite the difficulties following the events of August 2021, the de facto authority is closely working with fintech providers to provide the utmost support. It has an on-site examination team and is trying to scale this technology across civilian sectors, including passport payments.

DAB works to assist banking institutions in minimizing operational risk. By providing short-, medium-, and long-term lending to SMEs, DAB will work to encourage financial institutions to actively participate in economic activities. Many people, especially those in remote areas, lack access to formal financing due to the limited financial infrastructure,, and financial illiteracy. The complex problem necessitates a novel approach instead of standard conventional care, such as expanding bank branches and ATMs. Poor financial literacy, a lack of infrastructure, a sizable informal economy, and regulatory concerns are some problems in the emerging financial industry.

In addition, **Afghanistan** is currently undergoing a significant transformation in its financial sector as the new authorities have mandated a transition towards an interest-free, Sharia-compliant model. To facilitate this change, the RCIBCI, as a government wing, has intensified its efforts by establishing an Islamic finance research department responsible for developing new regulations.[186] While progress has been made, approvals remain limited, including the endorsement of Murabaḥa transactions for financial institutions.

The APS is a fundamental pillar in **Afghanistan**'s financial setting. It runs under the auspices of the respected DAB, the country's central bank, highlighting its commitment to creating a technologically advanced and robust economic environment. APS acts as the nation's nerve centre, arranging ideal electronic and mobile payment transactions.

The APS was created in 2011, resulting from a combined effort of the United States Agency for International Development (USAID), the World Bank and a consortium of FSPs. The APS supported various payment channels, including mobile payments, internet banking and card payments. The vision was to create a single interoperable system for all FSPs to drive efficiency among market players and provide incentives for individuals and MSMEs to accept electronic payments over cash for salaries, aid disbursements and other financial transactions (i.e. merchant payments, utility bill payments, loan payments, etc.). Common rules and protocols for payment providers translate into services that are more affordable and convenient for everyone, in particular for those

184 Mohamed Omar (n 54).
185 MFW4A, 2021
186 Introduction of Research Center for Islamic Banking and Contemporary Issues | (n.d.) AfGOV (asa.gov.af)

in the last mile.[187]

At its foundation, APS is committed to developing game-changing solutions beyond standard banking paradigms. It has unfurled a tapestry of possibilities for government, consumers and businesses through a repertory of innovative electronic and mobile payment systems. These services have not only altered how financial transactions are handled, but they have also instilled a revitalized feeling of dynamism and ease in the retail banking realm.

In another detailed report by the UNDP and UNCDF, the APSs history and stages of development were analyzed. Since 2017, the APS transformed into a government agency under the auspices of the DAB. This has reduced membership fees, which removed the barriers for Mobile Money Operators (MMO) and Payment Institutions (PI)) to participate in the ecosystem. Although between2020 and 2021, significant progress was made in terms of interoperability between bank accounts, similar progress was yet to be made in MMOs and PIs. After the events of August 2021, DABs ability to settle transactions was severely impacted. Banks could no longer depend on their balances with the DAB, and the operational capabilities of the APS were hard to sustain as fee collection dwindled and technical staff left the institution.[188]

According to a previous report, DAB has licensed only four SMMOs: Roshan (M-Paisa), Etisalat (mHawala), MTN (MoMo) and Afghan Wireless (My Money). Two licenses were granted to two PIs: HesabPay and Refah Payment Services. These PIs currently operate across 34 provinces and have a network of over 24,500 agents (of which 12 percent are women) using points of sale (POS) and mobile applications. The reach of these MMOs is still limited, serving less than 1 percent of the country's population [189] through a network of around 9,828 registered agents, mostly located in major cities (according to DABs Non-Banking Financial Institution Supervision Department). Their services mainly consist of airtime top-ups, bill payments and store value accounts, which are driven by Unstructured Supplementary Service Data (USSD) and are not interoperable.[190]

The payment institutions are interoperable e-payment solutions that rely on APS, commercial banks, and mobile money operators (MMO) to handle daily transactions. They enable payment services that include the cash in, cash out, transfer of funds, bill pay, donations, e-taxation, payroll and more.

Some characteristics of the market, including the reluctance of many to engage with formal banking institutions, provided an opportunity for telecom companies to be the carrier of service. They have been taking up shares in the market, according to market players. In terms of funding, telecom operators are well-funded and mobile operators are strong financial supporters of fintech solutions. Our interviews with some market players showed promising outlooks as the current microfinance practices make good use of financial technologies. Loan repayments are now made through mobile wallets instead of cash payments in person, which are expensive, inefficient and require a person to travel to beneficiaries to collect payments. However, impressive as they may be, these efforts are still unable to reach their full potential due to reasons mentioned in section two relating to political issues, low mobile phone penetration rates and low financial literacy. Development efforts, therefore, should focus on infrastructure and delivering financial services that align with people's values.

5.6.2 Digital Finance in Bangladesh

The rapid use of financial technology is bringing about a new era of inclusion in **Bangladesh**'s financial industry. Fintech services are being used by the banking industry in **Bangladesh** to adapt to the shift in technology, particularly by private commercial banks. The private commercial banks in **Bangladesh** provide 13 mobile-based fintech services, nine of which are provided by conventional and Islamic banks.

The government's Vision 2041 plan envisages a 'Digital **Bangladesh**' wherein digital solutions will be used to 'bring socio-economic transformation through information and communication technology (ICT).[191] The 2010-2021 Perspective Plan establishes a

187 UNDP UNCDF (n 16).

188 ibid.

189 The World Bank (n 3).

190 UNDP UNCDF (n 16).

191 General Economics Division, 'Making Vision 2041 a Reality Perspective Plan of Bangladesh' (2020).

roadmap for achieving these objectives. Mobile technology is a crucial enabler in this plan, and Digital Financial Services (DFS) have been recognized by the BB as a significant area that can expedite the pace and broaden the scope of financial inclusion. This includes non-credit financial services and, importantly, the financial inclusion of MSMEs.[192]

According to interviews with market players from **Bangladesh**, the government is pushing toward digital finance and provides support for that from financial and technological literacy angles. There are efforts to include schoolteachers in technology literacy so they can pass it on to their students. The government is also engaging in promoting fintech services. According to some interviewees, every major bank now has an online application for many services including opening accounts and fund transfers.

A report by Global Islamic Financial Technology (GIFT) explained that Islamic fintech in **Bangladesh** is getting better but not as good as it could be. However, the market for it is growing a lot within the country. The GIFT Index places **Bangladesh** at 14th rank, which indicates that this country is very conducive to the growth of the Islamic fintech market and ecosystem in its jurisdiction.[193]

The COVID-19 pandemic, the lack of a fully developed banking system, the sizable untapped population, and the high rate of smartphone adoption have all contributed to the economic expansion of digital technology. Financial transactions increasingly incorporate technology.

As previously mentioned, there are 178.61 million mobile phone subscribers and a 31.5 percent internet penetration rate in **Bangladesh** as of August 2021, along with a smartphone penetration rate of 50 percent. This is while there is a 95 percent 4G coverage rate. In comparison to 2020, the number of fintech transactions increased by 31.42 percent in 2022. In addition, there are 185.06 million Mobile Financial Services (MFS) accounts, with an average of 4083.7 million daily transactions in September 2022, an increase of 1 percent from August 2022. The MFS services are commonly used for inbound remittance, cash in and out, peer-to-peer (P2P) transactions, salary distribution, utility bill payment, merchant payment, government payment and other similar activities[194]. Conventional banks have a substantial market share of the MFS sector. Despite having a sizable customer base in Islamic banks, they are unable to influence their clients› decisions to use the Islamic MFS they provide. One of the main causes is that the service is seen as credible, and MFS are more common in conventional banks, ensuring greater coverage throughout the nation. Consequently, the clients can get what they need from local MFS representatives.

The opportunity for Islamic fintech is still significant, as Islamic banks make up only 25.8 percent of **Bangladesh**'s banking sector.[195] Most of the fintech market is still dominated by providers who do not identify as Islamic. Bkash & Nagad are not mainly Islamic finance companies. However, they are beginning to offer Sharia-compliant services to cater to a real demand from the **Bangladesh**i population.[196] Other Islamic banks are initiating their own electronic and mobile payment services. 8 percent of the 47 percent of adults without bank accounts in **Bangladesh** cite religious reasons for not having a bank account. It is believed that Islamic fintech will address this concern.

Some IFIs are beginning to address this gap. The "Islamic Wallet" mobile app from Al-Arafah Islami Bank was just released, but it has not been successful in attracting many users due to limited access to mobile applications. Although the aim is for the wallet to be able to provide all banking services, most of its services are currently limited to payments and fund transfers.

5.6.3 Digital Finance in Djibouti

Digital financial services in **Djibouti** are expanding, although they currently have a modest scope and reach. The acceptance of fintech is gradually increasing. Less than 1 percent of MSMEs use internet banking, a debit card, credit card or SMS payment. No MSMEs

192 General Economics Division, 'Outline Perspective Plan of Bangladesh 2010-2021: Making Vision 2021 A Reality', (2010).

193 Dinar Standard and Ellipses, 'Global Islamic Fintech Report 2022' (2022)

194 Hassan, Md. Sharif, Md. Aminul Islam, Mohd Faizal bin Yusof, Hussen Nasir, and Nasrin Huda. 2023. Investigating the Determinants of Islamic Mobile FinTech Service Acceptance: A Modified UTAUT2 Approach. Risks 11: 40. https://doi.org/10.3390/risks11020040

195 IFSB (n 25).

196 Fitch Ratings (n 39).

use credit card machines or mobile banking applications to make payments. It is reported that acceptance of using digital channels is low since the customers do not see the need for it. Almost all respondents (95 percent are unwilling to use mobile applications to open a bank account and nearly half (47 percent do not see the benefit of mobile banking.[197]

The growing development of networks and uses of digital technology constitutes a significant potential for creating economic and social opportunities in **Djibouti**. Development of the ICT sector and the digital economy can, through its own added value, contribute to economic growth, including the opportunity to incentivize innovation in the SME sector.

Initiatives to kick start the fintech sector in the country began in 2017 with the **Djibouti** Fintech Forum hosted by **Djibouti** Telecom, the government-owned telco provider. It has demonstrated that local telco providers are willing to engage and spearhead the development of the local fintech industry.[198]

Indeed, JDF[199] was launched in 2017 by Nomadecom (a mobile marketing agency) as a virtual wallet for payments and money transfer applications. This was, unfortunately, a limited success as the application saw less than 1000 downloads in its five years of being live. In addition, the local telco provider **Djibouti** Telecom launched the 2020 D-money[200] application for the same purpose, but success is yet to be attained as downloads are still below 20K. This reflects the previously mentioned notion that locals do not see a great value in digital financial services, demonstrating the pressing need for financial literacy and awareness.

On 10 October 2022, the minister in charge of the Digital Economy and Innovation (MENI) announced the launch of Crowdfunding **Djibouti**, a platform aiming to be a tool to provide seed funding for projects and ideas of young Djiboutians leveraging the expertise and financial capabilities of the diaspora.[201]

Last year, the digital economy and innovation roadmap was launched in collaboration with the UNDP. The initiative was made to kickstart the infant fintech industry in **Djibouti** in tandem with the significant improvement of the local business environment. The Information and Communication Technology Development Index (ICTI) published by the International Telecommunications Union ranks **Djibouti** in the 158th position out of 176 countries. The main hindrance to developing a fintech sector in the country is still the low broadband and the high cost of internet connectivity. This, in addition to other issues such as regulatory inefficiencies, lack of technical and leadership expertise, and weak funding results in an almost non-existent fintech sector in **Djibouti**.[202]

To summarize, in **Djibouti**, the constraints limiting access to Islamic digital microfinance services are present on both the supply and demand sides. Here is a summary of the primary causes to hindrances to access on the demand and supply sides.

On the demand side:

a. Poverty rates of 79 percent with 42 percent of the population living in extreme poverty in 2023, as well as unemployment estimated at 40 percent for the same year, affecting around half of the active population.

b. Low financial literacy

c. The scope of the informal sector leads to widespread use of cash in the economy and limits the recourse to financial services.

d. **Djibouti** has a small population which limits scalability potential compared to other selected LDCs (i.e. **Afghanistan** and **Bangladesh**).

On the supply side:

e. After the liberalization of the banking sector in 2006, the increased competition among banks has led to easier conditions for opening accounts. However, the costs of holding and maintaining accounts are still an obstacle, particularly for the low-income sector. Red tape, guarantee requirements,

197 The World Bank Group, 'Djibouti Overview: Development News, Research, Data' (n 45).

198 Djibouti Telecom, 'Djibouti FinTech Forum - Djibouti Telecom' (2017) https://international.djiboutitelecom.dj/sponsorships/djibouti-fintech-forum/ accessed 28 December 2023.

199 Nomdecom, 'Porte-Monnaie Mobile à Djibouti' (mJDF) accessed 14 January 2024.

200 Djibouti telecom, 'D-Money Digital Mobile Money' accessed 14 January 2024.

201 Le Ministère Délégué Chargé de L'Économie Numérique et de l'Innovation (MENI), 'Le "Crowdfunding" Bientôt Opérationnel A Djibouti' (2022) https://numerique.gouv.dj/Articles/detailArticle/22 accessed 28 December 2023.

202 UNDP, 'Launch of the Roadmap for the Digital Economy and Innovation' (UNDP Website, 13 April 2022).

employment and salary requirements, and deposit requirements decrease the demand for financial services.

f. Commercial banks do not provide credit lines for microfinance activities in **Djibouti**, nor do they recover refinancing. Relations between commercial banks and microfinance actors are limited to simple transactions (e.g. deposits, withdrawals, and transfers).

g. Weak Financial Infrastructure such as credit bureaus, the enforcement of collateral and functioning payment, securities settlement, and remittance systems do not exist. The credit information system and payment system are key components of this infrastructure.

h. High reimbursement rates for microfinance are caused by a high risk of lending stemming from the incapacity of client credit profiling through a credit access system due to weak financial infrastructure. This inefficiency is reflected in interest rate spreads and banks' overhead costs.

i. Due to high risk, Islamic microfinance offerings are limited to short-term activities often requiring rigorous and regular reimbursement. This type of credit allows only the financing small scale activities such as craft or food processing activities.

j. Lack of a diversified supply of Islamic financial instruments

k. High internet service costs, low access to telecommunication services and high-speed internet services remain limited in the country, largely because of the strategy of **Djibouti** Telecom, mainly toured towards the external market. **Djibouti** Telecom (DT) focuses on selling to regional counterparts the capacity of its numerous submarine cables, given that this operation generates the highest income of the company.
This strategy has, in fact, led to a lack of affordable, reliable and high-speed internet services flow because the extension and improvement of internet coverage are not the priority of **Djibouti** Telecom (DT).

l. The **Djibouti** digital paradox is particularly perceptible in the inequality of mobile broadband coverage between urban and rural areas where target consumers of Islamic microfinance fintech. It is estimated that in **Djibouti**, fixed broadband costs the equivalent of the monthly income of 60 percent of the most disadvantaged households.

KEY HIGHLIGHTS

- **Microfinance** has been widely adopted due to its inclusivity and sustainability.
- **Many communities still avert microfinance services due to religious and ethical concerns.**
- **The development of Islamic microfinance** has been hindered by a lack of a regulatory framework, scarcity of well-trained human resources, high interest rates and over-indebtedness.
- **MSMEs suffer** from a significant financing gap due, in many cases, to the lack of a formal registry and the short performance track record.
- **Technology can be leveraged in microfinance** to streamline KYC activities and make payments and money transfers more efficient.
- **Technology-aided KYC activities** will remove many barriers to MSME financing.
- **Technology can also be used for agriculture finance programs, including crop monitoring and farmer aid distribution.**

Photo UNDP Afghanistan

6. FINTECH-BASED ISLAMIC MICROFINANCE SOLUTIONS

6. Fintech-Based Islamic Microfinance Solutions: Best Practices Across Jurisdictions

There is specific fintech-based Islamic microfinance solutions in different jurisdictions, both developed regions and LDCs. They combine the principles of Islamic finance with the innovations of fintech to offer more accessible and ethical financial services. Fintech-based solutions are not as prevalent as in LDCs due to various challenges (as explained in our report), such as infrastructure limitations, lower levels of digital literacy, and regulatory environments that may not fully support digital financial services. As has been already noted, this chapter attempts to draw together all the available best practices of fintech, particularly focusing on their successful key factors and the gap they are closing in the different regions.

Islamic Microfinance Mobile Apps

These apps offer microloans, savings, and insurance products in compliance with Islamic law. They can be particularly useful in remote areas where traditional banking services are limited. For example, HelloGold, a Malaysian app allows users to save in gold in a Shariah-compliant way. It was established in 2015 as a worlds' first Shariah compliant mobile application. One key success of HelloGold is its ability to lower the barrier to gold investment, making it accessible to a broader audience in **Malaysia**. The low entry point as little as RM 1 (approximately 0.23 USD) was crucial to allow people who might not have had the means to invest in traditional gold products. Thus, a more diverse group of people can protect and grow their wealth.

Peer-to-Peer (P2P) Islamic Lending Platforms

These platforms connect borrowers seeking Shariah-compliant financing with investors willing to lend under Islamic financial principles. They often bypass traditional banking intermediaries, reducing costs and increasing accessibility. For example, the Ethis Indonesia platform, a Musharaka partnership is created where investors appoint a sister company to enter a partnership with the issuer. Profits, if any, are shared between the issuer and investors as per a pre-agreed ratio. In addition, ETHIS has successfully targeted small and medium-sized enterprises (SMEs) by providing the necessary capital for various projects, notably social impact housing and infrastructure projects in Indonesia. The two most common contracts used in EthisCrowd projects and campaigns are Murabaha, Mudarabah and Istisna'. [203]

Digital Rotating Savings and Credit Associations (ROSCAs) Platforms

ROSCA is among the most ancient and widely embraced informal financial institutions, flourishing through the communal pooling of resources and sustained by the collective trust and mutual support within the group. ROSCAs are imperfect alternatives to the mainstream banks that help participants save money and access credit, which otherwise might be difficult for them to obtain from the conventional financial market. ROSCAs fulfil a crucial and pivotal function within the informal sector, assisting predominantly women members in accessing savings and interest-free loans. In the last decade, numerous fintech startups have endeavoured to leverage the potential of ROSCAs by incorporating the model into the mainstream financial framework through

203 Please read more on the deployment of these financial structures within EHTIS business model here and here (''Shariah Compliance Analysis of Islamic Crowdfunding: Case Study of ethiscrowd.com'', Ayu Yuningsih, Rifqi Muhammad, 2020).

digital innovation[204]. Some examples of start-ups that are digitising ROSCAs are: Oraan in Pakistan, Equbs in Ethiopia and MoneyFellows in Egypt.[205], [206]

Blockchain-Based Islamic Microfinance

Some initiatives use blockchain technology to create transparent, secure, and efficient Shariah-compliant financial transactions. This technology can help reduce fraud and ensure compliance with Islamic financial principles. Key examples include Al Rajhi Bank's blockchain-based international transfers in **Saudi Arabia**, Abu Dhabi Islamic Bank's (ADIB) use of blockchain for trade finance in the UAE, and the IsDB's exploration of blockchain in various countries. Additionally, Kuwait Finance House (KFH) and Emirates Islamic Bank (EIB) are leveraging blockchain for improved transaction services, while Singapore's Finterra provides a blockchain platform for Islamic financial services including Waqf and crowdfunding.[207]

Moreover, in 2020, IsDBI obtained patents for blockchain-based innovative solutions for financing economic development in IsDB MCs. The first is the Smart Credit Management System.[208] It is a blockchain-based system that integrates: (i) credit information and history, (ii) credit rating, (iii) credit insurance, (iv) credit incentives (pecuniary and non-pecuniary) to debtors to pay on time, (v) and verification incentives of the blockchain network. The second is the Smart Voucher. This blockchain-based voucher allows a regulatory authority to authorize selected goods and / or service providers (e.g. privatized enterprises, schools and hospitals) to provide selected goods and / or services to eligible parties (e.g. beneficiaries). The third is proof of use. This is a method and system for transaction validation in a Distributed Ledger Technology (DLT) such as a blockchain network[209]

Crowdfunding for Islamic Micro-enterprises

Crowdfunding platforms specifically tailored for Islamic micro-enterprises allow individuals and small businesses to raise funds in a Shariah-compliant manner. One strong collaboration is at the base program at Akhuwat, a Pakistani non-profit Islamic microfinance, which provides Qard Hasan or interest-free loans to low-income Islamic micro-enterprises. In 2013, one of its initial strong collaborations was with Lendwithcare (LWC), a microfinance crowdfunding platform based in the UK. In 2017, a report discovered that there was an increase in employment concentrated in a relatively small group of entrepreneurs. However, 74 percent of the respondents reported higher sales, and 46 percent had seen an improved standard of living[210]. One of main factors for its effectiveness and sustainability is that Akhuwat's community-based approach. Their operations are deeply embedded in the communities by using mosques and other religious centre as loan disbursement points. This approach build trust, encourage volunteerism, and promotes a sense of ownership among beneficiaries.[211]

Digital Zakat and Waqf Platforms

Digital Zakat and Waqf platforms play a crucial role in Islamic microfinance and financial inclusion by leveraging technology to facilitate transparent, efficient, and accessible channels for charitable contributions and endowment management. These platforms empower underserved communities by channeling funds towards interest-free loans, grants, and sustainable development projects, thereby

204 Ali, D., When Fintech Meets Traditional Informal Financial Schemes: Recent Trends & Innovations in Digitising Rotating Savings and Credit Associations (ROSCAs) (2024), European Microfinance Platform, https://www.e-mfp.eu/blog/when-fintech-meets-traditional-informal-financial-schemes-recent-trends-innovations-digitising Learn more about MoneyFellows from Egypt, its challenge and impact here.

205 Learn more about MoneyFellows from Egypt, its challenge and impact here.

206 Please read more on Trends and initiatives in digitising ROSCAs here.

207 Please read more on the Blockchain application for Waqf by exploring further the case of Finterra Platform, Analyzing the Success Factors of the Malaysian Experience in Developing Islamic Financial Services Industry through Blockchain Applications -Finterra Waqf Platform Model, Chaima Benyezza and Djebar Bouketir, 2023.

208 Further information about the Smart Credit Management System, read here.

209 IsDB (2021), IsDB Annual Report: Beyond Recovery, Resilience and Sustainability, https://www.isdb.org/sites/default/files/media/documents/2022-06/IsDB_AR21_REPORT_EN_WEB_high_Amended_26.5.22.pdf

210 LWC (2018). Lendwithcare Asesssment Project: Akhuwat Islamic Microfinance Project, https://www.careevaluations.org/wp-content/uploads/LWC-Akhuwat-Assessment-Project-UoP-Report-January-2018.pdf

211 Please read more on the success factors of Akhuwat platform via the article, Akhuwat: Measuring Success for a Non-profit Organization'', Mohsin Bashir, Ashar Saleem, and Ferhana Ahmed, 2019.

promoting economic empowerment and social welfare within Islamic finance frameworks. They can improve the efficiency and reach of these traditional Islamic financial instruments. In Indonesia, for example, some Zakat and Waqf institutes have initiated building their own platforms like Dompet Dhuafa, Rumah Zakat and Kitabisa. In 2020, Indonesian National Zakat Institution BAZNAS recorded a significant increase of 30 percent in Zakat collection by digital platforms. This is considered more efficient as the institution does not require higher operational costs and is able to spread the services to more expansive areas throughout Indonesia. [212]

E-Wallets and Digital Payment Solutions

Digital payment solutions that adhere to Islamic financial principles provide an alternative to conventional banking services for daily transactions. There are some IFIs and Islamic microfinance banks with digital services in **Malaysia**, **Indonesia**, and the **UAE**. **Pakistan**, **Bahrain** and **Nigeria** have embraced digital transformation, offering online banking services that comply with Shariah law. In developing countries, low-bandwith environments with a wide range of devices, attribute to the unique challenges for enabling its success in the markets. Thus, this is what the payment applications trying to bridge the gap, by using user-friendly and accessible approach to cater to diverse populations, including those who may have limited experience with digital technologies.

Takaful-Based Microinsurance Products

There are fintech platforms that offer Takaful (Islamic Insurance) products tailored to the needs of low-income individuals and small businesses. Also, microtakaful is a form of Islamic insurance that is particularly significant for those traditionally neglected in the mainstream insurance market, including the poor and vulnerable segments of society. Microinsurance offers products such as life insurance, medical insurance, agricultural insurance, assets and property insurance. It plays a critical role in poverty reduction and improving the standard of living for poor and low-income people.[213]

Data Analytics for Islamic Microfinance

Using advanced data analytics and AI to assess creditworthiness and risk in a Shariah-compliant way helps microfinance institutions make informed lending decisions. For example, Tamam was established in 2019 in **Saudi Arabia** and aims to increase financial inclusion in the country. The platform provides individuals requiring financing the opportunity to immediately avail a Shariah-compliant consumer microfinance. These solutions are particularly prevalent in regions with significant Muslim populations, such as Southeast Asia, the Middle East and parts of Africa. They play a crucial role in enhancing financial inclusion by aligning with their user's ethical and religious values.[214]

212 Please read more on Baznas by referring to the article: ''The Indonesian National Zakat Board (BAZNAS): Islamic Economic Evaluation'', Ria Tohawi, Ahmad Al-Saad, 2022.

213 Further information regarding Takaful-based Microinsurance can be accessed here.

214 Please read more on Tamam here.

1.

UGANDA & EVERSEND FINTECH
CASE STUDY

Uganda, one of 33 LDCs in Africa, as well as a member of the OIC countries, is experiencing rapid expansion in the fintech sector. The nation, with a population of 48 million, has registered 25 licensed fintechs companies under the National Payment Systems Act 2020. These companies are revolutionizing financial services, providing inclusive access to banking, payment and lending.

It is a good example of how, by leveraging digital technologies and fintech, companies can empower individuals and businesses, driving financial inclusion and fuelling economic development. As a result, the value of mobile money transactions accounted for 94 percent of GDP in 2021 in Uganda, one of the highest penetration rates in Africa. Another sector in which fintech has a direct impact is e-commerce. The e-commerce sector in Uganda is also booming, projected to have a predicted revenue of $122.8 million by 2023. This surge in e-commerce activity is unlocking new possibilities for entrepreneurs, expanding market reach, and promoting economic growth. Ugandans are embracing the convenience of online shopping, and businesses are adapting to the digital age.

Furthermore, Uganda's vibrant start-up ecosystem is disrupting traditional industries and propelling economic growth. With over 100 start-ups operating nationwide, innovation and entrepreneurship are thriving. Regulatory bodies, such as the Bank of Uganda (BOU), the Uganda Communications Commission, the Financial Intelligence Authority, and the National Information Technology Authority of Uganda, have played a pivotal role in ensuring the safety and security of fintech platforms. Challenges such as high transaction fees on interoperability have been mitigated by the recent reduction of person-to-person (P2P) sending fees in December 2022.

As of 30 September 2023, MTN Fintech subscribers have increased by 9.7 percent to 11.6 million, with the MoMo Pay platform contributing to merchant growth. The impact of mobile money extends beyond financial services, sparking competition among payment service providers and banks, leading to improved service quality and lower transaction costs for consumers.

Fiscal policy interventions such as the 0.5 percent tax on cash withdrawals implemented in 2018 have impacted the adoption of this use case. Three years ago, the parliament of Uganda passed the National Payment Systems Act 2020, giving BOU the mandate to license, supervise and regulate all Electronic Money Issuers (EMIs), Payment Service Providers (PSPs) and Payment System Operators (PSOs). Under the law, there is a provision which allows experimentation in financial innovation under a controlled environment (regulatory sandbox) for a specified period prior to the acquisition of a license.

The expansion of the internet, the booming e-commerce sector, the rapid growth of the fintech industry, and the thriving start-up ecosystem all contribute to Uganda's economic development and digital transformation.

Eversend is a Uganda-based fintech application that offers money transfer, stock trading, virtual debit card and currency exchange services. Recently, it opened a new window offering a multi-currency e-wallet. The multi-currency wallets and currency exchange offer fair and transparent money exchange rates between USD, EUR, ZAR, GBP, NGN, UGX, GHS, KES and RWF across borders. With new expansions, the application now offers its services to individual and business clients. It has also expanded geographically into Kenya, Nigeria, Rwanda, and Ghana. Fast, convenient and affordable money transfer, currency exchange, holding multiple currencies, virtual dollar cards, savings, group savings, donations, bill payments, investing, and crypto are what Eversend offers to the market.

Eversend is an example of a successful mobile money usage that promotes higher remittances, savings and borrowing in the LDCs. According to the IMF, a key implication is that the expansion of fintech technologies could help promote financial inclusion in Africa as seen in the case of Eversend.

Digital literacy is crucial in both developed and LDCs/OIC-LDCs, but it holds particular significance in LDCs for several reasons. The most important reason, besides financial inclusion, is that it fosters sustainable development and reduces the digital divide. Eversend is playing a pivotal role in promoting digital literacy. This is carried out through the company’s blog, where clients or internet users have assess to information related to financial services. An example is how to instantly send money from Europe to Africa with Eversend.

The use case shows that providing support to digitalization efforts in Africa and LDCs elsewhere would play a significant role in the development of fintech in terms of accessibility and its impact on overall economic growth. Support efforts include, for example, developing e-commerce infrastructure, which will increase the need for e-payments and will provide widened access to productive economic activities. The Uganda fintech sector also shows that having the right ecosystem is critically important in financial technology. A supportive and conducive environment with a regulatory framework helps foster innovation, growth, and the successful integration of fintech solutions into the broader economic landscape.

2.

SOMALIA & KAAH INTERNATIONAL MICROFINANCE SERVICES (KIMS) CASE STUDY

Located in the horn of Africa, with a 60 km land boundary with its neighbour Djibouti, shared history, similar habits, and demographic composition, as well as the same civil war period, Somalia is an LDC that has a pioneering success story in Islamic microfinance named Kaah International Microfinance Services (KIMS).

Kaah International Microfinance Services (KIMS) was launched in 2014 as Somalia's first and private Islamic microfinance institution to provide Sharia-compliant microfinance services. KIMS provides enterprise financing and linked savings services to low-income Somalis and Somali small businesses.

Sustainable Impact and Financial Inclusion

KIMS business model objective is to create a viable business, along with social impact-driven financing scheme that considers low-income and historically excluded groups, such as females, displaced, rural and young Somalis, while sustainably developing. All profits generated by the microfinance are reinvested into the operating budget rather than distributed as dividends. KIMS core vision is to 'play a catalytic role stimulating economic development across the Somali territories, with a positive impact on job creation and poverty alleviation.' Individuals from rural areas represent 15 percent of KIMS cumulative portfolio, of which 64 percent are women, 61 percent are youth (18-35 years old), and 25 percent are displaced persons. For marginalized women, KIMS provides access to finance via a loan of $1,000 for the first cycle, which is subject to increase. In 2023, KIMS provided over $32 million in Shariah-compliant financing to more than 34,000 clients, which resulted in the creation of an estimated 23,000+ new jobs.

Financial Literacy and Capacity Building

KIMS has provided financial literacy training to 5,000 borrowers and business skills training to over 1,000 youth clients. All refugee returnee clients and IDPs have been provided with additional skills training relevant to the local labour market. Meanwhile, products and support are tailored to the needs of borrowers, resulting in a diverse product range and a default rate under 5 percent.

To complement its women's loan product, KIMS provides a package of non-financial services in the form of access to entrepreneurship training, coaching, and mentoring as complementary and targeted support to reduce business risks and increase business scalability.

KIMSs prioritization of development towards rural clients enabled the microfinance institution to build a bridge towards previously untapped communities. KIMS is actively pursuing market entry into neighbouring Djibouti, Ethiopia, and Kenya, with the objective of becoming the first regional Islamic microfinance service of East Africa.

Refugee Impact

KIMSs efforts to provide access to finance and other services to low-income Somalis allow refugees and other displaced populations (IDPs) to be a central building block of the company's business strategy. In fact, 2.6 million individuals are internally displaced due to the ongoing security threats in Somalia combined with the displacement impact of environmental threats. Refugees represent a key category of KIMSs four target clients: the displaced, women, the youth, and those in rural areas.

Launched in 2017, the KIMSs Refugee Returnee and IDP Microfinance Project is located in the Kismayo region and other areas of Lower Juba. This project is Somalia's first tentative of a structured refugee economic reintegration program serving. This project is the fruit of a partnership between the United Nations High Commission for Refugees (UNHCR), the American Refugee Committee (ARC) and German GIZ and KIMS, which all engage in the development of a dedicated reintegration scheme for returnees, IDPs and host communities. This programme focused on the provision of vocational and business skills training, consisting of a combination of 0 percent (Qard Hassan) microcredit loans and the provision of supporting grants (used to cover the costs of skills training and / or startup tools and equipment), both disbursed by KIMS. Loan sizes ranged from $500 –$800 and were combined with financial literacy and business skills training for more than 550 beneficiaries, 90 percent of whom were returnees.

Grants for capital expenditure combined with working capital loans to micro and small businesses are granted. Business expansion loans enable them to provide employment for returnees. Once again financing consisted of a combination of 0% (Qard Hassan) microcredit loans and grants disbursed by KIMS. It is estimated that this project has had a broad positive impact on more than 6,000 people.

KEY HIGHLIGHTS

- **There are different types of fintech innovations based on Islamic microfinance** that offer more accessible and ethical financial services, likely Islamic Microfinance Mobile Apps; Peer-to-Peer (P2P) Islamic Lending Platforms; Blockchain-Based Islamic Microfinance; Crowdfunding for Islamic Micro-enterprises; Digital Zakat and Waqf Platforms; E-Wallets and Digital Payment Solutions; Takaful-Based Microinsurance Products; and Data Analytics for Islamic Microfinance.
- **One significant advantage of integrating fintech in Islamic Microfinance is that it enables institutions to be more efficient,** as they don't require higher operational costs. As well as they can **spread their services to more expansive areas.**
- **Using data analytics for Islamic Microfinance** also enhances financial inclusion by aligning the users' ethical and religious values, assessing creditworthiness and risk in Shariah-compliant ways, and making informed decisions in more efficient ways.
- **Evidence from case studies** shows that there has been a rapid expansion and adoption of digital financial services, particularly mobile money.

7. CONCLUDING REMARKS AND RECOMMENDED OPTIMIZATIONS

Photo UNDP Afghanistan

7. Concluding Remarks and Recommendations

The report focused on three OIC-LDCs to provide a detailed proposal for developing their financial systems, which will enable the achievement of multiple SDGs. It was found that many LDCs lack the basic foundations for a functional financial system. There is deficiency in financial literacy, shortage of technological infrastructure and a lack and weakness of regulatory frameworks. This is while most of the LDCs cannot afford the necessary funds to invest in these foundations. LDCs cannot provide financial services to their remote areas. Since most of the population live in rural areas and providing financial services to rural areas is comparatively more expensive, it represents a major problem for LDCs. However, technological advancements have made it significantly cheaper to provide financial services to the most remote of areas.

Historically, microfinance has emerged as an important tool to bridge financial service gaps for underprivileged and excluded groups. However, the analysis identifies one significant barrier: a prevalent aversion towards interest-based financial transactions rooted in religious beliefs. This presents a unique opportunity to amalgamate technology, microfinance and Islamic finance into an innovative Islamic Microfinance (IsMF) system. As a cost-effective alternative to expensive traditional services, this system can be tailored to the target populations' cultural and religious contexts.

The report offers strategic recommendations to realize this vision, including enhancing regulatory frameworks to support Islamic microfinance, elevating financial literacy, and building capacity and expertise in Islamic finance and fintech. The objective is to cultivate a well-rounded and efficient financial ecosystem capable of making contributions to the economic upliftment and growth of LDCs, thereby aligning with multiple SDGs.

CATEGORY	DESCRIPTION
Economic Vulnerability	LDCs often contend with fragile economies that hinge on a limited range of products, making them susceptible to external shocks and market fluctuations.
Environmental Sustainability	It is an urgent task to strike a balance between environmental protection and economic growth. To achieve long-term sustainability, LDCs must appropriately manage natural resources.
Social Development	Targeted initiatives are necessary to improve communities and encourage diversity because problems with healthcare, education and poverty continue.
Institutional Capacity	For successful policy execution and sustainable development outcomes, it is essential to strengthen governance institutions, enhance public administration and reduce corruption.
Access to Technology and Infrastructure	Economic diversification and growth in LDCs are hampered by limited access to contemporary technology and poor infrastructure, necessitating targeted investments and capacity-building initiatives.

Table 5

Requirements for sustainable development

Source: (World Bank, 2023)

The proposed IsMF ecosystem is envisioned beyond a financial model to act as a catalyst for inclusive economic development, integrating ethical finance principles with innovative technology to create a more equitable financial landscape in LDCs. This holistic approach is expected to pave the way for a new era of financial inclusion, where economic growth and social development go in tandem. Sustaining economic development, particularly through fintech and Islamic microfinance, requires this holistic approach encompassing all aspects of regulatory systems, policies and development programs, financial services systems, and market development. This approach also involves ESG and sustainability, as economic growth should not come at the expense of the environment. The following recommendations shall be in line with these principles. The following table summarizes the requirements for sustainable development while maintaining environmental and social balances.

7.1 General Recommendations for Policymakers

I. Tailored National Strategies

OIC LDCs need national development plans with strategies that effectively integrate Islamic microfinance, financial inclusion, and fintech to boost economic empowerment and enhance access to financial services. LDCs aiming for digital transformation need customized strategies that consider their unique challenges. Simultaneously, there is an expressed need to formulate robust digital strategies. These should be coherent with the country's national ambitions and capabilities, creating a harmonized approach to digital evolution. Regulating and supervising frameworks need to be established with the dual objective of promoting innovation and ensuring security against potential downsides associated with digital developments and disruptive technologies.

II. Building Legal and Regulatory Infrastructures

OIC LDCs often lack well-established legal and regulatory frameworks for digital technologies. They need to develop and strengthen these infrastructures to create a conducive environment for digital innovation, ensuring fair competition, data protection, and cybersecurity measures. OIC LDCs should establish specific regulations tailored to the fintech industry to address its unique challenges and opportunities, distinct from traditional financial services regulations. Also, creating a dedicated regulatory body or a specialized division within an existing financial authority in these countries will enable oversight of fintech activities and ensure coordination between various stakeholders.

III. Sector-Specific Growth Initiatives

OIC LDCs should identify key sectors with growth potential, such as software development, educational technology (EdTech), and financial technology (FinTech). They should encourage specialized investments and provide support mechanisms like incubators, accelerators, and training programs to nurture these sectors, leveraging their potential for economic growth and job creation.

7.2 Recommendations for Digital and Financial Literacy

I. Establishing Formal Financial Literacy Policies

OIC LDCs most often face limited resources and infrastructural challenges. Tailored policies should be designed to boost financial literacy, acknowledging the specific needs and constraints of these countries. These policies should prioritize reaching remote and underserved areas where a significant portion of the population remains unbanked.

II. Simplified and Accessible Education

Given varying levels of literacy, introducing simplified and easily accessible financial education materials becomes crucial. Strategies might involve community-based learning, using local languages, and leveraging visual aids to make financial concepts understandable to populations with diverse educational backgrounds.

III. Utilizing Low-Cost Communication Channels

In LDCs where access to technology might be limited, utilizing low-cost communication channels such as television, community radio, local gatherings, and printed materials can be effective in disseminating financial literacy information widely. Also, leveraging Digital channels in districts with internet coverage is a potential harbinger of financial transformation.

IV. Building Trust through Community Engagement

Establishing trust in financial institutions is pivotal. Programs should incorporate community engagement activities involving local elders (like local Shura members in **Afghanistan**) and influencers who hold credibility in these areas to bridge the trust deficit.

V. Government and NGO Support for Sustainability

Due to limited resources, support from governments and NGOs becomes vital for sustained financial literacy initiatives. Advocacy for funding and sustainable models from international organizations and donor countries can assist in ensuring long-term effectiveness.

VI. Empowering Local Agents and Volunteers

In OIC LDCs, local agents and volunteers often play a crucial role in community development. Training and empowering these individuals with basic financial literacy knowledge can exponentially expand the reach of financial education initiatives.

VII. Gender-Inclusive Programs

Tailored programs should address the gender gap in financial literacy, empowering women in OIC LDCs with specific education and services that consider their societal roles and challenges. Given that the gender gap is highly visible in some LDCs, such programs have immense significance.

VIII. Measuring Impact and Adapting

Regular assessments of program effectiveness are essential. LDCs should continuously measure the impact of their financial literacy initiatives and adapt strategies based on feedback and evolving needs.

7.3 Recommendations for the Islamic Microfinance Sector

I. Innovative Funding Solutions

As observed within the case studies (particularly considering the **Afghanistan** situation), Islamic microfinance institutions often run into crisis due to funding issues. The overreliance on MFIs in **Afghanistan** turned into a distress situation in the post-2021 era. In this regard, encouraging collaborative funding models involving governmental support, international institutions, and private-sector partnerships to overcome funding constraints is significant.

II. Tailored and Diversified Product Offerings to Enhance Financial Inclusion

To broaden financial inclusion through Islamic microfinance in OIC LDCs, customizing and diversifying the range of financial products and services specifically designed for underserved communities, especially women, is essential. This ensures that the offerings align with the diverse needs of the sectors contributing to the economy of the country and preferences of the targeted population, as well as promoting better access and usage on the demand side.

III. Mobilizing Financial Technology to Ease Access

Embracing financial technology becomes a critical enabler, facilitating remote access to microfinance services. Implementing digital solutions can bridge geographical barriers, making Islamic microfinance accessible to remote and rural populations within the OIC LDCs.

IV.Capacity Building and Human Capital Development

Due to constraints in formal education and poverty within LDCs, many of these countries have deficiencies in skilled and technical human resources in most of the financial sectors. IMFIs, in this regard, must invest in comprehensive capacity development programs targeting their local practitioners through partnerships with capable institutions. Governments are invited to raise awareness in schools and universities for the upcoming generations through integrating financial literacy themes in the educative curriculums.

V. Strengthen Credit Information System

An effective information system that enables real-time access to information on credit applications reduces risks in connection with information asymmetries between lenders and borrowers and promotes credit to the private sector.

7.4 Recommendations for Islamic Fintech Development

I. Simplify Taxation and Incentivize Formalization

Gradually digitalize taxation systems to facilitate the transition of informal sectors into the formal economy. By simplifying tax procedures, compliance can be encouraged, and tax evasion reduced, which ensures the inclusion of marginalized communities. For fintech startups and digital businesses in OIC LDCs, provide targeted tax incentives. This gives them ample time to formalize their operations, ultimately contributing to economic growth.

II. Strengthen Intellectual Property Protection with Collaboration

The OIC LDCs should collaborate with international organizations and developed countries to improve intellectual property protection mechanisms specific to digital innovations. Efforts should concentrate on strengthening the local expertise and capacity of patent and copyright offices to effectively manage digital aspects and safeguard the rights of local innovators.

III. Prioritize Data Privacy and Cybersecurity

Emphasizing the need for establishing robust data protection laws that preserve individuals› privacy during digital transactions, while also providing educational programs and training opportunities to raise awareness about potential cybersecurity risks and effective prevention tactics is highly important. Recognizing the limited resources of LDCs, it is crucial to facilitate international cooperation and support for building their cybersecurity capabilities and infrastructure.

IV. Targeted Investment and Skill Development

Encouraging investment in digital infrastructure, including internet connectivity and technology education in rural and underserved areas, will lead to reduction of the digital divide. Establishing skill development programs, possibly in collaboration with global organizations or through public-private partnerships, with a focus on training local talent in relevant digital skills will prepare the environment for the fintech sector.

V. Adaptation of Emerging Technologies

Prioritizing the adoption of emerging technologies in fintech that align with the local context can be in line with addressing unique challenges faced by LDCs. For this purpose, the governments should invest in research and development initiatives focusing on technologies with potential for immediate impact. TheyThey can also foster innovation hubs and provide support for startups, offering resources, mentorship, and funding opportunities to accelerate fintech growth in LDCs.

VI. Formalization of Informal Sectors

LDCs often have a significant informal sector contributing substantially to their economies, similar to the Hawala system in **Afghanistan**. Encouraging gradual formalization with simplified business identification and taxation processes can uplift the informal sector. The approach to gradually bring informal businesses into the formal economy through digitization, akin to India’s Aadhaar system, could benefit LDCs by reducing paperwork and costs associated with formalization.

VII. Boosting E-Commerce and Access to Funding

LDCs face challenges in funding and investing in emerging e-commerce ventures akin to **Bangladesh**. Encouraging collaborations between local financial institutions, foreign investors, and startups can foster growth. LDCs can explore innovative methods, like the collaboration between banks and leading brands for credit and debit card promotions, to provide easier access to credit for e-commerce businesses.

VIII. Strengthening Rural Supply Chains withTechnology

Many LDCs have agrarian economies (similar to **Bangladesh** and **Afghanistan**), making initiatives like mobile ERP solutions for relevant farmers. Implementing such technology can enhance supply chains, reduce losses and boost incomes. Leveraging mobile applications for knowledge sharing and market awareness can bridge information gaps between rural farmers and urban consumers, ensuring fair prices and improved livelihoods.

IX. Empowering Marginalized Entrepreneurs

LDCs often have vulnerable groups, including women, facing barriers to entry in formal sectors. Implementing policies to empower women in e-commerce, providing training, and enabling financial inclusion through mobile wallets can spur entrepreneurship.

X. Incubation and Mentorship Programs

LDCs can establish incubators and accelerators in partnership with international organizations, regional development banks, and tech companies. These programs should focus on nurturing local talent, providing guidance and connecting startups with mentors and networks.

XI. Public-Private Partnerships (PPPs)

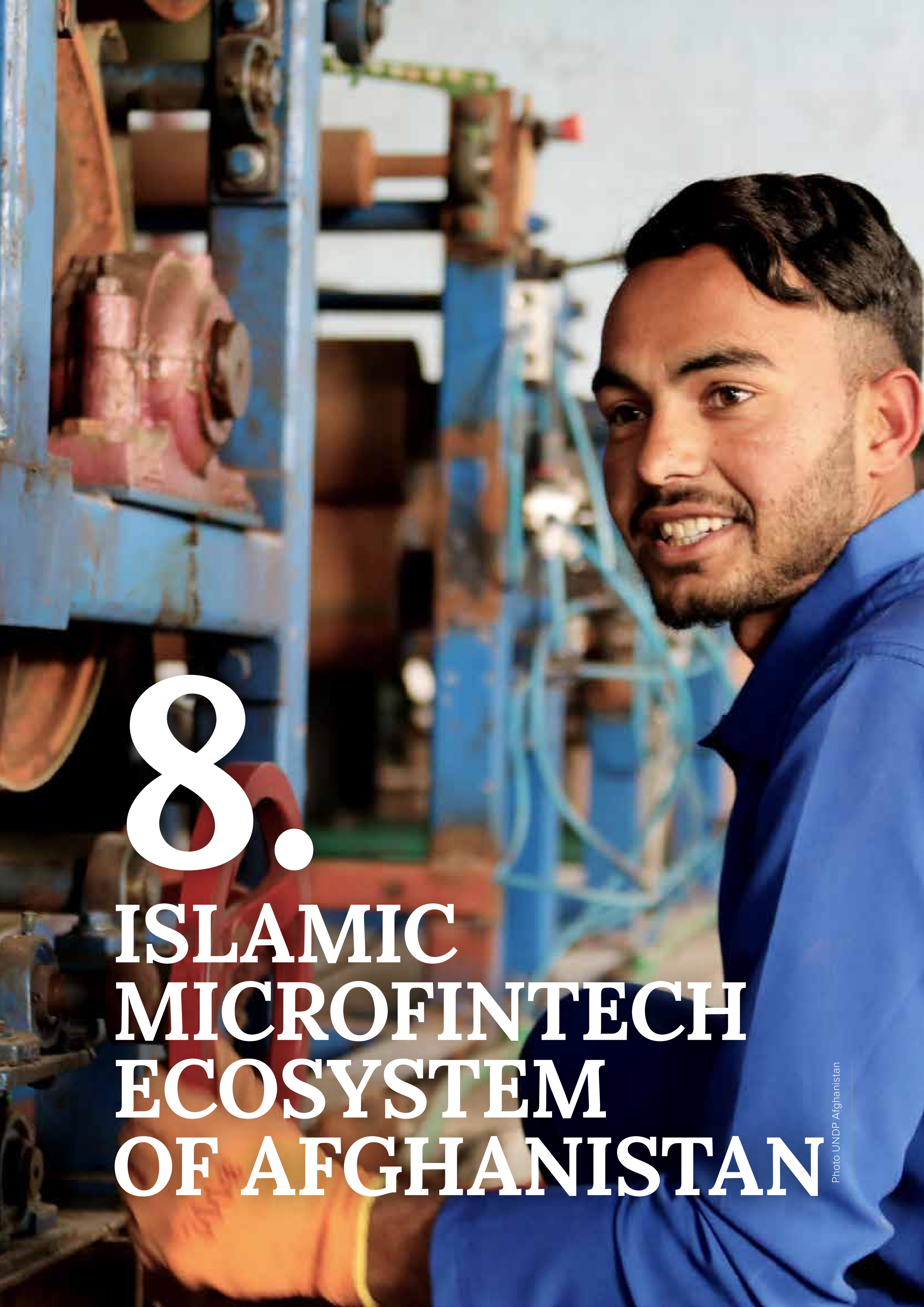
Foster collaborations between public entities, private corporations, and international aid organizations to establish tech hubs, co-working spaces and innovation centres. These partnerships can provide startups with crucial infrastructure and resources.

XII. Focus on Service Innovation and Sector Diversity

Encouraging startups in various sectors beyond traditional tech domains will help LDCs build a foundation for future developments to address diversified economic needs. For instance, support innovations in agriculture, healthcare, and renewable energy, addressing specific needs prevalent in LDCs.

KEY HIGHLIGHTS

- **The development of an efficient fintech system requires a holistic approach** that is not limited to regulatory improvements but includes government assistance, support for certain innovative financial products, and due regard for the environment and sustainability.
- **Enhancing access to financial services** needs a national development plan with targeted products and communities and radical regulatory improvements in taxation, company registry, licensing, etc.
- It is paramount that these efforts are accompanied by **awareness programs leveraging existing social establishments** like community leaders (the Shura in Afghanistan, for example).
- **Building human capital** is also vital for developing the Islamic micro-fintech sector. This entails a focus on university programs in addition to primary education tailored to build technical capacity in the fields of technology and finance.



8. ISLAMIC MICROFINTECH ECOSYSTEM OF AFGHANISTAN

Photo UNDP Afghanistan

8. Proposal for Islamic Microfintech Ecosystem of Afghanistan

This proposal is intended to provide a framework for developing the Islamic Microfintech (IsMF) system. It is designed to be flexible enough to be adaptable to all three LDCs but detailed enough to provide meaningful recommendations for **Afghanistan** that could be generalized with modifications to other LDCs. It is intended to drive fintech into the next phase beyond payments and fund transfers. Fintech can only reach its potential when it moves to financing and investment. The following figure provides a grasp of different elements within the proposal.

8.1 Nature of the Proposal

One of the crucial factors contributing to the success of microfinance is coverage. The ability to reach remote areas is necessary to deliver financial services to those who need it the most. Experience has proven that the most suitable means is telecom companies. In **Afghanistan**, some of the running operators can cover all 34 provinces. The case is similar in most LDCs, where telecom companies tend to have mobile coverage in the most remote areas.

This proposal, therefore, relies on telecom companies as distribution channels but not as providers of financial services. Currently, telecom companies provide payment services both with and without internet connectivity. However, by establishing full coverage and reliable internet access, most payment services should be undertaken by financial institutions.

The proposal relies on data collected from cashflows throughout the economy to enable efficient economic planning by authorities. Additionally, KYC requirements will be more accurate and efficient. The defacto government shall establish a data center safeguarding security and privacy. There shall be a protocol to encrypt the data so that the applicant's identity is only revealed to those directly involved with the approval of financing. It is important for the central bank to have custody of the data to prevent any breaches or data leaks.

8.2 Awareness and Education

One of the main issues identified in study was financial and technological literacy.

Figure 15

Elements of Proposal for Afghanistan Microfintech Ecosystem

Source: Elements of Proposal for Afghanistan Microfintech Ecosystem

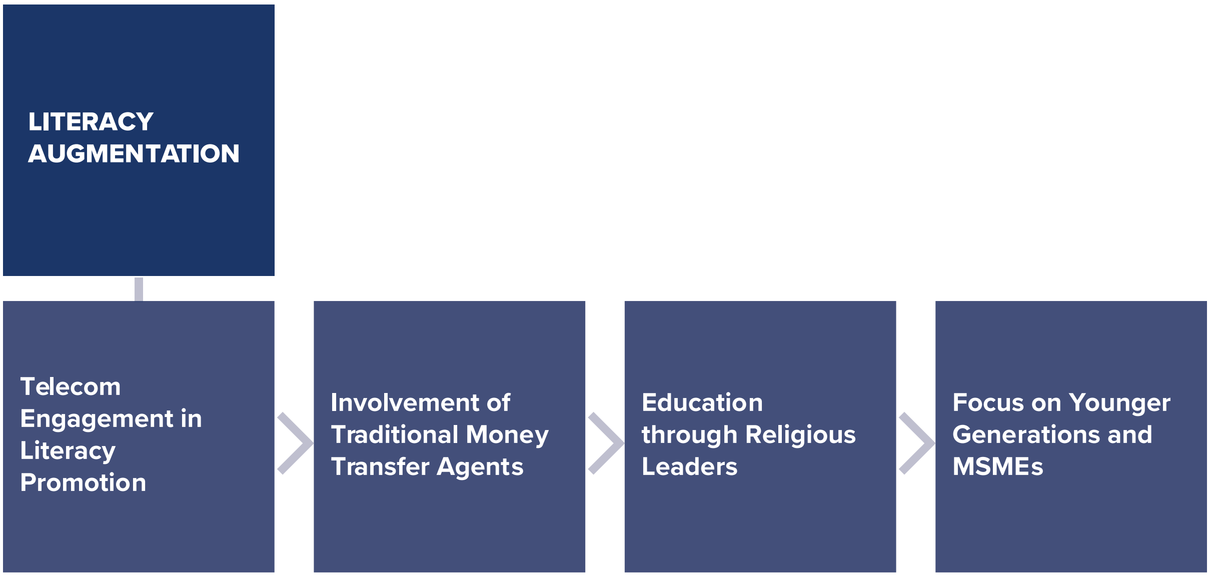


Figure 16

Financial Literacy Augmentation

It is a necessary precondition for the development of any IsMF. This effort should involve all actors, most importantly telecom companies, as they have the widest reach. This will also make commercial sense for them because it will increase their commission and create a sales channel for mobile credit at a significantly lower cost.

Traditional money transfer agents could also be engaged in this service to provide withdrawal and deposit services for mobile payment applications. This is already being applied to a certain degree. Agents can play an important role in educating customers on the benefits of IsMF. Religious leaders and relevant stakeholders can also be educated through the Central Sharia Board (CSB) on Sharia-compliance-related aspects and the importance of financial services in developing the economy and improving the livelihoods of the population.

Focus should be given to younger generations as they have demonstrated better readiness to adopt technology. They are also the majority of the population of LDCs. This includes MSMEs, as most founders are young.

An essential part of awareness is building capacity and Islamic finance expertise. It is necessary to recommend establishing a specialized institute for Islamic finance within TVET sector, similar to the current National Institute of Management and Administration (NIMA). The aim is to provide shorter programs, with valid certifications, to generate needed human capital for entry and mid-level positions required within the sector. In long term, at higher education level within the state and private sector ran universities with degrees in Islamic finance, which includes professional diplomas to PhD degrees. Moreover, the higher education sector can host research programs and centres dedicated to industries with high quality of academic research. Thus, it can be a seed for developing the business of Islamic finance through professional private research centres.

8.3 Regulatory Aspects

It is important to simplify the licensing process. Regulations should be flexible enough to allow cross-selling between different types of financial institutions. A payment application, for example, may be able to offer financing products and collect submissions. It may also function as a broker for the sale of investment units. In order to simplify that, a fintech sandbox can be implemented to gather knowledge and experience and design regulations that fit the peculiarities of the local market.

The plan is to expand the IsMF to include microcapital market services. For that, it is

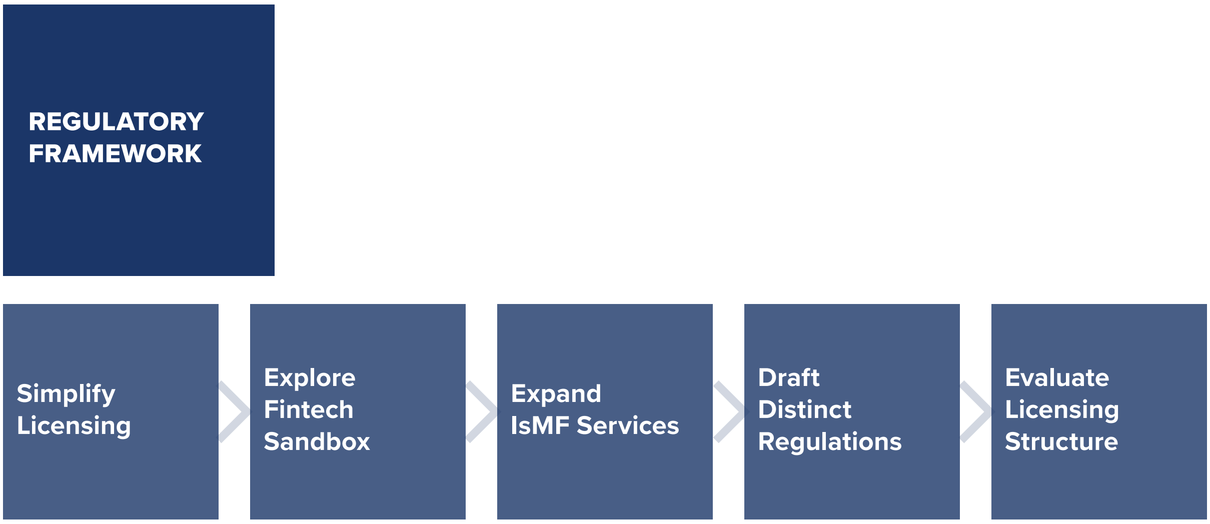


Figure 17

Regulatory Framework Development

proposed to draft separate regulations for debt financing and equity financing. After obtaining the necessary conclusion from the sandbox, it should be determined whether licensing for financial institutions will be separated for fintech and traditional institutions.

In addition, digitalization of property and land titles would provide a key means of collateralizing, thereby encouraging lending, due to the asset-backed nature of Islamic financial modalities. This provision could potentially stimulate increased economic activities, particularly for individuals and businesses lacking access to traditional banking systems. Therefore, a digitized, transparent, and easily accessible land registration system resolves another potential roadblock in assessing risks and aids the promotion of asset ownership in a Sharia-compliant manner.

8.4 Sharia Governance

The IsMF system necessitates a reliable Sharia Governance Framework (SGF). The experience of the Islamic financial industry for the last four decades proved that a formal SGF is a significant enabler for Islamic finance. Many countries have adopted that approach, including major markets in Southeast Asia and the Gulf region. For that purpose, we recommend establishing a Central Sharia Board (CSB) at the level of supervisory authority. The CSB may choose after studying the local market whether to adopt a top-down approach or a bottom-up approach with regards to product development and Sharia approval. Some CSBs chose to make detailed criteria for each product that all Islamic financial institutions must adhere to. Others chose and approached product approval according to general criteria.

An essential part of Sharia governance is building Sharia expertise through integrating Islamic finance knowledge with traditional Sharia studies. Islamic universities and Sharia colleges should include modules or master programs specialized in Islamic finance and Sharia advisory.

To prevent the unqualified from engaging in Sharia advisory services, a charter for local Sharia advisory should be established. It should rely on fit and proper criteria issued by the regulator in order to certify qualified Sharia advisors with periodic training activities to keep its members abreast of current and emerging issues. It should also conduct periodic performance assessments to ensure its members maintain the necessary levels of knowledge and experience.

8.5 Product Offerings

As previously mentioned, the goal is for the IsMF system to provide all ranges of financial

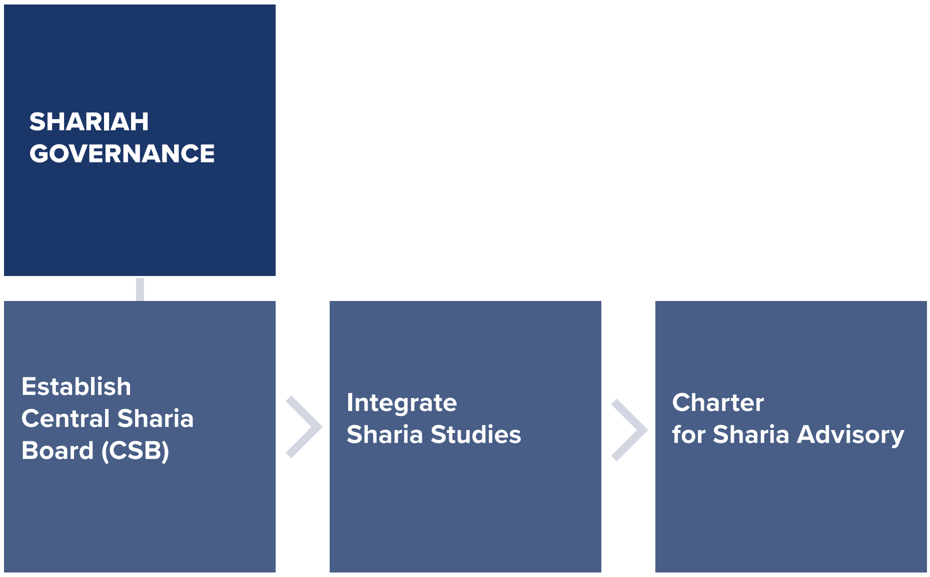


Figure 18
Shariah Governance Development

products. This will be based on reliance data. The illustration of this is simplified in the following steps.

1. Building payment systems (initially through telecom companies, then by financial institutions when reliable internet service is established) that send all cashflow data to the central bank.

2. The central bank establishes a data custody, protection, and encryption system.

3. After strengthening its Public Credit Registry (PCR) capabilities in terms of system and infrastructure along with adequate skills, and with obtaining permission from central bank, IsMF institutions start offering Murabaha financing through its mobile application. IsMF institutions will be able to perform KYC and credit assessments through the database established by the central bank.

4. The central bank, leveraging the established data framework and superior PCR capabilities,

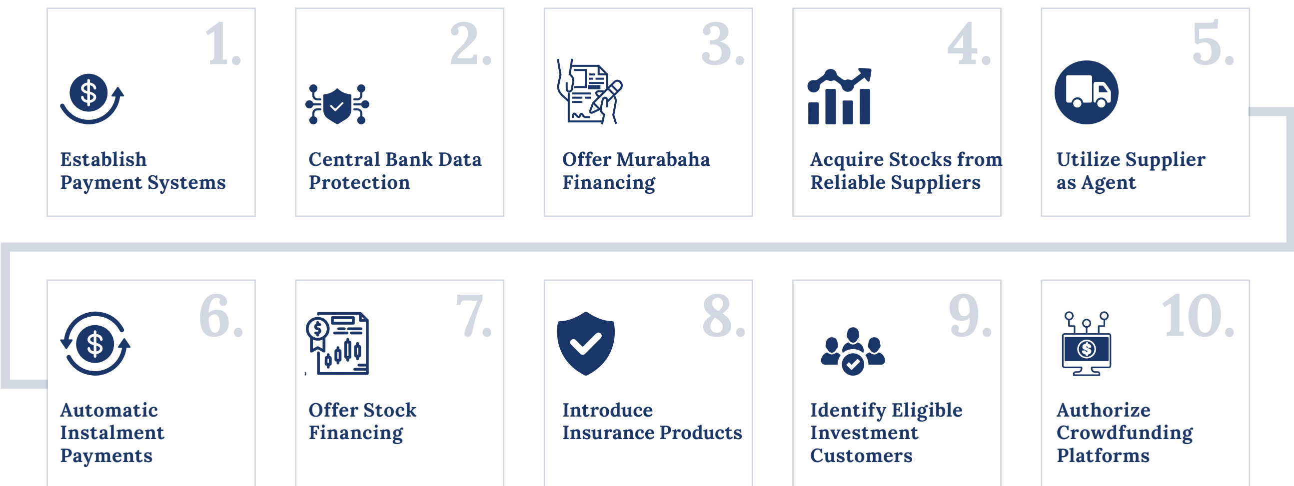


Figure 19
Product Development Stages

initiates a centralized credit rating system accessible by all IsMFs. This would serve as a comprehensive medium for credit risk assessment, promoting responsible lending and trust in the ecosystem. The transparent and standardized criteria for creditworthiness assessment will foster fair practices and pave the way for more sophisticated and varied financial services filtered as per creditworthiness.

5. The IsMF institutions will appoint the supplier as their agent to sell Murabaha products to the Murabaha applicants.

6. Customers who obtain Murabaha financing will pay the purchase price through instalments withdrawn automatically from their mobile wallets.

7. After establishing a long relationship, the IsMF institutions will be able to provide stock financing to suppliers, thereby acquiring an ownership share in their inventory. These shares of inventory ownership can be packaged in investment units and sold to customers.

8. Once customers› profiles are established at the level of central banks, insurance/ takaful products can also be sold through mobile applications, enabling investment authorities to identify customers eligible for investment products.

9. Authorized crowdfunding platforms can be established with a license from investment authorities (possibly a capital market authority). They will be allowed to offer their equity products only to eligible investors as identified through the central bank database.

8.6 Diversification of the Sectors

Considering the proposed structure and environment, offering three types of financial products, i.e., credit, equity and insurance, will be possible. The size of the products will be small to fit the level of income in OIC LDCs. Further plans should be established to expand the offering to establish a financial system large enough to make a meaningful contribution to the economy.

8.7 Growth Expectations

After establishing the data centre at the central banks and supervisory authorities for investment and insurance, the government is expected to encourage financial institutions to offer investment and insurance products. The outlook of these products is to grow into their own sectors as the government should also establish protocols to coordinate between providers of different financial services. The establishment of a data center at a central bank primarily aims to create a centralized database for the entire financial sector, encompassing data from banks, insurance agencies, and investment firms, thereby ensuring data consistency and streamlining processes. Additionally, it would allow enhanced regulation and supervision by facilitating transparency and regulatory compliance. While it may store credit histories, this is generally a function of credit bureaus. Such initiatives reflect the ongoing digital transformation in the financial sector, spearheaded by central banks. Further, the integrated data infrastructure would foster better coordination between providers of different financial services, driving integrated service offerings. Specifics, however, would depend on the operational models of the central bank or supervisory authority.

KEY HIGHLIGHTS

- **The proposal relies on telecom companies** as distribution channels for Islamic Microfinance (IsMF) services, leveraging their wide coverage and ability to reach remote areas in Afghanistan and other LDCs.
- **The government shall establish a data centre** to collect and safeguard cashflow data throughout the economy, enabling efficient economic planning and accurate KYC requirements while maintaining security and privacy.
- **Financial and technological literacy** is crucial for the development of IsMF. Awareness and education efforts should involve all actors, including telecom companies, traditional money transfer agents, and religious leaders, and establishing a specialized institute for Islamic finance at the largest university in the country is recommended to build capacity and expertise.
- **Simplifying the licensing process and implementing a fintech sandbox** will help design regulations that fit the peculiarities of the local market, and separate regulations for debt financing and equity financing should be drafted to expand the IsMF to include microcapital market services.
- **A reliable Sharia Governance Framework (SGF) is necessary for the IsMF system.** Establishing a Central Sharia Board (CSB) at the supervisory authority level and integrating Islamic finance knowledge with traditional Sharia studies in universities will help build Sharia expertise.
- **The IsMF system** aims to provide a comprehensive range of financial products tailored to the income levels in LDCs, initially offering credit, equity, and insurance in small sizes. The growth of these products is expected to contribute meaningfully to the economy, with the government establishing protocols to coordinate between providers of different financial services.

UNDP - ISDB Cooperation in Introducing Islamic Finance as an Innovative Mechanism for SDG Financing

The objectives of UNDP and IsDB are to foster sustainable development, reduce poverty, and promote economic growth. The UNDP and IsDB implemented several measures to enhance their involvement in these critical priority areas. For instance, the IsDB Digital Inclusion Strategy (2024-2027) sets the emphasis on the expansion of digital access in Eastern Europe, Central Asia, and South Asia. In an effort to address the digital divide, additional investments will be directed towards Sub-Saharan Africa and the Arab region. Both institutions continue to offer innovative financing solutions for sustainable development by implementing the IsDB-UNDP Joint Climate Financing Facility and supporting green sukuk initiatives, building on the success of previous collaborations. Their collaborative endeavors will also persist in fragile economies, including **Sudan**, **Yemen**, and **Afghanistan**, where integrated development programs will be extended to improve economic stability, social cohesion, and livelihoods. In order to further enhance the impact, efforts will be redoubled to assure the seamless integration of IsDB and UNDP strategies at both the country and headquarters levels, streamline project implementation, and enhance regional cooperation. In the years ahead, the IsDB and UNDP are well-positioned to advance an ambitious agenda of inclusive growth, sustainability, and resilience by reinforcing their shared vision, thereby ensuring an enduring developmental impact across their member countries. UNDP ICPSD was the first to introduce Islamic finance as an innovative mechanism for SDG financing, based on the I for Impact report, which was developed by the UNDP Istanbul International Centre for Private Sector in Development (ICPSD) and the Islamic Development Bank Institute (IsDBI). It emphasizes the various aspects of compatibility between Islamic finance and impact investing, reviews recent developments and key factors for growth, pinpoints similarities between the two sectors, and provides policy recommendations for development actors to establish the conditions for the two sectors to benefit from each other. Through this partnership, UNDP ICPSD has provided assistance to more than nine countries and continues to encourage collaboration in order to advance sustainable development solutions.

The Global Islamic Finance and Impact Investing Platform (GIFIIP)

UNDP ICPSD and IsDB established the Global Islamic Finance and Impact Investing Platform (GIFIIP) in 2016. The Platform aims to promote market-based solutions to sustainable development challenges by developing a collaborative working space, engaging the private sector, governments, and key stakeholders operating in the Islamic finance and impact investing markets. As part of GIFIIP's strategy to mobilise Islamic finance, the Green Sukuk Initiative began in 2018. To expand this initiative, UNDP ICPSD and the Islamic Financial Sector Development Department (IFSD) of IsDB collaborated with the Securities Commission Malaysia (SC) and the Islamic Corporation for the Development of the Private Sector (ICD) of IsDB. The above GIFIIP Initiatives were later implemented through the signing of a Grant Implementation Technical Assistance (TA) agreement on the 22nd of July 2022 which consists of four components, namely, green Sukuk issuances, digital solutions for financial inclusion, capacity-building on Islamic finance and impact investing, and the GIFIIP communication strategy.

Green Sukuk Initiative

Under this initiative, GIFIIP offers advisory and consultancy services to assist potential issuers in conducting necessary feasibility analyses and strategic assessments for issuing Sukuk to raise funds and finance green projects.

Social Sukuk Issuance for MSMEs – Türkiye: The first private-sector social Sukuk in Turkey, totaling TRY 50,000,000 (fifty million Turkish Liras) with a one-year term, was issued on February 8, 2024, under the Sukuk issuance program, which was approved by the Capital Markets Board of Türkiye in January 2024. The technical assistance provided by GIFIIP and facilitated by Türkiye Emlak Katılım Bankası (Emlak Katılım), is a prominent institution in the sector, enabled the issuance of the Sukuk. Funds generated from this issuance are allocated to the promotion of economic development, financial inclusion, socioeconomic advancement, and job creation.

GIFIIP also provides technical assistance for the first Municipal Green Sukuk issuance. This assistance includes facilitation, framework development, obtaining a Second Party Opinion, and impact reporting.

Green Sukuk Awareness and Training Initiatives: Under this initiative, UNDP ICPSD aims to highlight the synergies between Islamic finance and green Sukuk, demonstrating how Sharia-compliant products and services can effectively generate impact and achieve SDGs. On June 18-19, 2023, the "Islamic Finance, Impact Investing and Green Sukuk Training"[215] was conducted in collaboration with the Kuwait Finance House (KFH), UNDP Kuwait Country Office, and UNDP RBAS. This program aimed to train participants from KFH management and relevant departments, as well as its subsidiaries and affiliates in **Bahrain**, **Malaysia**, **Türkiye**, and **Saudi Arabia**. On 16-18 October 2024, UNDP ICPSD in collaboration with UNDP Uzbekistan Country Office and the National Agency of Prospective Projects under the President's Administration Office of Uzbekistan (NAAP), organized "The Workshop on Development of the National Green Sukuk Framework for Uzbekistan" followed by a two-day "Islamic Finance and Sukuk/Green Sukuk Training Programme". The training was conducted to strengthen and promote Islamic Finance and Sukuk as an alternative source of financing for sustainable development. It covered green Sukuk and its potential, offering recommendations for establishing a national legislative and regulatory framework for Sukuk and Green Sukuk issuance in **Uzbekistan**. UNDP, in collaboration with IsDB, is also providing technical assistance in developing Uzbekistan's national Green Sukuk framework.

UNDP in collaboration with Kuwait Finance House and Islamic Development Bank under GIFIIP developed global research titled "The Potential Growth and Future Trends of Islamic Green Sukuk as a Tool for Sustainable Financing". The study contains theoretical insights with practical knowledge of the industry, best practices, and case studies. The focus of this study is on analyzing the role and impact of Green Sukuk in advancing sustainable financing and its contribution to achieving SDGs, while also providing practical insights and policy recommendations for stakeholders in this field.

215 This training combined "Islamic Finance and Impact Invseting" and "Green Sukuk Training" in four days. ICs and Istructors from various organizations (i.e. Development Bank (IsDB), Ida Capital, UNDP Sustainable Finance Impact, Emlak Katilim etc.) delivered training modules with practical experiences and case studies.

Islamic Fintech Solutions for Least Developed Countries (Knowledge Product)

The main objective of this project is to conduct in-depth research on Islamic Fintech solutions, best practices, and implications for Least Developed Countries (LDCs), specifically showcasing their potential applications in the financial systems of **Afghanistan**, **Bangladesh**, and **Djibouti**. Despite challenges such as low financial literacy, inadequate technological infrastructure, and weak regulatory frameworks, the project suggests that technological advancements can offer significantly cheaper financial services in rural and remote areas.

By thoroughly analyzing the financial systems in LDCs from a microfinance perspective, the study highlights Fintech's best practices and solutions for these countries. It recommends developing a holistic Islamic Microfinance ecosystem that leverages technology and Islamic finance principles to address the challenges faced by LDCs. The recommendations include enhancing regulatory frameworks, improving financial literacy, and fostering expertise in Islamic finance and Fintech to promote inclusive economic growth.

Massive Open Online Course (MOOC) "Islamic Finance for Sustainable Development Goals"

UNDP ICPSD, in partnership with the Islamic Development Bank (IsDB) and Durham University Business School, has developed the pioneering Massive Open Online Course (MOOC) "Islamic Finance for the Sustainable Development Goals (SDGs)" (2020-2022). It is a first of its kind MOOC designed to engage development professionals and Islamic financiers under the single roof of sustainable development, and a unique capacity development opportunity with its comprehensive coverage of topics through video lectures from eminent, internationally recognized course instructors. Since its publication in 2022, the MOOC has reached more than 4000 participants from 129 countries. It is available online on IsDBI's edX channel and UNDP Learning for Nature platforms in English language.

The UNDP ICPSD has partnered with the Qatar Financial Center (QFC) in 2024 to develop the

Arabic language version of MOOC, broadening its reach to Arabic-speaking learners. The IsDB supports this project as the publication partner, with an agreement to publish the Arabic version on IsDBI's edX channel.

The IsDB also supports as the publication partner the UNDP ICPSD, UNDP Kuwait and Warba Bank partnership Advanced Online Course "Environmental, Social and Governance (ESG) Standards and Practices for Islamic Financial Institutions" currently under development.

Islamic Microfinance

UNDP IICPSD provides several services for the development of the Islamic microfinance sector across the world. The mandate of UNDP IICPSD & GIFIIP regarding Islamic microfinance sector development includes providing technical assistance to stakeholders, developing products, and delivering training and providing capacity-building services. Main products and services are Assessment of the Microfinance Sector, Strategy Development, Islamic Microfinance Product Development & Output, Islamic Microfinance Training and On-the-job Training. The platform has successfully implemented initiatives in different countries and contexts. For example, some initiatives are summarized below from **Djibouti** and **Afghanistan**:

Djibouti: Since 2021, ICPSD UNDP has been providing technical support to Djibouti under the project "Enhancing Economic Resilience of Vulnerable SMEs in Djibouti" funded by IsDB to guarantee the MSME sectors' recovery and resilience and to actively support national implementation. Under the first phase of the project, UNDP ICPSD has developed the studies entitled "Islamic Microfinance Assessment of Djibouti", "Strategic Recommendations for Developing Islamic Microfinance" and "Engaging Islamic Finance in the Djibouti Credit Guarantee Fund" in 2021. As part of second phase of the project, UNDP ICPSD provided technical assistance to the Djibouti Center for Leadership and Entrepreneurship (CLE) in collaboration with the UNDP Djibouti Country Office to draft the fund management agreements between the CLE/Government and the three Islamic banks (Salaam African Bank, Saba African Bank, and East Africa Bank), as well as conducting capacity-building activities including an Islamic microfinance training in Djibouti between 27th and 29thNovember 2022.

Afghanistan: Two reports have been developed for the Islamic microfinance initiative, ''Microfinance Landscape in **Afghanistan** and Islamic Financing Alternatives: Assessment and Strategic Recommendations'' and ''Pre-Feasibility Study on Engaging Islamic Finance Modalities in Credit Guarantee Funds.''

Assessment Study on Islamic Microfinance for Cash Disbursement and Engaging Islamic Finance in Credit Guarantee Funds (Pre-feasibility Study) – 2022. Based on these reports, ICPSD UNDP has developed various workshops, projects and activities. Key factors were identified to assess capacity-building and training activities which were conducted simultaneously for selected microfinance institutions (MFIs). Some of these activities included: a. Islamic Microfinance Training which focused on products, operations, and best practices tailored to the Afghan context, delivered in person by international experts; b. Impact Management and Measurement (IMM) Training; c. Afghanistan Islamic Finance Week (AIFW), a comprehensive four-day event held from 22–25 July 2024 in Kabul, Afghanistan. Each day featured a distinctive theme with a target audience: Day 1 – Policy Dialogue, Day 2 – Information Session and Public Hearing by AAOIFI, Day 3 – Corporate Sharia Governance Training, and Day 4 – Knowledge and Upskilling Forum (Access to Finance for Women)

Studies and Knowledge Products developed as part of this initiative include i. Liquidity Management Tools for Central Bank: Case of Afghanistan (Assessment Study), ii. Diagnostic Study on the Conversion Process of the Banking Sector from Conventional to Islamic, iii. Product Development Toolkit and Guideline: Istisna, Salam, Ijarah, Wakalah, Qard al-Hasan, iv. Assessment Study and Stakeholder Engagement for Establishing the "Center of Excellence for Islamic Finance"

APPENDIX I:

Data Collection and Research Methodology

Objectives and Scope

The objective of this report is to give an overview of the Islamic fintech industry with a particular focus on Islamic microfinance and digital finance in OIC LDCs, to study the challenges and opportunities, bring in a multitude of best practices and solutions into the specific contexts of three selected countries and propose recommendations.

Data Collection

The research is mainly focused on i) reviewing the current literature, ii) development and current trends in Islamic fintech, iii) best practices and mobilization of Islamic fintech across jurisdictions, particularly OIC region, iv) potential gains of Islamic fintech intervention in OIC LDCs, v) reviewing and designing Islamic fintech solutions in selected LDC countries. These focus points will be completed with a conclusion containing recommendations and policy implications.

1. Reviewing the existing literature

In order to achieve the objectives mentioned previously, the study renders a review of the existing body of knowledge through two levels of review methods, namely:

a. Evaluation of Previous Studies: This review provides a comprehensive understanding of Islamic fintech development and its potential, current situation and needs in OIC LDCs, current best practices and relevant gains, and context attributable suggestive ideas to link needs to the solutions within the selected LDCs context.

b. Industry Review with Data Research and Analytic: This offers an overview of Islamic fintech, concentrating on its trends and developments. Key areas of focus include the Islamic fintech market, its applications, and its role in promoting SDGs, specifically sustainable and inclusive growth. Additionally, it addresses the challenges faced in this sector, such as the regulatory environment, Sharia compliance, digital infrastructure and financial literacy. This type of method is also utilized to explore the opportunities arising within Islamic fintech.

2. Interviews with key stakeholders

In this report, to provide technical assistance to the microfinance sector in LDCs, the key stakeholders in the microfinance sector & beneficiaries in selected countries are interviewed to achieve an in-depth understanding of their current fintech mobilization capacities and need areas. Original insights are provided by related agencies in Islamic finance and Islamic fintech on the ground and industry experts to help constitute a holistic overview of the sector in LDCs.

The interviews are also extended to fintech solution providers to obtain their best practices in addressing the defined needs of LDCs including the context of selected countries.

3. Market conduct analysis

This approach seeks to survey the exact market fintech platforms available, then select which study sample to partner with for comprehensive analysis to identify best practices in the industry. The method also aims to determine the levels of competition in the fintech industry and how to obtain a competitive advantage. These actions include micro-saving, microloan, microtakaful, micro-investing, philanthropy payment and transfer, wealth management, credit scoring and microcapital.

4. Research sampling

Given this predominant religious demographic in **Afghanistan**, **Bangladesh** and **Djibouti**, Islamic finance has the potential to significantly improve the lives of people by providing enhanced access to financial services and resources. Among the LDCs, these three countries exhibit notably similar proportions of Islamic Finance within their total financial assets. Specifically, in 2022, Islamic Finance comprised 27 percent[216] of total financial assets in **Bangladesh**, while in **Djibouti** the figure stood at 17% in 2021, and **Afghanistan** recorded a 9.1 percent[217] share prior to the Taliban's assumption of power. According to the previously mentioned countries' selection criteria, the research sample countries are required to be included in the list of LDCs and to be members of the OIC. Based on these conditions, **Afghanistan**, **Bangladesh**, and **Djibouti** were selected.

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APPENDIX II:

Terminologies

Hawalah	A method of transferring debt/right where responsibility is passed to a third party. It's used for settling international transactions in developing countries.
Ijarah / Ijara	Islamic leasing or hiring services. An agreement to lease an asset for a specified period and rent.
Maslahah	Refers to the consideration of public interest or common good in Islamic law. It's the principle of achieving benefit or preventing harm, used in legal reasoning to derive rulings.
Mudarabah / Mudaraba	A profit-sharing contract where one party provides capital and the other effort. Losses are borne by the capital provider unless caused by negligence.
Musharakah / Musharaka	A partnership agreement where all partners contribute capital and share profits and losses proportionally.
Murabahah / Murabaha	A contract of sale with an agreed profit mark-up on the cost. It's a sale contract where the seller adds a known profit margin to the cost of an item.
Qard	A loan of fungible goods with an obligation to return the equivalent in the future. A general term for loans in Islamic finance.
Qard al hasan / Qard hasan	A virtuous or benevolent loan without interest or profit. The borrower returns only the principal amount.
Riba	Unjustified increase or surplus in transactions. In Islamic finance, it refers to interest or usury, which is prohibited.
Salam	A contract for the advance purchase of a commodity for deferred delivery. It is commonly used in agriculture for advance payment for crops.
Shariah / Sharia / Shariyah	Refers to the rulings contained in and derived from the Quran and the Sunnah. It's the Islamic law that is a source of guidance, similar to how water is essential for life.
Sukuk (Islamic bonds)	Islamic bonds representing shared ownership in tangible assets or projects. They are investment certificates compliant with Shariah law.
Takaful	Islamic insurance based on mutual assistance. Participants contribute to a fund for shared support against loss or damage.
Ujr	fees paid in lieu of service to be provided by the service provider.
Ujrah	A fee or compensation paid for services or renting. In Islamic finance, it refers to the payment made for a service or benefit, like in ijarah contracts.
Zakah / Zakat	Mandatory almsgiving or welfare tax in Islam, usually 2.5% of wealth above a certain limit. It's a contribution to the welfare of the poor.
Waqf / pl. waqaf	An endowment for a property in Shariah, making it non-transferable and dedicating its usufruct to beneficiaries. It cannot be sold or inherited.

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