Food and Agriculture Organization of the United Nations

Promoting access to agricultural finance for youth in developing countries

A synthesis of lessons and experiences

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Food and Agriculture Organization of the United Nations

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Cover photo: Young vegetable farmer in Pakse, Lao People's Democratic Republic
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Abbreviations and acronyms

AAIN	African Agribusiness Incubator Network
ADF	African Development Fund
AFC	Agricultural Finance Corporation of Kenya
AfDB	African Development Bank
CABFIN	Improving Capacity Building in Rural Finance
CGAP	Consultative Group to Assist the Poor
CSD	Center for Social Development
CTA	Technical Centre for Agricultural and Rural Cooperation
CYFI	Child and Youth Finance International
DANIDA	Royal Danish Ministry of Foreign Affairs
D4Ag	digital solution for agriculture
DVA	DigiFarm Village Advisor
EPRC	Economic Policy Research Centre
FARA	Forum of Agricultural Research in Africa
FAO	Food and Agriculture Organization of the United Nations
FI	financial institution
FSD	Financial Sector Deepening
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
GSMA	Global System for Mobile Communications Association
ICA	FAO Integrated Country Approach programme
ICT	information and communication technology
IFAD	International Fund for Agricultural Development
IFC	International Finance Corporation
KES	Kenyan Shilling (currency)
KLPA	Kenya Livestock Producer Associations
LAC	Latin America and the Caribbean
MFI	microfinance institution
MMO	mobile money operator
MNO	mobile network operator
MSME	micro-, small-, and medium-sized enterprise
NENA	Near East and North Africa
NPL	non-performing loan
OECD	Organisation for Economic Co-operation and Development
OHADA	Organization for the Harmonization of Business Law in Africa
RFILC	Rural Finance and Investment Learning Centre
RISE	FAO Rural Institutions, Services and Empowerment Team
SDGs	Sustainable Development Goals
SME	small- and medium-sized enterprise
SSA	sub-Sarahan Africa
TCA	Technical Centre for Rural and Agricultural Cooperation
UNCDF	United Nations Capital Development Fund
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
USD	United States Dollar (currency)
WFP	World Food Programme

Selling wares at a textile market in Madagascar

Introduction

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The aim of this publication is to provide a comprehensive overview of the current state of agricultural financing for youth in developing and emerging countries, underlining the trends, core challenges, opportunities, innovative solutions and initiatives associated with this undertaking. The study makes use of the latest and most relevant literature on youth finance, while also relying extensively on insights and case studies that have emerged during the development of three country-level assessments on the state of agricultural finance for youth, in Guatemala, Kenya and Uganda. Building on the analysis of this data and experience, the study aims to provide a range of recommendations and lessons learned that can be leveraged by interested stakeholders to develop new modalities to promote youth access to agricultural finance, in their own specific contexts[1].

The intended audience of the paper is composed of rural finance practitioners, policymakers and other relevant stakeholders whose mandate is linked to the promotion of youth financial inclusion in the agrifood sectors of developing and emerging countries.

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[1] Together with this study, a companion publication was developed titled *Assessing the state of youth financial inclusion in developing contexts - Methodological guidelines* (see Benni, 2022 in the References). These guidelines seek to provide a series of practical recommendations on how to carry out quality assessments of the state of youth financial inclusion in developing and emerging contexts, especially for what concerns young actors engaged in agriculture. While the present study provides a more theoretical and ample analysis of the domain of youth finance in agriculture, the methodological guidelines focus specifically on the development of youth financial inclusion assessments at national and regional level.

The study is divided into four sections:

Section 1: **Understanding the context**

This section seeks to provide the core information and essential data that is required to understand the current scenario of youth financial inclusion in developing and emerging contexts, focusing on the rationale for fostering quality access to financial services in agriculture. It also analyzes the most recent data available on the state of financial inclusion of young agripreneurs in developing and emerging countries.[2]

Section 2: **The role of digital technology in supporting the financial inclusion of young agripreneurs**

This section seeks to illustrate the opportunities and challenges associated with using digital financial services to promote access of finance for young agricultural entrepreneurs, showcasing recent notable trends and experiences in this regard.

Section 3: **Insights from select experiences linked to youth agrifinance promotion**

This section reviews and discusses a series of public and private programmes, products and platforms dedicated to directly promoting young agripreneurs' access to quality financial services that can support them in expanding and maintaining their businesses.

Section 4: **Conclusions and recommendations**

This section provides a series of conclusions and recommendations aimed at policymakers and rural finance practitioners involved in the design and implementation of solutions and support interventions that seek to promote the financial inclusion of young agripreneurs.

[2] Note that, throughout this study, the term "agripreneur" will be used to generally define an individual that launches and manages a business venture in the agricultural sector. While the term in this study is bound to mainly refer to young entrepreneurs engaged in agricultural production, it can actually encompass other segments of agricultural value chains, such as trading or processing.

Young farmer in
Beora, Rupandehi
District, Nepal

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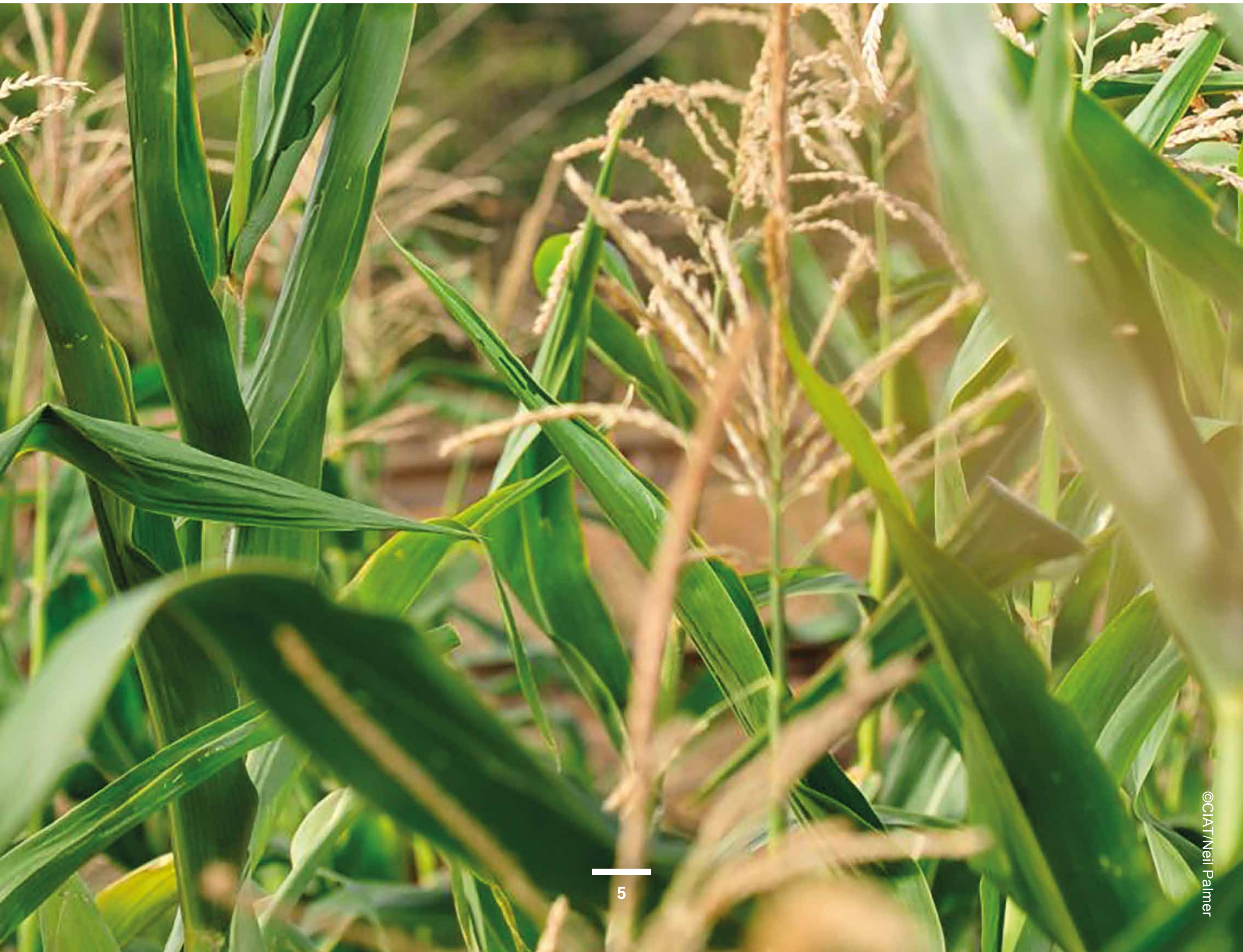
Section 1

Understanding the context



1.1 Key data on rural youth in developing countries

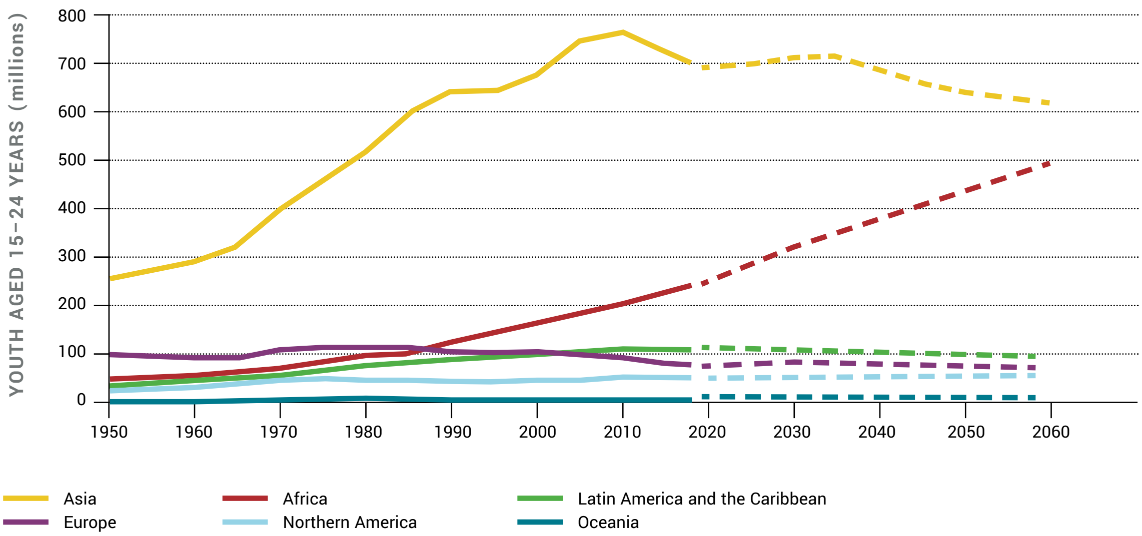
According to estimates from the UN Department of Economic and Social Affairs (UNDESA), as of 2019 there were **1.2 billion young people (aged 15 to 24)**[3] **in the world**, accounting for 16 percent of the global population. More than 83 percent of these young people live in developing countries. Central and Southern Asia is home to 30 percent of these young people, while 25 percent live in Eastern and Southern Asia and 17 percent in sub-Saharan Africa (UNDESA, 2019). In terms of rural youth specifically, International Fund for Agricultural Development (IFAD) (2019) data shows that there are 494 million youth residing in rural areas of developing countries, of which 65 percent live in Asia and the Pacific and 20 percent live in Africa.

The global youth population is projected to rise considerably in the coming decades (peaking at 1.4 billion in 2060). The chief drivers of this growth are expected to be **the least developed – and poorest – countries.** According to UNDESA estimates, the youth population from the 47 least developed countries is projected to increase by 62 percent by 2060, from the 207 million of today up to 336 million. More specifically, as shown in Figure 1, **sub-Saharan African countries** are forecasted to be the main source for this youth demographic bulge, with an estimated increase of 89 percent in their youth population taking place by 2060 (UNDESA, 2019).

The UNDESA has underlined that, in order to achieve the Sustainable Development Goals (SDGs) by 2030, developing countries should become capable of leveraging what is known as the **"demographic dividend"**, which refers to the boost in economic productivity that derives from the growth of the share of the working age population at country level in relation to the total population. This is a consequence of notable declines in child mortality and fertility rates in a country, which lead to the labour force growing faster than the population dependent on it, freeing up resources to invest in family welfare and economic development (Lee and Mason, 2006). The capacity of developing countries to leverage the demographic dividend is dependent chiefly on their human capital investments, in particular on young people who are poised to enter the workforce – as the productivity, entrepreneurship and innovation that characterize these actors can represent a fundamental drive towards future economic growth. If the investment in human capital is insufficient, or if the labour market is incapable of absorbing these new workers, the growth opportunity deriving from the youth bulge will most likely be lost (UNDESA, 2015).

[3] Note that all references to youth within this publication are based on the commonly UN-accepted definition of youth as an individual in the 15–24 age range. Nevertheless, it has to be underlined that, in both past academic literature and field-level programmatic experience, this definition has been interpreted quite loosely, often using also either the 12–24 or 15–35 age categories (the latter also commonly referred to "young adults").

Figure 1 **Youth aged 15–24 years, by region, 1950–2060**



Source: UNDESA. 2019. *World Population Prospects 2019: Highlights*. New York, USA. https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

Developing countries could reap substantial benefits from the demographic dividend, in terms of economic growth and strengthened social development. The reality, however is that:

> "despite their significant present and future numbers, young people are often faced with age-related challenges and barriers to participation in economic, political and social life, greatly hindering their development and, by extension, sustainable development" (UNDESA, 2018).

That is why, for a range of stakeholders such as governments and development agencies, leveraging youth's potential is closely connected to fostering and strengthening their capability to access quality education, decent employment opportunities, adequate healthcare and food security, as well as – as will be discussed extensively throughout this study – **quality financial services.**

With regard to agriculture specifically, the potential that youth carry to foster the development of this sector cannot be overstated. Recent data published by different development agencies **appears to disprove the widely held assumption** that the average age of the population engaged in developing agricultural sectors is high overall. The 2019 *Rural Development Report* from IFAD, for example, estimates that in developing countries the average age of those who carry out at least some work on their own farm or their family's is only 34, which rises to 41 when considering those that spend more than half of their typical work week doing the same. The same source estimates that rural youth in developing contexts spend 50 percent or more of their working time engaged in farming, with this number being the highest in Africa, at 65 percent (IFAD, 2019).

IFAD (2019) data shows that 72 percent of the rural youth in the developing world live in countries that register **low levels of rural transformation**,[4] which implies that substantial reforms around policy and the overall enabling environment are still needed to make agribusiness a profitable and palatable opportunity for youth entrepreneurs in these contexts. The vast majority of these countries belong to the sub-Saharan Africa and Asia-Pacific regions. The remaining 28 percent of the rural youth reside in countries with relatively high levels of rural transformation, where the agribusiness sector already holds considerable economic opportunities to escape poverty and make a decent living. Beyond the present status quo, in the near and mid-future, structural and social transformations are bound to turn agriculture into an **increasingly younger and more dynamic sector** across most developing regions, which implies that countries will be able to tap into a formidable pool of potential for economic development, provided that they can rise up to the challenge of establishing a conducive policy environment, an appropriate system of education and skill development, and **support services** for youths and their businesses, including business advisory services, technical assistance, access to market channels, promotion of agricultural mechanization and digitization, and, especially, support towards accessing financial services.

As pointed out by IFAD (2019), young agripreneurs in different regions where agrifood systems have already reached a transitional stage of development[5] (e.g. West Africa, East Africa and South Asia) are presented today with increasing opportunities to engage in **high-value agribusiness ventures**, due to the rising urban demand and growing connections with both domestic and international markets. In order to properly capture these opportunities, governments and other relevant stakeholders need to support these agripreneurs in transitioning towards a type of farming that is increasingly more technology- and data-intensive, with stronger ties to international markets, while breaking the widely held cultural assumptions of farming as a low-profit, labour-intensive and high-risk occupation, associated with a weak social status and scarce opportunities for growth.

[4] Following IFAD's definition, rural transformation at national level can be proxied by agricultural labour productivity (a central driver and reflection of the transformation process), measured as agricultural value added per worker. In this sense, rural transformation can be deemed "low" when the agricultural value added per worker is below USD 1 530 (IFAD, 2016, 2019).

[5] According to IFAD (2019), countries in a transitional stage of development show a number of shared features such as rising incomes, expanding urban populations and an overall diet shift towards more processed foods, all of which result in deep, structural changes to national agrifood systems. These changes include, but are not limited to: rising shares of the food market destined to urban locations; rapid increases in production of non-grain foods (e.g. fresh produce, dairy, poultry and other meats) with substantial growth in associated value chains (especially in the processing industry); rise in off-farm employment; higher investments on the part of traders in storage and cold storage; expansion and consolidation of the food packaging industry; and a rapid growth of supermarket chains, as well as small-scale food vendors (to meet a higher demand for food consumption away from home). As highlighted by IFAD (2019): "This is the boom stage for youth employment opportunities in small and medium-sized enterprises and, to a lesser extent, in wage employment in the agrifood system and in more remunerative and commercially oriented farming".

1.2 The importance of quality financial inclusion for young agripreneurs

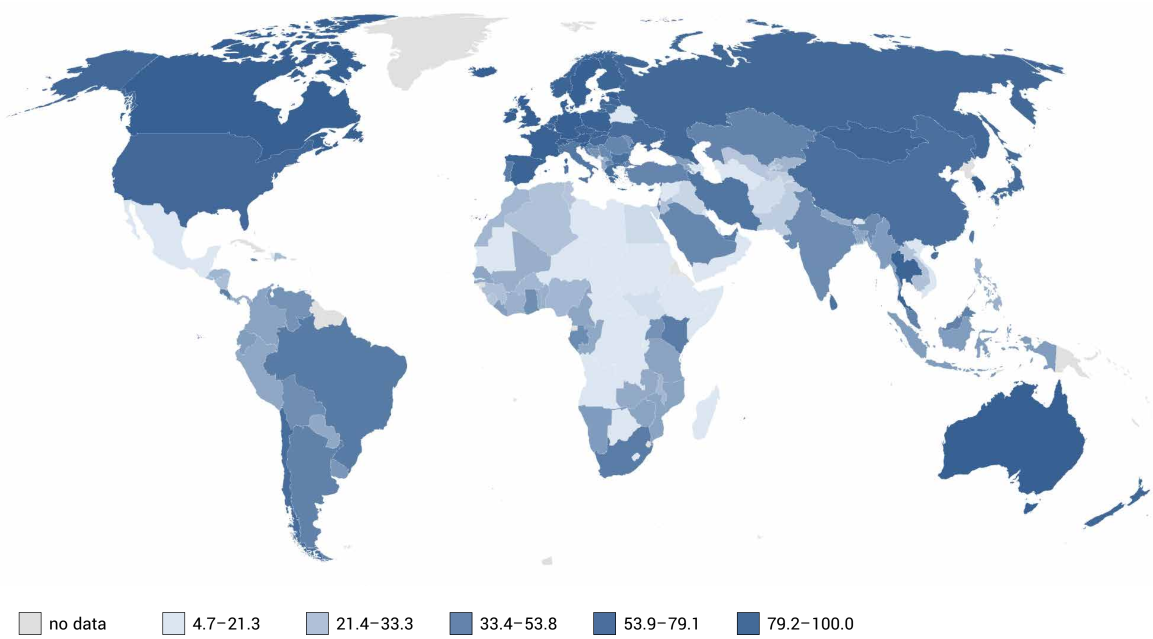
Access to finance represents a fundamental enabler of rural transformation for developing economies. For young agripreneurs especially, access to quality financial services holds particular importance as it can provide them with – among other things – the seed capital, savings channels and risk-mitigation mechanisms that are essential for them to **kickstart and grow their business ideas.** Targeted and tailored financing can encourage and promote youth-led innovation in agriculture, supporting the development of agricultural small and medium enterprises (SMEs) that lean more on technological innovation, have better connections to domestic and international markets, and are engaged in transformative processes characterized by high added value.

Despite the many advantages that young entrepreneurs could derive from being able to access a quality offer of financial services, the reality is that there is still, to this day, **a substantial gap in financial inclusion between youth and older adults** – a gap that is particularly evident in low- and middle-income countries. From a global perspective, according to the 2021 edition of the World Bank's *Global Findex* publication, 65 percent of youth aged 15-24 own a formal financial account against 79 percent of adults aged 25 and older – a notable gap of 14 percentage points.[6] Nevertheless, when restricting the analysis to only high-income countries this difference almost disappears. As can be clearly seen from Figure 2, which draws on national data from the 2021 *Global Findex*, low- and middle-income countries in regions such as sub-Saharan Africa, Southeast Asia, and the Near East and North Africa (NENA) **are home to the vast majority of the unbanked youth**, registering notably low levels of formal[7] account ownership among the youth population, on average, especially in rural areas (Gasparri and Muñoz, 2018).

[6] The World Bank's *Global Findex* is the world's most comprehensive dataset on how adults save, borrow, make payments and manage risk. Launched with funding from the Bill & Melinda Gates Foundation, iterations of the database have been published for the years 2011, 2014, 2017, and 2021. The data is collected in partnership with Gallup, Inc., through nationally representative surveys of more than 150 000 adults in over 140 economies. See Demirguc Kunt *et al*., (2022).

[7] Throughout the study, the term "formal" financial institutions refers to those entities whose structure and operations are regulated by a country's financial regulatory framework, and whose main line of business/specialization is the actual provision of financial services. This list of institutions includes, among others, commercial banks, microfinance institutions (MFIs) and regulated financial cooperatives.

Figure 2 **Share of youth population with an account at a formal financial institution (as of 2021)**



Source: adapted from IFAD. 2019. *2019 Rural Development Report – Creating opportunities for rural youth*. Rome. https://www.ifad.org/documents/38714170/41133075/RDR_report.pdf/7282db66-2d67-b514-d004-5ec25d9729a0

A range of interesting insights emerge by analyzing the 2021 *Global Findex* data from the perspective of youth financial inclusion:

1. Youth engagement with the formal financial sector in developing countries is **driven by savings**, more than credit. Almost 19 percent of youth had reported using a formal savings account to save money in 2021, against 23 percent of adults. With regard to credit, only 12 percent of youth reported borrowing money from a formal FI in 2021, against 23 percent of adults.

2. Youth in developing economies appear to have a relatively higher ownership rate for what concerns **mobile money accounts**, with 16 percent of youth having such an account compared to 11 percent of older adults.

3. Youth in developing countries still depend mainly on **informal[8] financial services** to see their financial needs satisfied. For example, while 42 percent of youth borrowed money in

[8] Throughout the study, "informal" financial service providers refer to those actors for whom the provision of finance does not represent their main profession or specialization, and/or which are not regulated by the national regulatory framework for the financial sector. These include informal moneylenders, value chain agents such as input providers or retailers, and family and friends.

A young beekeeper in Urlanta, Department of Jalapa, Guatemala.

2021 according to Findex data, only 12 percent of youth actually took a loan from a formal financial institution, which points to the fact that the majority of the demand for finance among youth is still serviced by informal providers.

This last point is particularly relevant for young entrepreneurs engaged in agriculture. In developing countries, the vast majority of these actors rely on informal financial service providers to satisfy their need for credit, savings, insurance and a host of other services that are critical to successfully kickstart and grow a business in the agricultural sector. The financial products offered by these informal providers are on average substantially more costly, less flexible and less varied than their formal counterparts, and usually limited to the same value chain segments (chiefly production and input supply). As will be further illustrated in Section 2 of this study, the exponential growth of **dedicated digital financial services for agriculture** seen in recent years in developing countries, chiefly driven by the rise of mobile money technology, holds considerable potential to assist agripreneurs in transitioning from the informal to the formal financial sector.

It is undeniable that young agripreneurs present a range of unique challenges that can significantly reduce their appeal as clients in the eyes of formal FIs and limit their capacity to engage with these providers.[9] Nevertheless, what most FIs in developing countries still fail to understand is that young agripreneurs hold incredible potential **as a profitable and unexploited client segment** that could be reached effectively with a targeted, quality offer of financial services. In order to do so, as will be illustrated throughout this study, formal FIs, policymakers and development agencies should start by leveraging **the unique strong points of youth** as agricultural entrepreneurs, such as their increased familiarity with digital financial services, their attitude towards innovation and their flexibility.

1.3 Key barriers constraining the financial inclusion of young agripreneurs

The following is a comprehensive (albeit not exhaustive) list of barriers that limit access and use of financial services for young agripreneurs. Beyond the "traditional" constraints to financial inclusion that affect rural developing contexts in general, this section seeks to define barriers that are either unique to young agripreneurs, or at least **exceptionally pressing** for this specific category. For the sake of clarity, these barriers have been categorized as 1) demand-side constraints, when stemming from obstacles related to political, legal and socioeconomic challenges faced by rural youth as financial clients; and 2) supply-side constraints, when related to structural and policy weaknesses affecting formal FIs and other public-private stakeholders. Nevertheless, it is evident that most often these constraints are in fact two sides of the same coin, stemming from challenges faced both by the side of the demand and that of the supply of financial services.

[9] These challenges and constraints will be analysed extensively in the next section.

Demand-side constraints

A weak or discriminatory legal environment: this barrier can imply either a lack of regulation on the policymaker's side that ends up affecting youth's capability to access financial services, or the presence of rigid and discriminatory rules that end up having the same effects.[10] They can encompass issues such as:

- **Low levels of access to formal ID** (such as a national ID card or student card) among youth, which – depending on the national regulation – can constrict restrain young agripreneurs' ability to open an account at a formal FI or apply for a loan or other service. In Uganda, for example, only 58 percent of young adults own one of the forms of ID required to open an account with a formal FI, such as a birth certificate or proof of residence (Benni, Berno and Del Puerto Soria, 2020). Additionally, banks often require additional documentation, such as utility bills or rental agreements to verify residential addresses, which presents further difficulties for youth.

  In recent years, some formal FIs that have more heavily invested in youth-specific portfolios have begun to accept alternative forms of identification, such as baptism certificates, driving licenses or certificates from vocational training centres. Finance Trust in Uganda, for example, accepts letters of recommendation from adults who know the youth as an acceptable form of identification, as well as accepting school IDs. Opportunity Bank in Malawi (part of the UN Capital Development Fund's (UNCDF) YouthStart programme) accepts letters from village chiefs as a form of identification and recommendation. Aside from alternative forms of IDs, digital solutions have also proven effective: countries such as India and Nigeria, which have established **biometric-enhanced digital ID databases** at a national level, have gone a long way in tackling this fundamental constraint.

- **Age restrictions** set by national regulatory frameworks to open formal accounts or apply for loans, and which can severely limit capability of youth under the age of 18 to engage with formal FIs. A number of developing and emerging countries in recent years (e.g. Colombia, Ethiopia, India and Mongolia) have implemented policy reforms to lower the minimum age to open accounts, while others (e.g. Malawi and Uganda) foresee such changes as part of their National Financial Inclusion Strategies. Some national regulations (e.g. in Nigeria, South Africa and Zambia) allow for an underage minor to co-sign on an account together with an adult legal guardian (such a family member or tutor), although guardianship can also have **unintended negative consequences**: a guardian, for example, could act in an irresponsible or even exploitative manner, by taking the youth's assets, while guardianship requirements can also exclude specific vulnerable client segments, such as orphans or adolescents living independently at a distance from responsible relatives (Kam, 2011).

[10] In recent years, a number of noteworthy non-profit initiatives, such as The Smart Campaign and the Child and Youth Friendly Banking Principles, have sought to push governments towards tackling the core regulatory constraints that prevent youth access to finance, for example by providing increased control to youth over their finances within the boundaries of national legal and regulatory frameworks, as well as loosening age and identity restrictions.

- **Discriminatory laws on property rights and use of collateral.** Weak and inflexible regulation can constrain youth from employing alternative forms of collateral they do have in their possession, such as moveable property (e.g. livestock), as guarantee for a formal loan. This compounds with the value of conventional collateral demanded by commercial banks for credit, which is usually quite high and out of reach for the vast majority of young entrepreneurs. In Uganda, for example, World Bank data shows that commercial banks can ask for a value up to 160 percent of the value of a loan, while 87 percent of total loans to enterprises require some sort of collateral (Benni, Berno and Del Puerto Soria, 2020).
- **Grievance redressal mechanisms** that are either absent from the financial regulatory framework or especially challenging to access for the rural youth,[11] which makes rural youth particularly exposed to risks of frauds, scams and predatory behaviour on the part of financial providers.

Lack of financial capability: following the definition suggested by the UNDESA (2013), financial capability is "the combination of knowledge, skills, attitudes, and especially behaviors that people need to make sound personal finance decisions, suited to their social and financial circumstances". As such, it does not just encompass financial literacy and business education for young agripreneurs, but also the promotion of an entrepreneurial attitude, tutorship and mentorship, and all other types of support that can equip the youth with the confidence to make sound financial decisions, effectively manage financial services, develop their business and work toward tangible goals.

A main issue in developing contexts is that there is often a **mismatch** between the education provided by traditional school curricula and the types of practical skills required to be successful in the agribusiness sector (such as knowledge of climate-smart agricultural practices, business management or financial education), which makes the school-to-work transition process considerably more challenging. In Kenya, for example, youth are able to study agriculture, but traditional teaching methods do not provide opportunities for them to learn practical agricultural skills or carry out on-the-job training. Furthermore, educational institutions (which include local schools, vocational and training centres, and even universities) are often weakly linked to the agricultural industry, and are unable to assist young graduates in strengthening their professional networks in this area (Mercy Corps, 2019a).

Overall, having these types of capabilities are fundamental for youth to, for example, assess the validity of the financial services they are offered, prepare solid business plans that can be used to attract formal financing, as well as navigate the intricacies of formal FIs' loan application processes (which often require considerably high levels of financial literacy to be completed

[11] This could be due to a variety of reasons, depending on the context, including: a scarcer awareness on the part of youth on the existence of such mechanisms, due to lower levels of financial education; a weaker position, from a socioeconomic perspective, that might prevent them from approaching these channels or from being taken seriously in their grievances; and the lack of economic assets that might discourage them from engaging predatory financial providers on the legal front.

successfully). Financial capability can be developed through various approaches, among which the following stand out: **community-based approaches** (e.g. development agency-led campaigns carried out at community level, an example of which is described in Box 1), **technology-based** approaches (e.g. digital learning platforms, as described in Section 3.1), and **school-based** approaches (e.g. national financial literacy campaigns for students).

Perception of agriculture as an unprofitable line of business: there is a diffused perception among youth in many cultures that working in agriculture is an **unprofitable, labour-intensive and unattractive occupation,** characterized by high risk, little potential for entrepreneurism, and an association with low social status. This is an important cause of scarce youth engagement in the agribusiness sector, as well as scarce enrolment in agribusiness-related degrees at technical institutes or universities. In Uganda, for example, according to a survey carried out by the Aga Khan University (2016) among rural youth, only 12 percent of respondents saw farming as an appealing profession, while far more wished to go into business (48 percent) or engineering, law or medicine (24 percent). Overall, this scarce perception of the business potential that could be leveraged in the country by agricultural ventures is due to traditional views of farming as subsistence-based, labour-intensive and barely capable of providing a decent living.

Despite this perception, many developing and emerging countries have substantial opportunities for successful and profitable entrepreneurship on the part of young farmers,[12] provided that the necessary support and enabling conditions are present, and especially given the rising advances in technology and digitalization. Beside primary production, other value chain segments (e.g. processing, trade and transportation), carry substantial opportunities for youth to kickstart substantial entrepreneurial ventures, although access to initial capital investment remains a core barrier to seizing these opportunities.

Lack of potential or concrete linkages with other segments of rural and agricultural value chains: even when young agripreneurs are put in the position to receive training and capacity building on essential skills such as business management and financial literacy, they are still bound to face another fundamental obstacle that prevents them from attracting formal financing: **the lack of commercial channels** (both domestic and international) to market their products; in other words, the absence of contractual linkages with other value chain segments – such as medium- and large-sized processors, wholesalers and exporters – able and willing to process and commercialize their offer. Furthermore, the few linkages that young rural entrepreneurs might be able to establish with their own strength are usually **informal** (i.e. not enforced through a legal contract), which increases the uncertainty over their potential profits and weakens both their creditworthiness and their business growth prospects in the eyes of

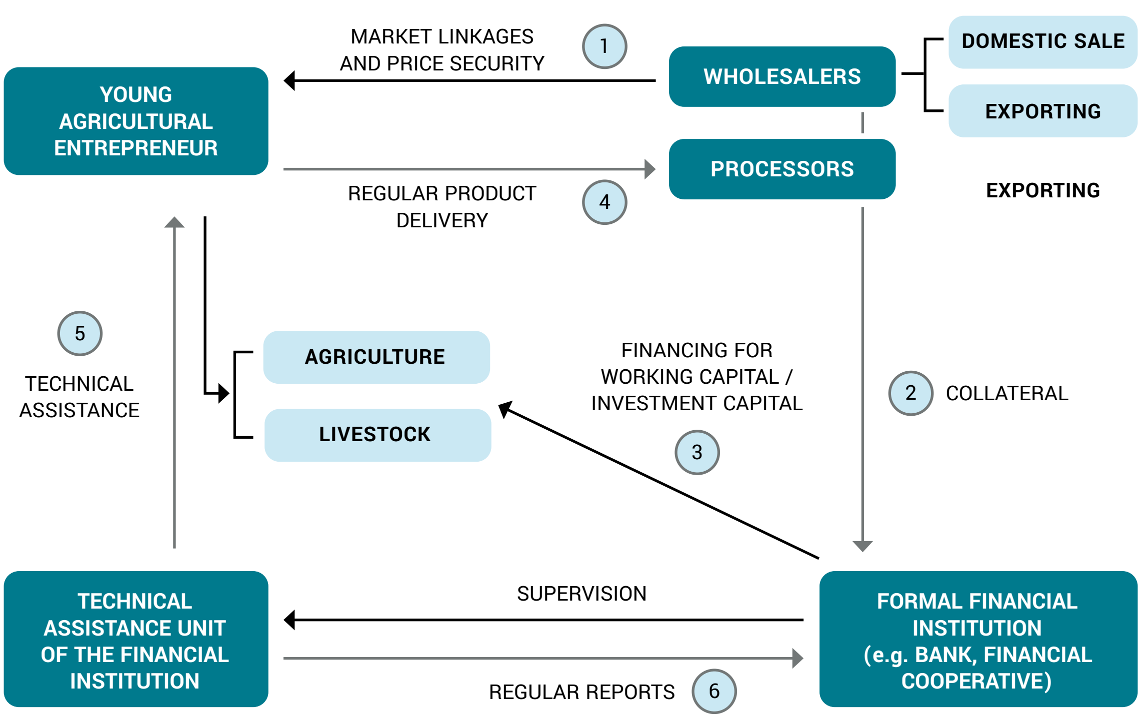
[12] In Kenya, to cite one example, young entrepreneurs looking to make a profit can engage in high value-added business endeavours such as the processing and export of fruits (e.g. mango and passion fruit), vegetables and nuts (e.g. macadamia) and the processing of imported commodities (e.g. vegetable oils and wheat for pasta) for local markets (Benni, Berno and Ho, 2020).

formal FIs (Benni, 2020). Although these challenges are valid in general for all rural producers, they are particularly pressing for youth due to the weaker socioeconomic networks they have access to, their lack of business experience, their lower social status and a host of other factors.

These specific challenges (related to commercialization and, more generally, the weak legal enforcement in rural areas) also prevent the development of **value chain financing schemes** which can formalize – in their simplest version – a tripartite and mutually beneficial collaboration between a young entrepreneur, a formal FI and an established value chain agent (e.g. a processor or a wholesaler).

Figure 3 illustrates a basic example of an arrangement of this kind, in which the young agripreneur receives a loan from a formal FI (such as a bank) to kickstart or expand their business plan, together with capacity building and technical assistance. The collateral for this loan is not provided directly by the entrepreneur, but rather **by one or more value chain agents (such as processors or wholesalers) with which the youth has previously established a commercial contract**. These value chain actors provide the FI with a guarantee to compensate for the youth's lack of collateral, receiving in exchange a regular delivery of the entrepreneur's production, at a price formally agreed upon beforehand.

Figure 3 **Basic model for a value chain financing scheme in agriculture**



Source: adapted from FAO. 2016. *Estrategias innovadoras de gestion del riesgos en mercados financieros rurales y agropecuarios – Experiencias en América Latina*. Rome. http://www.fao.org/3/a-i5503s.pdf

Through this arrangement, the young agripreneurs can benefit from the capacity building and support provided by the formal FI, as well as the established market linkages and price security ensured by the contract with the processing/wholesaling segments of the chain. Moreover, they can overcome the barrier caused by their lack of collateral, as this is provided by the partnering value chain agents who, in turn, ensure for themselves a steady stream of quality (raw) products. The FI, on its end, sees the lending risk it faces considerably reduced, as the value chain agents provide a guarantee on a loan to a trained client.[13]

Box 1 IFAD's experience of providing financial education to agripreneurs in Cambodia

In the frame of the Sustainable Assets for Agriculture Markets, Business and Trade Project, IFAD has been supporting the Cambodian Government since 2019 in financing the training of eligible youth from farming areas to enhance their employment opportunities and labour productivity. Trainees are supported with seed capital grants from the project and assisted in developing business plans, procuring up-to-date market research and in raising finance from the local private sector. Additionally, the project is supporting 5 000 young farmers through trainings on digital literacy, giving specific attention to gaps in women's digital literacy as well as providing start-up incubation services to develop innovative concepts for digital, agri-related solutions. These young farmers are also the first adopters of the project-supported *Chamka* app, a digital application that provides young entrepreneurs with direct-dial extension services, such as access to agricultural practices, finance, market linkages and weather information (Hamp and Singh, 2019).

Lack of collateral and weak socioeconomic networks: young agripreneurs often lack the necessary starting resources and assets which, if not enough to kickstart a business, can at least be leveraged to attract further financing from the formal financial sector. In other words, they lack the types of collateral commonly required by formal FIs to provide loans, such as properties, land or other commonly demanded assets. This fundamental barrier[14] prevents aspiring young agripreneurs from kickstarting their business venture, or bringing it up to scale to make it really profitable. Furthermore, young agripreneurs possess weaker social

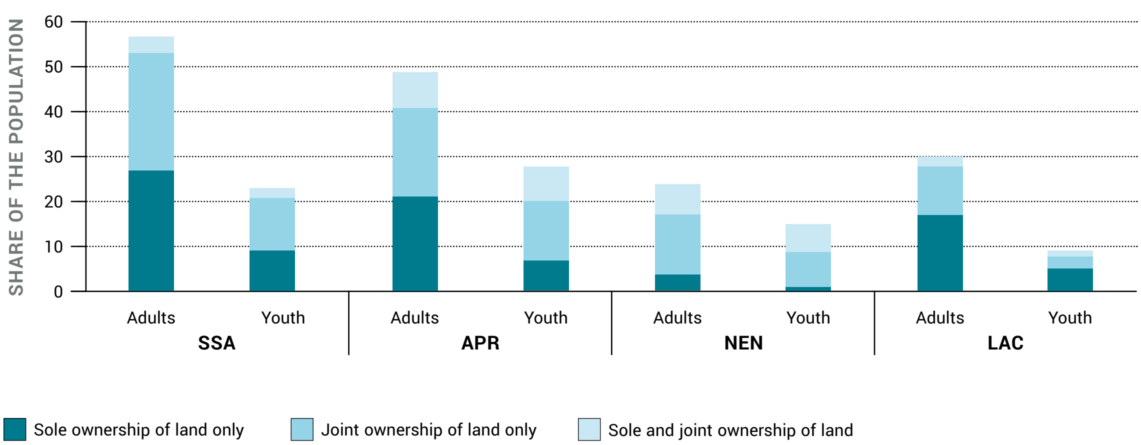
[13] Note that value chain financing arrangements are not necessarily restricted to the production segment. In fact, various experiences show (see Rutten and Fanou, 2015) that they can be even more successful for young entrepreneurs in value-adding segments of the value chain, instead of primary production. Examples could include: a venture by young people to provide services such as pesticide application, equipment maintenance or ICT-based advice to farmers; a cold storage transport company; a company that links farmers directly to urban consumers; or an exporter to high-value markets.

[14] As will be discussed in Section 3, mobile money can represent a fundamental enabling factor in reducing these constraints, and can narrow down the existing gaps, both age- and gender-related. As pointed out by Gasparri and Munoz (2018), recent data shows mobile money account penetration is similar overall in rural and urban areas of developing countries, with youth showing higher rates of uptake than adults.

networks – which could be tapped into to obtain informal credit to kickstart a business, or to find a respected guarantor that can put his weight behind a formal loan application – compared with adult entrepreneurs.

Within the category of collateral constraints, **the lack of access to land** and land titles is an important subcategory to underline, as it is the result of both socioeconomic and legal barriers faced at country level. Formally owned land is a type of asset that is commonly requested by formal FIs as collateral for loans. While issues and challenges related to land titling and ownership are quite common for all rural dwellers in developing countries, they can be particularly pressing for youth. According to the 2019 IFAD Rural Development Report, for example, while around one in three adults in sub-Saharan Africa are sole owners of a plot of land, **only one in ten youth can say the same**[15] (see Figure 4). More generally, major age-related gaps in land ownership (whether sole or joint ownership) can be found in all regions analysed by the IFAD report.

Figure 4 **Types of land ownership by adults and youth, percentage by region**



Notes: SSA: sub-Saharan Africa; APR: Asia and the Pacific; NEN: Near East, North Africa, Europe and Central Asia; LAC: Latin America and the Caribbean

Source: IFAD. 2019. *2019 Rural Development Report – Creating opportunities for rural youth.* Rome. https://www.ifad.org/documents/38714170/41133075/RDR_report.pdf/7282db66-2d67-b514-d004-5ec25d9729a0

[15] As will be seen in the next section, these gaps are usually more pronounced in the case of young women: in Kenya, for example, women hold only 1 percent of all registered land (Benni, Berno and Ho, 2020).

Among the various challenges that limit youth access to land in rural developing contexts are the following:

- **Rapid population growth** which makes land a less available resource, while arable land parcels become smaller and more fragmented. In some specific regions, such as East Africa, **the issue of land scarcity**, which is also reflected in the high rental prices for agricultural land, represents a major constraint on agricultural production.
- **Higher maximum working age of parents,** due to improved socioeconomic conditions and increased lifespans. One of the results of this trend is that parents are bound to work on farms for longer – and that it is less likely they will transfer it to their children when they start entering the labour force. Youth can thus choose either to work on their parents' farm and expect to inherit it later in life, delaying their transition to becoming autonomous entrepreneurs, or rent their own land, provided that their own means, as well as the local economy and regulation, allow them to do this (IFAD, 2019).
- **Poor or scarcely enforced land titling regulation** that can be particularly discriminatory towards rural youth, which can weaken their legal claim to a particular plot of land – and their capacity to use it as collateral.
- **The rise of medium-size commercial farms** in many developing contexts, which occupy sizeable amounts of arable land to the detriment of small-scale farming – where rural youth are mainly concentrated. Medium-scale agribusinesses, for example, can own from 30 to 50 percent of total farmland in countries such as Ghana, Kenya, Malawi and Zambia. According to IFAD (2019) data, if the current trends continue, medium-scale farms will account for a majority of output in many African countries within the next decade.

Supply-side constraints:

Lack of in-house expertise to develop youth-tailored financial products: formal FIs usually lack both the commercial interest and the in-house technical capacity to develop financial products that are tailored to the strengths, weaknesses and general opportunities associated with young agripreneurs. The complexity associated with lending to the agricultural sector (e.g. due the diversity of production cycles, value chain dynamics and inter-agent relationships) as well as to young actors (due to the various constraints illustrated in this section) implies that investing in a long-term process of **internal institutional capacity building** is essential for an FI to become able to develop flexible financial products that can be both convenient for young agripreneurs and profitable for the institution itself, while building an institutional track record on successful agricultural lending. This issue is compounded by the **general lack of public support** (e.g. financial or technical, whether governmental or non-profit) provided to FIs to develop innovative, youth-friendly financial services.

Lack of detailed information on agripreneurs' client profiles: formal FIs in developing and emerging contexts traditionally lack insightful and timely information on agricultural value chains, their dynamics and their agents, which would allow them to establish financing strategies for the whole sector, as well as take individual decisions on loan applications from agripreneurs. In the case of the youth, this information is even more lacking, also because of the insufficient or non-existent credit histories these actors have, both due to their relative inexperience as well as **the challenges they face in registering at a credit bureau** (provided that it even exists as a public facility, which in developing contexts is more often the exception rather than the norm). Furthermore, the public information on financial markets that governments make available in developing contexts (if any) is rarely disaggregated at age level, which considerably raises the difficulty for formal FIs to develop a youth-specific strategy for an offer of tailored financial services. Finally, those categories of rural FIs whose networks are "closer" to young agripreneurs and might have better experience in lending to agriculture, such as financial cooperatives, are restrained by their limited capital. All these elements contribute to significantly raising the cost of formal financing for young agripreneurs, restricting their opportunities to kickstart and expand their businesses (IFAD, 2019). Box 2 at the end of this section illustrates the experience of a programme focused on designing and delivering savings services tailored on the needs of young clients, which overcame the lack of public or private information available on this client segment by undertaking a large-scale data gathering exercise prior to product development.

An institutional bias against lending to young agripreneurs: this constraint is actually composed of two compounding biases that are diffused among formal FIs: 1) the perceived notion that lending to agricultural ventures is a risky activity, highly vulnerable to external shocks such as climate events and pests and diseases; 2) the idea that young people are irresponsible, unprofitable clients, lacking financial education, business experience, a stable financial base and an established credit history. Aside from sociocultural factors, these biases are also fomented by the widespread lack of timely, granular and insightful data on agricultural value chains' dynamics and production cycles, as illustrated in the previous paragraph. These biases prevent the institution from successfully foraying into lending to young agripreneurs as part of its institutional strategy, as well as developing, over time, a greater technical specialization in the financing of this specific client segment.

A scarcity of effective facilities dedicated to fostering agricultural financing for youth: developing countries are characterized by a widespread scarcity of financial facilities (such as revolving funds, partial credit guarantee schemes and technical assistance facilities) explicitly dedicated to promoting financial access for rural young entrepreneurs, and **which could facilitate the flow of investment capital towards youth-led agribusinesses.** While there can be facilities available to all agri-SMEs at national level (i.e. not youth-specific), such as investment funds or credit guarantee schemes, these often present **very rigid requirements to access** that young entrepreneurs simply cannot meet, which limits their impact and outreach among this group.

A group of young agripreneurs from the "Young Entrepreneurs' Development Association of Guatemala", together with staff members of FAO's ICA programme.

©FAO/Rubí López

Youth-specific support mechanisms are not only capable of increasing the flow of credit towards their target segment in a relatively short period, but can also – in the longer term – **improve the overall perception that formal FIs have towards young rural entrepreneurs as a whole**, i.e. as more trustworthy and profitable recipients for financing. Although in the past two decades there have been a number of cases of financial facilities explicitly set up to strengthen the flow of agricultural financing for young entrepreneurs (especially in sub-Saharan Africa), these experiences have been marred by a wide range of flaws and bottlenecks which have majorly impaired their effectiveness, such as elite capture, new market distortions, embezzlement and weak regulation. Section 1.5 delves into the use of agricultural financing facilities explicitly dedicated to young agripreneurs in more depth.

Box 2 The YouthSave Project

YouthSave was an international project led by Save the Children, in partnership with the Center for Social Development (CSD) at Washington University in St Louis, the New America Foundation, CGAP and MasterCard Foundation. It sought to develop, deliver and test new savings product accessible to low-income, rural youth in Colombia, Ghana, Kenya and Nepal, in partnership with local FIs. In the period the project was implemented (2010–2015), it managed to open more than 130 000 accounts for young savers, primarily in the 12–18 age range, to collectively save over USD 1 million. In addition, approximately 44 000 youth received direct financial education, 48 000 individuals were reached through community-level events and an estimated 660 000 were reached through mass media (Benni, Berno and Ho, 2020).

In order to analyze how youth saved over time and what factors affected their savings behaviour, YouthSave put together the largest known database of demographic and transactional data on youth savers. The project also implemented the largest longitudinal, experimental study of its kind, examining the impact of the opportunity to open an account on the financial capability, cognitive functioning, health and educational outcomes of young people. Additionally, YouthSave analysed the results of its financial education work in terms of changes in participants' knowledge, attitudes and behaviors related to saving, and used qualitative methodologies to explore young account holders' subjective experiences of saving in order to identify what facilitated savings or presented obstacles. Aside from the multiple benefits related to youth financial inclusion and development goals, YouthSave also examined the business case for youth savings accounts from the perspective of financial institutions (YouthSave Consortium, 2015).

In Kenya, the project worked in partnership with Kenya Post Office Savings Bank (Postbank) and the Kenya Institute for Public Policy Research and Analysis from 2012. In the frame of the project, in 2013 Postbank rolled out a new savings account product called SMATA, geared towards youth aged 18 or under. A parent or guardian could operate the account on behalf of children under 12 years of age, while those in the 12–18 age range could operate it with minimal supervision. A parent or guardian had to open the account, which required some sort of identification document available to youth, such as a birth certificate or school ID.

The account did not require an initial deposit to be opened. Although this could prove to be beneficial for youth with low income, it also resulted in a higher number of dormant accounts (i.e. open accounts with no deposits). Aside from dormant accounts, 71 percent of accounts created in the frame of the programme registered less than one deposit per month. In the years that the project operated, more than 90 000 youth registered for a SMATA savings account, while more than 44 000 received financial education (Benni, Berno and Ho, 2020).

1.4 Focus on young female entrepreneurs' constraints to financial inclusion

According to 2021 Findex data, **women represent 54 percent of the world's unbanked individuals** (740 million women in absolute terms)**,** with the majority of financially excluded women residing in developing countries. The overall gender gap in account ownership in developing economies was 6 percentage points in 2021 (a reduction of 3 percentage points compared to 2017) while the global gender gap was 4 percentage points.

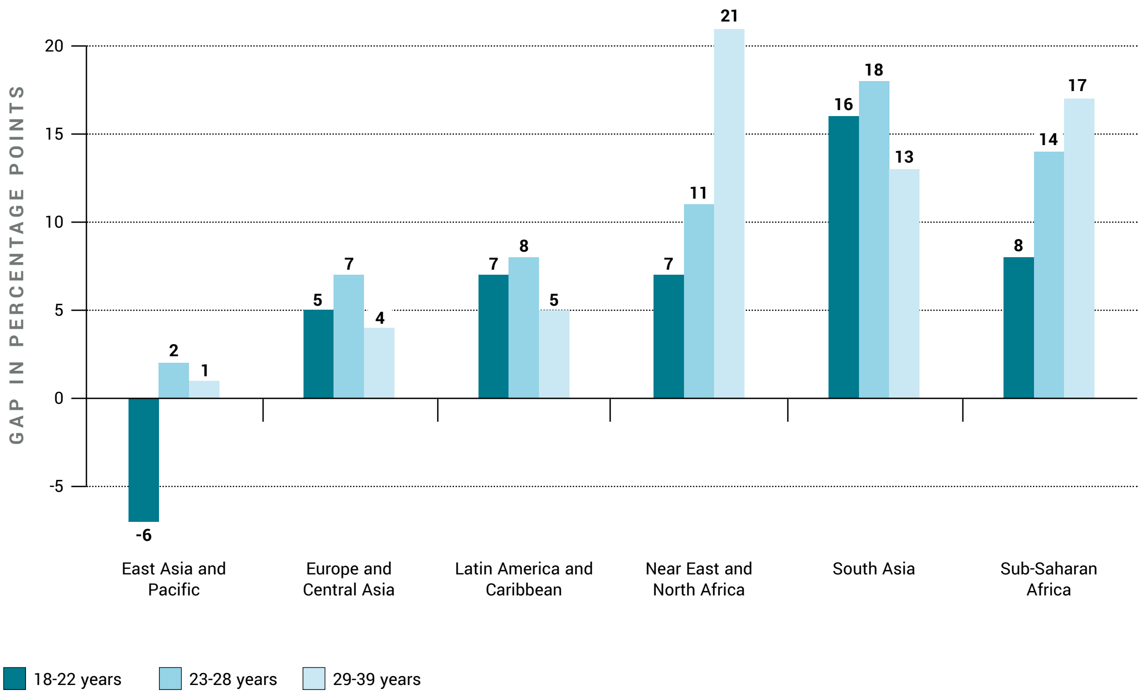
With that being said, a recent study carried out by Ansar *et al.* (2021) shows that **profound differences emerge** when refining the analysis of the gender gap in financial inclusion on the basis of age and location (see Figure 5). In the NENA region, for example, while the gender gap in account ownership among youth aged 18 to 22 is similar to that registered on average in developing countries (7 percentage points), this rises to 21 percentage points in the case of the 29–39 age group. In sub-Saharan Africa, the gender gap in account ownership among people aged 29–39 years is **more than double** of that of youth aged 18–22. In South Asia, on the other hand, youth aged 18–22 register a slightly higher gender gap in account ownership than their older counterparts (16 against 13 percentage points). The significant variations between age ranges across regions shown in Figure 5 appear to suggest very complex scenarios at the regional level in terms of the gender- and age-based determinants to financial inclusion.

Despite these different patterns at regional level, a series of general considerations can be made regarding the **intersectionality of the barriers** that constrain financial inclusion for young, rural women. Rural women and youth, as subcategories of financial clients, face a range of similar, intersecting constraints when seeking to access formal financial services: among others, formal FIs view them as less profitable and creditworthy clients; they have access to scarce initial capital and land; they are on average less educated from the standpoint of financial literacy; and the social/economic networks they can leverage are usually weak and quite limited.

That is why, from an inclusion viewpoint, **young female entrepreneurs represent a particularly vulnerable category** to constraints related to financial access and usage, due to the complex, interlinked socioeconomic dynamics that contribute to keep them unbanked and unserved by the formal financial sector, and that widen the inclusion gap when compared with their male counterparts. The triple burden that these actors face, on account of being female, young and rurally located, implies that they are bound to face a combination of compounding economic, cultural, social, legal and infrastructural barriers[16] which contribute to keep them financially

[16] Young rural women in developing contexts, for example, are only half as likely as young rural men to have sole title to a plot of land, and they are almost twice as likely as young rural men to neither work nor be in school, in most cases as a result of marriage and child-rearing responsibilities (IFAD, 2019).

Figure 5 **Gender gap in account ownership, by age and region**



Source: Ansar, S., Deshpande, R., Klapper, L. & Koning, A. 2021. What drives the financial inclusion gender gap for young women? *FinDev Gateway*, 4 March 2021. New York, USA. Cited 14 April 2022. https://www.cgap.org/blog/what-drives-financial-inclusion-gender-gap-young-women

excluded, and that can only be overcome with a flexible and well-designed offer of financial services tailored on their needs and features.

With this premise, it is fundamental for all stakeholders involved in the financial inclusion domain (development agencies, policymakers, FIs and mobile money operators [MMOs]) to develop inclusion strategies that target the specific pain points **that stem from the convergence between gender-specific and youth-specific constraints to access.** For young female entrepreneurs, barriers such as lack of collateral, scarce access to formal ID and limited financial education are the result of multiple socioeconomic and cultural factors that have to be addressed holistically, as targeted public and private interventions that only focus on one aspect of these constraints risk actually widening the financial inclusion divide affecting young women, given the added layers of complexity in the bottlenecks that they face. Box 3 at the end of this section illustrates the case of an interesting project implemented in different Latin American countries which sought to identify and tackle the different barriers to financial access faced by young rural women through a holistic approach, targeting all stakeholders involved in the offer and delivery of financial services to this client segment.

An important factor in reaching young women as financial clients is to understand their lifestyle, specific habits and customer journey, especially by **breaking down the specific gender-based barriers that limit their capability to access financial services.** Cultural and social expectations make it especially challenging for young women to access the same level of education as men and to transition successfully from school to work.[17] High levels of teenage pregnancy also represent a barrier to girls' education, entrepreneurship and financial access: in sub-Saharan Africa, for example, the rate of adolescent pregnancy is almost 20 percent (Kassa *et al*., 2018). All of these factors – which are but a fraction of the overall gender-based barriers to financial access – limit the growth potential of young women as entrepreneurs.

In many developing countries, women (especially in rural areas) rely heavily on informal savings and credit groups to build financial capital by saving in small amounts over long period of times, in order to address both consumption and investment capital needs. In Kenya, for example, 37 percent of Kenyan women rely on informal savings and credit group (i.e. chamas) to satisfy their financial necessities, compared with 22 percent of men (FSD Kenya, 2019). In this sense, **public or private programmes** that seek to digitize these savings patterns and behaviors will have considerable appeal to women as formal financial clients, especially if implemented as a component of a graduation scheme. Safaricom, East Africa's largest telecom company, has tried and tested this approach by developing a financing model in which savings group members can save small amounts towards the purchase of a smartphone, as an essential bridge to internet access and mobile wallet ownership, and as a starting point on a route towards higher levels of inclusion and entrepreneurship (Muhura, 2019).

Finally, another essential factor that both FIs and MMOs should take into consideration is **selecting the most appropriate channels** to inform and raise awareness among young women on the offer of financial services that is available to them. There are plenty of examples of how this can be done, such as: using local media channels, such as radio stations, to advertise financial products, and delivering targeted ads for young women; hiring and training female banking and mobile agents with whom young women can feel more comfortable interacting; and delivering tailored digital and financial literacy trainings which can introduce young women to both analogue and digital financial products.

[17] In Kenya, for example, women do three times more unpaid care work than men, such as tending to children and the elderly in the family, which deprives them of time and resources which could be devoted to promoting a business (Benni, Berno and Ho, 2020)

Box 3 The MuJeR project

The MuJeR (Financial Inclusion for Young Rural Women) project, managed by Fundación Capital and financed by IFAD, was implemented in Colombia, Mexico and Paraguay between 2017 and 2020. The objective of the project was to facilitate the access and use of financial services tailored on their strengths, needs and client features of young rural women, in an effort to promote a virtuous circle of asset and resilience building that would allow them to rise above the poverty line. The project sought to build the capacity of governments and FIs with knowledge and tools that could be used to promote youth financial inclusion, with a view to further replication and scaling up at country and regional level (Fundaciòn Capital, 2020).

The project adopted a different strategy for each target country, although three common elements were adopted throughout implementation: i) activities aimed at empowerment; ii) activities for strengthening financial capabilities, encouraging goal setting and savings plans to reach these goals, and introducing the young women to the financial system; and iii) the use of digital technologies and social media to build financial capabilities. Overall, the MuJeR project drew a series of key insights and lessons learned from its implementation:

1. **There is a need to have a holistic approach that encompasses financial health and life-plan choices to promote young women's financial inclusion.** This implies assisting young women in identifying their personal and professional aims in their current situation, while helping them understand what is the best combination of asset building and investment that can aid them in pursuing such objectives in the specific phase of their lifecycle.

2. **Peer-to-peer capacity building is a powerful instrument for inclusion.** In Colombia, the project employed local lideresas ("women leaders", both young and adults) who were extremely effective in raising awareness on issues related to financial inclusion among the project targets, as well as building young women's capacity and knowledge on the use of savings and credit instruments. The project underlined the importance of investing time and resources in properly identifying, selecting and capacitating the local "leaders" themselves, to make sure they had both the reputational standing and the communication skills to make a concrete impact on young rural women. Fundaciòn Capital underlined that the fact that the champions were speaking from experience and relaying their own experiences carried considerable weight among the young girls in the project.

3. **Delivery should reach a balance between "High-tech" and "High-touch".** To capacitate young rural women effectively on the use of different financial services there is a need to implement an appropriate combination of digital tools (high-tech) as well as in-person interaction (high-touch). In terms of digital tools, the project provided the local "leaders" with tablets that had the LISTA app installed, a digital course developed by Fundaciòn Capital used to impart a standardized level of education to all young women in the project. This was extremely effective in providing young women with a way to learn at their own pace, as well as to repeat the content that interested them. In terms of in-person interaction, capacity building on how to use ATMs and mobile money accounts was also provided with live workshops and peer-to-peer demonstrations.

4. **Work with partners that have close linkages with the beneficiaries.** The project sought to partner with local entities that had worked extensively with the target population (young rural women), and which were respected and trusted by the beneficiaries. Delivering capacity building and awareness raising through these partners facilitates engagement and uptake, on account of the existing trust relationships, and can help overcome any eventual bias or mistrust that young rural clients might have towards dealing with formal FIs.

Young agripreneurs supported by FAO's ICA programme in Guatemala.

1.5 Focus on the use of agricultural financing facilities for young entrepreneurs

In the past two decades, various governments in developing and emerging economies have experimented with trying to foster young entrepreneurs' access to agricultural finance through the establishment of dedicated facilities. **This has been particularly common in the sub-Saharan African region**, where several governments have set up, starting from the 2000s, a range of youth-focused financing facilities that showed similar features, usually combining credit provision at a subsidized rate with training for beneficiaries, as well as a variety of complementary mechanisms to reduce loan default (Rutten and Fanou, 2015). Examples of such facilities include the Youth Venture Capital Fund in Uganda, the Namibia Youth Credit Scheme, the Botwsana Youth Fund, the Umsombvu Youth Fund in South Africa, and both the Youth Enterprise Development Fund and the Uwezo Fund in Kenya.

When looking at the data, it becomes evident that the majority of these facilities have fallen short of their intended objectives, when they have not **failed outrigh**t, due to a variety of reasons that include bad design and targeting, corruption, elite capture, irregular funding, stringent requirements for access and weak regulation. Many of these facilities (e.g. in Kenya and the United Republic of Tanzania) have registered repayment rates below 70 percent of the disbursed amounts, especially when funds were disbursed exclusively by local government authorities, without partnering with local financial entities (e.g. MFIs, credit and savings associations), as youth tended to erroneously perceive the disbursed amounts as grants instead of loans.

Even when FIs are involved as facility partners, their **lack of strong engagement** can turn out to be a major roadblock to achieving results: in 2017, for example, the Ugandan Government removed two of the three commercial banks engaged as partners in the Youth Venture Capital Fund, due to their failure in properly disbursing funds to young entrepreneurs. In some cases, the **severe misappropriation of funds** can prove to be a critical threat to sustainability: in 2019, an external audit found that 65 percent of the USD 55 million capitalization of the Uwezo Youth Fund in Kenya had been disbursed to improperly selected recipients or without the support of any documentary evidence, while 60 percent of beneficiaries were defaulting on their loans (Benni, Berno and Ho, 2020).

Partly as a consequence of these past experiences, there has been renewed attention on the part of governments and development agencies in recent years on the use of **alternative financing arrangements** as the foundational mechanism for youth-focused facilities, such as challenge funds, matching grants facilities and incubators/accelerators. The use of alternative financing mechanisms for youth-focused facilities has been shown to produce substantial results in filling critical financing gaps faced by youth-led agribusinesses in specific phases of their growth and development, usually complementing the provision of finance with a range of complementary services such as business capacity building, financial education and the fostering of market linkages. Although these financing mechanisms face the same risks as traditional youth funds when it comes to issues, for example, of bad design or improper targeting, they hold considerable potential in overcoming a range of common bottlenecks that can limit the sustainability of youth-focused facilities.

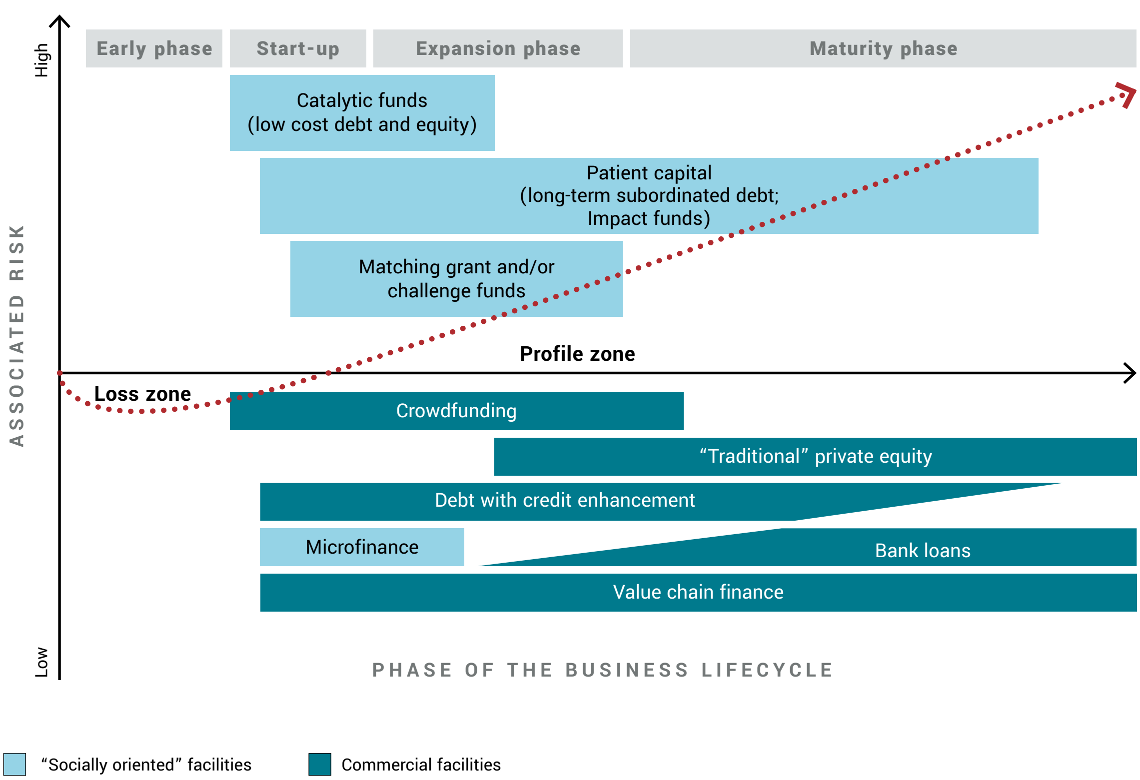
A model proposed by Rutten and Fanou (2015), illustrated in Figure 6, is quite useful to illustrate the role that these different financing mechanisms can have depending on the state of development of the specific youth-led agribusiness being targeted, and the associated risk/reward ratio. The model ideally characterizes youth-focused agricultural facilities along two main categories:

- **Group 1:** this group, coloured in light blue in the figure, is composed of more "socially oriented" facilities, established with development objectives in mind. It comprises catalytic funds, challenge funds and matching grants facilities, all of which are mechanisms that are well suited to supporting the financial inclusion of young agripreneurs from the early development stage of their businesses through to maturity,[18] when the risk associated with the investment is relatively higher and profits can vary considerably.

[18] Note that with "maturity", we refer to a phase of the business lifecycle characterized by some (albeit not necessarily all) of the following features: stable revenues; a consolidated market position; considerable cash reserves; an experienced workforce; and tried-and-tested institutional processes.

- **Group 2:** this group, coloured in dark blue in the figure, is composed of commercial facilities whose tools encompass private equity, debt with credit enhancement, equity and debt-related crowdfunding, and value chain financing. These facilities are more appropriate for youth-led agribusinesses in the expansion and maturity phase, characterized by medium to high profits and low to medium risk. As can be evinced from the figure, alternative lending arrangements such as value chain financing or debt/equity-based crowdfunding can fill the gap in provision between microfinance and bank loans, as youth-led agribusinesses transition from the start-up to the expansion phase. As a consequence of this transition, youth-led agribusinesses – now mid-sized – begin to require higher capital investments that are outside of the commercial scope of most MFIs, but at the same time they are also lacking the traditional requirements demanded by banks to provide credit[19] (Rutten and Fanou, 2015).

Figure 6: **Categorization of youth-focused agricultural finance facilities**



Source: Rutten, L. & Fanou, S.L. 2015. Innovative and inclusive finance for youth in agriculture. In: AGRA (Alliance for a Green Revolution in Africa). *Africa Agriculture Status Report: Youth in Agriculture in Sub-Saharan Africa*, pp. 94-117. Nairobi, AGRA. https://www.tralac.org/images/docs/8202/aasr-2015-youth-in-agriculture-in-sub-saharan-africa.pdf#page=94

[19] For a more in-depth analysis on this issue (i.e. the so-called "missing middle" in agricultural financing) refer to Miller, Ono and Petruljeskov (2018).

Young rice and vegetable farmers in Tra Vinh Province, Viet Nam

Section 2

The role of digital technology in supporting the financial inclusion of young agripreneurs

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2.1 Mobile money and the rise of platform-based services for the rural youth

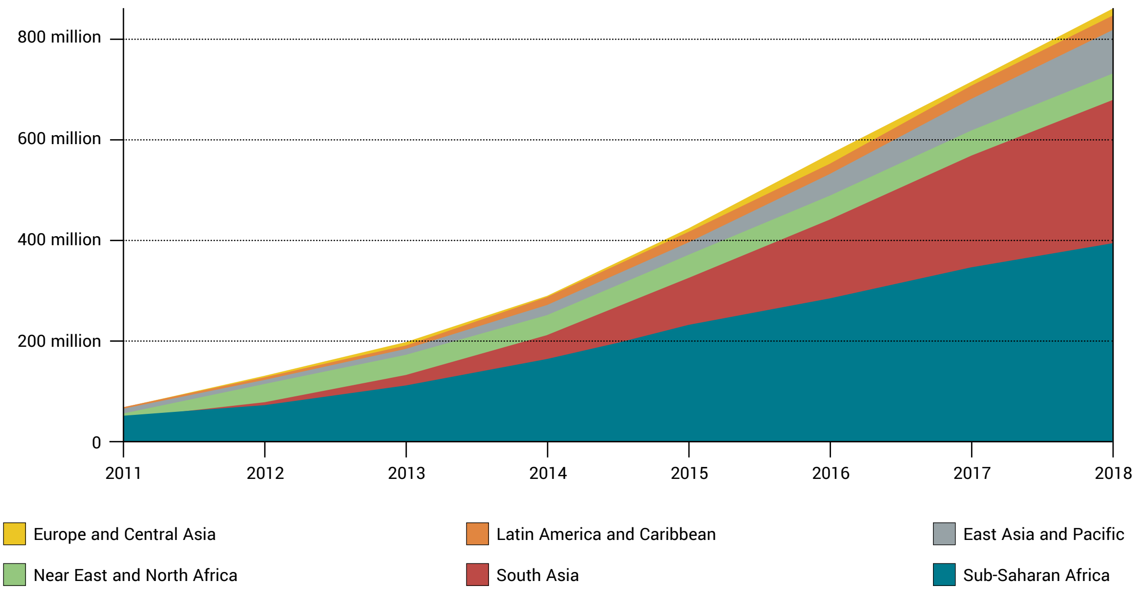
In recent years, digital technology has been revolutionizing the provision of financial services for entrepreneurs in developing and emerging contexts, increasing the outreach, flexibility, affordability and convenience of a wide variety of services – of which credit, savings and insurance are only among the most common. Young entrepreneurs stand as ideal early adopters of this revolution, given their overall higher familiarity with and aptitude towards these innovations.

In developing and emerging contexts, **mobile money services** in particular have emerged as an essential instrument for the promotion of financial inclusion, experiencing a meteoric rise in the past decade. To give an idea of the magnitude of this phenomenon, Figure 7 shows the growth in the number of registered mobile money accounts across macroregions, from 2011 to 2018. While the growth in accounts has been substantial all around, the largest increases have been registered in sub-Saharan Africa (almost 400 million registered accounts as of 2018) and South Asia (287 million).

According to the latest *State of the Industry Report on Mobile Money* from the Global System for Mobile Communications Association (GSMA) (2019), which provides us with a snapshot of the global mobile money landscape, mobile money accounts around the world totaled over one billion as of 2019. Mobile money services are available today in 96 percent of those countries **where less than a third of the population has an account at a formal financial institution**, which showcases the extreme importance of such services for financial inclusion.

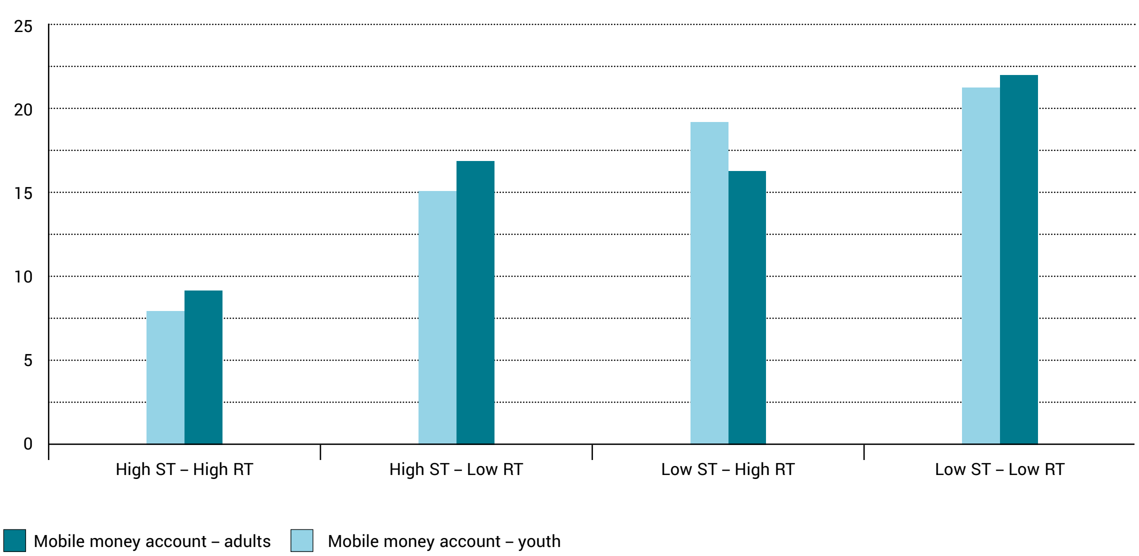
With regard to the rural youth in particular, it should be noted that mobile money holds considerable potential to reduce the age gap in financial inclusion in the developing world. In fact, as illustrated by Gasparri and Muñoz (2018), countries that register the lowest levels of both structural and rural transformation **present the highest levels of mobile money account ownership**, with youth presenting slightly higher levels of ownership than adults (see Figure 8). This can be explained by the fact that mobile money services can fill a range of critical gaps in countries where a series of endemic barriers (infrastructural, legal, socioeconomic) majorly limit access to brick-and-mortar financial services, especially for vulnerable categories – with the rural youth being a case in point. As youth tend to be **early adopters of digital technologies**, they have an easier time taking up and assimilating mobile money services and other digital innovations to overcome the inherent constraints that limit them from accessing traditional financial services – provided of course that specific regulatory barriers do not prevent registration.

Figure 7 **Registered mobile money accounts by region, 2011 to 2018**



Source: GSMA. 2019. *The State of the Industry - Report on mobile money 2019*. London. https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf

Figure 8 **Percentage of youth and adults with a mobile money account, by country transformation category**



Notes: ST: structural transformation; RT: rural transformation.

Source: adapted from Gasparri, A. & Muñoz, L. 2018. *Inclusive finance and rural youth.* Background paper for the Rural Development Report 2019. Rome, IFAD. https://www.ifad.org/documents/38714170/41187395/11_Gasparri+and+Munoz_2019+RDR+BACKGROUND+PAPER.pdf/1446b159-ed1b-5ae9-fb1f-c0af77e698c8

When it comes to agriculture specifically, in recent years mobile channels have been widely used as the starting point to develop a variety of innovative digital products for the provision of both financial and non-financial services to young farmers. In fact, **innovative digital technologies for agriculture** ("D4Ag") have been gaining increasing popularity in developing and emerging contexts recently, with sub-Saharan Africa being at the forefront of this trend. A 2019 report from the African Technical Center for Rural and Agricultural Cooperation (TCA) registered 390 active D4Ag companies across 43 sub-Saharan African countries, with a total user base of 33 million smallholders and pastoralists.[20] **Considering that 70 percent of D4Ag users in sub-Saharan Africa are young adults**, it is evident that the widespread adoption of D4Ag technology has considerable potential to become a powerful driver for youth engagement in agribusiness. Overall, these D4Ag innovations encompass five major use cases: advisory services; market linkages; **promotion of financial access**; supply chain management; and macro-level agricultural data (Benni, Berno and Ho, 2020).

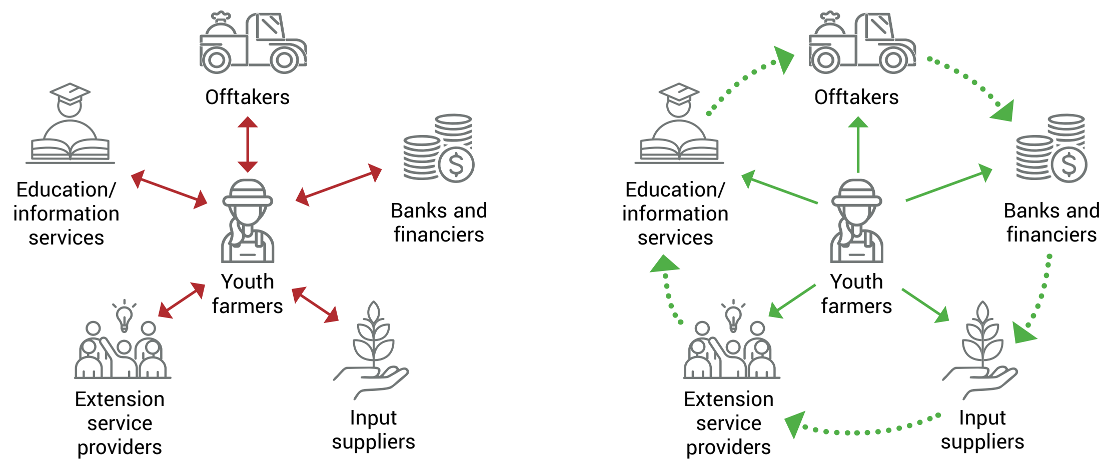
Interestingly, over half of these solutions bundle together two or more use cases, such as the promotion of market linkages with financial access. In fact, as illustrated by Mercy Corps (2019a), emerging experience is repeatedly showing that the most effective D4Ag innovations for young agripreneurs are those **that bundle financial and non-financial services together on a platform,** acting as one-stop shops for agriculture-related services in the digital market, with a view to increasing impact and scale**.** As can be evinced from Figure 9, in a conventional farming ecosystem young entrepreneurs have to engage support providers on their own, through multiple relationships and intermediaries – an approach that can be quite costly and inefficient. A D4Ag platform can bring together multiple providers into one, synergic relationship with the youth farmer, improving efficiency and reducing costs through aggregation and cross-subsidization. The case of DigiFarm in Kenya, illustrated in Section 3.1, is a good example of a successful application of such a model.

The growing popularity of D4Ag platforms is particular noteworthy because of the wide variety of benefits that they can bring not only to young agripreneurs, but also to the platform managers and partners (e.g. FIs, telecom companies, governments, development agencies and international donors), as well as, more generally, to agricultural sectors as a whole. In particular, the following considerations from Mercy Corps (2019a) can be highlighted in terms of the advantages that a platform approach can bring:

- **Increased uptake on the part of youth**: D4Ag platforms that offer a combination of services can be of interest to a wider number of young entrepreneurs, across a variety of different contexts/geographies. This makes it more likely that youth will use different services by various platform partners over time, and increases the chances of achieving scale with the platform.

[20] Kenya in particular plays a leading role in the African D4Ag landscape, with almost 200 such companies active in the country, accounting for more than 9 million registered customers (Benni, Berno and Ho, 2020).

Figure 9 **Traditional ecosystem vs platform-based ecosystem in providing D4Ag services to young entrepreneurs**



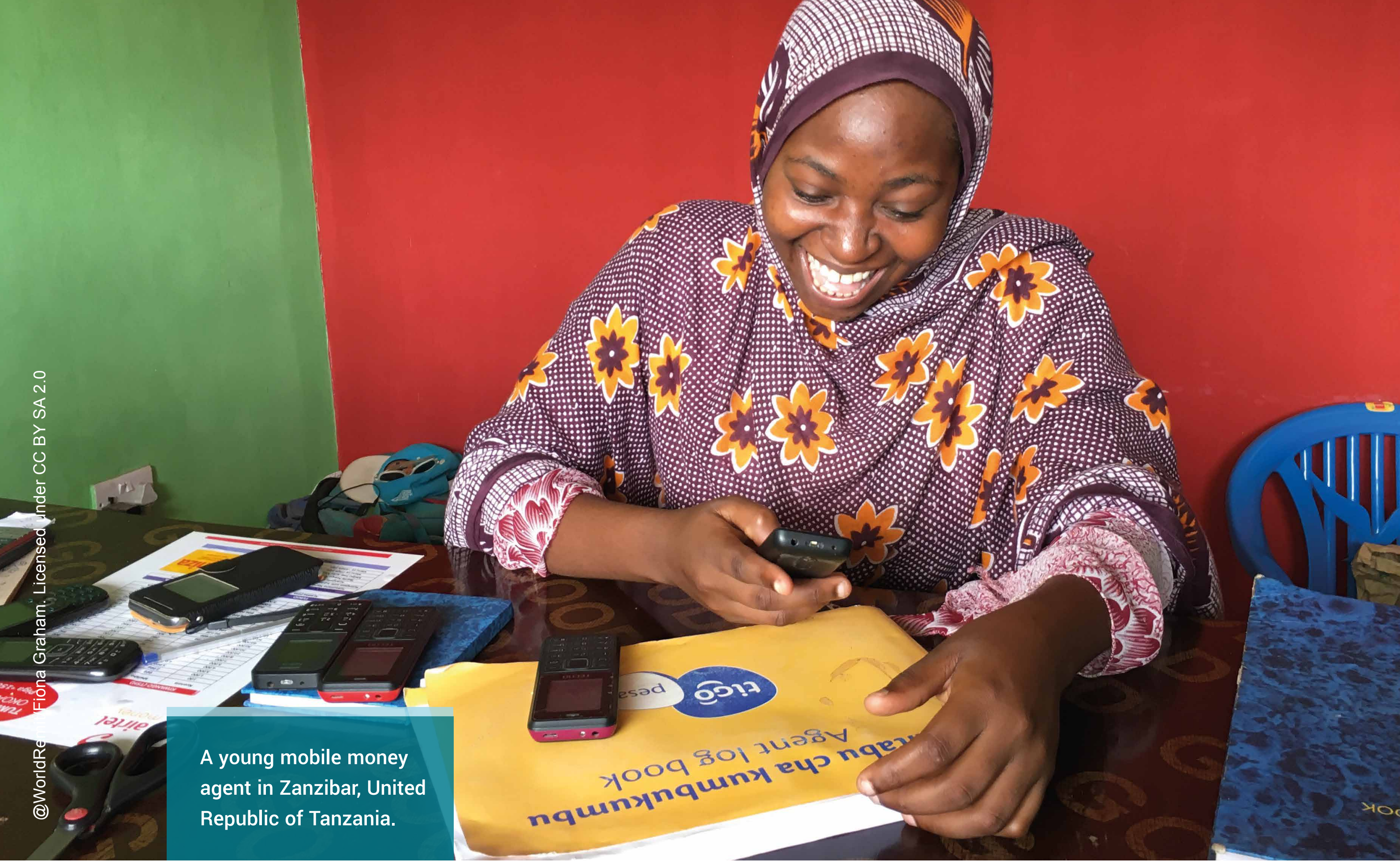
Source: Mercy Corps. 2019. *AFA case study: Digital pathways for youth in agriculture.* Portland, USA. https://mercycorpsagrifin.org/wp-content/uploads/2018/12/230118_afa-youth-final-vF-compressed.pdf

- **More insightful and timely data flows on young clients**: the regular use of a variety of services on the part of young clients of a D4Ag platform improves the level of detail of the customer data generated by the platform itself. The platform partners can use such data to refine their services, and better customize the services to the youth's needs. Higher levels of granular customer data also reduce the credit risk faced by the FIs that partner with the platform, which allows them to make their products more flexible and affordable, and to mitigate the risk associated with young clients stemming from their inability to fulfil conventional requirements (e.g. hard collateral, credit history, a savings record).

- **Investment diversification increases as partners join**: as different service providers join a D4Ag platform as partners, the amount of risk that each individual has to shoulder, both financially and organizationally, becomes reduced. With more service providers entering the platform, the financial structure of the partnership also becomes more diversified, opening up the potential for flexible capital to extend the length of time and resources needed for results to be achieved.

- **Stronger operational systems for better results:** As more partners join the D4Ag platform, the resources dedicated to creating a better operational system grow. Better operational systems translate into increased success rates when compared with individual engagements which would not be able to leverage increased technology.

- **Transaction costs are reduced:** D4Ag platforms reduce the costs incurred by both users and partners alike to participate. This increases the potential return, per dollar, on an investment channeled through such platform, in terms of both financial as well as development returns.



A young mobile money agent in Zanzibar, United Republic of Tanzania.

Despite these interesting experiences (drawn from Africa-specific data), it should be noted that the vast majority of developing countries are far from being able to realize a meaningful transition to a D4Ag platform model that goes beyond a few sporadic experiences. **Weak infrastructure** still represents a key constraint that limits the expansion of such platforms in rural and agricultural areas, exemplified by low levels of smartphone penetration, mobile internet coverage and access, lack of interoperability and several other factors. **Scarce digital and financial literacy** is another core constraint, which would strongly limit uptake (especially among more vulnerable categories, such as youth and women) regardless of the amount of infrastructure development and public support provided for these types of innovation.

Furthermore, the growth of a digital platform-dominated model in agricultural sectors of developing countries (responsible for providing both financial and non-financial services) **carries a number of potential risks and negative impacts** that have to be taken into careful consideration by public decision-makers, regulators and donors. These potential negative impacts are illustrated in Figure 10, taken from a recent publication by ISF Advisors (2021) which provides an in-depth analysis of the risks associated with fostering a platform-dominated model for agricultural service provision without addressing these different externalities. These represent legitimate concerns that will have to be addressed by public decision-makers as agricultural sectors of developing countries proceed, at different velocities, on their respective digitization paths.

Figure 10 **Possible negative impacts of a platform-dominated model in agriculture**

EXCESSIVE MARKET DOMINANCE Replacing one form of (inefficient) intermediation with another more efficient but less competitive remediation	**PLATFORM USER COMPETITION** Platform operator competes with users on its own Platform	**DISPLACEMENT** Displacement of vulnerable MSMEs as Platforms disintermediate markets
DATA AND SECURITY Less control and ownershp over data and information	**WORKFORCE PROTECTIONS** Reduced security and benefits for gig workers compared to traditional employment	**VULNERABLE POPULATION SUB-SEGMENTS** Platform benefits may not extend to all vulnerable population segments and may exacerbate inclusion gaps

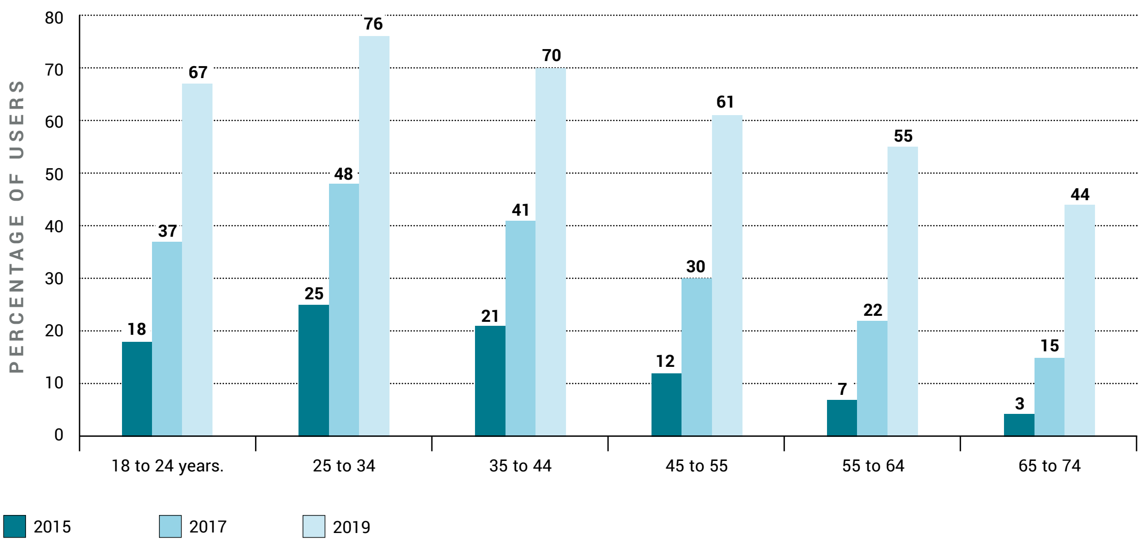
Source: ISF Advisors. 2021. *Agricultural "platforms" in a digital era – Defining the landscape*. New York, USA. https://isfadvisors.org/wp-content/uploads/2021/03/ISF_RAFLL_Agricultural_Platforms_Report.pdf

2.2 Fintech innovation targeting the rural youth

All throughout the world, but especially in developing and emerging countries, the COVID-19 pandemic has further accelerated the process of creation and expansion of financial technology ("Fintech") start-ups focused on developing digital services for underserved segments of the financial clientele. Effectively reaching (and seizing) these vast masses of potential new clients, the majority of which are located in rural areas, represents **a new frontier of competition** between Fintech start-ups, commercial banks, MMOs and other providers, given the considerable potential in terms of untapped profit that is carried by these (so far) underserved clients segments. Rural youth represent a particularly appealing target in this sense, considering their greater familiarity with digital applications, and in general the greater inclination they have towards applying technology to their life and business. In fact, according to data from the Ernst & Young *Global Fintech Adoption Index*,[21] the growth in Fintech adoption in recent years has been driven by youth and young adults in the 15–24 and 25–34 age categories (see Figure 11).

[21] The *Global Fintech Adoption Index* is the result of a worldwide survey carried out every two years by the multinational professional services network Ernst & Young, covering more than 27 000 consumers in 27 markets, as well as 1 000 SMEs in five markets, encompassing Fintech registration and usage for different applications such as banking, payments services, and financial management

Figure 11 **Use of Fintech by age group of users**



Source: OECD (Organization for Economic Co-operation and Development). 2020. *Advancing the digital financial inclusion of youth*. Report prepared for the G20 Global Partnership for Financial Inclusion by the OECD. Paris. https://www.oecd.org/daf/fin/financial-education/advancing-the-digital-financial-inclusion-of-youth.pdf

It is no wonder, then, that several Fintech startups have been created in recent years that focus on financially underserved youth as a core client segment, aiming to provide them with a variety of services that go well beyond digital credit, and encompass widely different applications such as savings, insurance, e-commerce, payments and remittances.

In this sense, a few interesting examples of Fintech companies in developing and emerging countries that view young agricultural entrepreneurs as a critical client segment for their service offer can be cited:

- **Cellulant** is a multi-service Fintech company that operates in 11 African countries, working with 94 banks and mobile money operators. In 2017, Cellulant launched a digital marketplace called **Agrikore**, a blockchain-powered e-commerce platform that seeks to link together all relevant actors connected to different agricultural value chains (e.g. farmers, processors, traders, logistics companies, FIs) and increase the transparency and efficiency of transactions.

  The platform seeks to address some of the key factors responsible for the current inefficiencies associated with Africa's agricultural economy, including high levels of market fragmentation, scarce trust among interested parties, low digitization and lack of access to financing leveraged by contract farming. Through the platform, farmers, processors, wholesalers, aggregators and other value chain actors can strike deals and generate a chain of digital, end-to-end transactions that help deliver the final product all the way from the farmers to the final consumer. By leveraging smart contract technology and a clear set of business rules, Agrikore seeks to strengthen trust among all engaged parties and increase the security of all the transactions carried out within the platform.

Cellulant views young agri-entrepreneurs as a critical client base for its platform. In Nigeria, it has partnered with the **Young Africa Works** initiative of the Mastercard Foundation in 2020 to establish a five-year programme that seeks to enable 720 000 young entrepreneurs to kickstart and expand their agribusiness ideas by leveraging Cellulant's range of financial and non-financial services, in an attempt to foster decent job creation and poverty reduction in Nigeria's agricultural sector (Mastercard Foundation, 2020).

- **Farmcrowdy** is a digital agriculture platform founded in Nigeria in 2016 which has a strong focus on supporting young entrepreneurs in the agricultural sector. It deliberately seeks to draw young entrepreneurs within its network not only as potential clients, but also as aggregators or traders working within the frame of one of its various business divisions. Although it initially began as a crowdfunding platform, it has since shifted away from this model to evolve over the years into a multi-component digital platform whose services (both financial and non-financial) span across all segments of agricultural value chains. In fact, the platform offers **six different types of digital services** to small-scale farmers and value chain actors:
    1. "Structured Finance", providing input and equipment financing to underserved farmers and other agri-related actors.
    2. "Insurance", providing life, health, crop and property-related digital insurance to farmers and other actors in the network.
    3. "Aggregation", which connects farmers to a network of 101 tech-enabled aggregation centres for farm products in rural areas, managed by young entrepreneurs trained by Farmcrowdy.
    4. "Foods", which provides an e-commerce platform to trade raw agricultural products, inputs and commodities, both among agri-value chain actors as well as final consumers.
    5. "Marketing", which provides a variety of marketing and advertising solutions to farmers and other value chain actors.
    6. "Technology and Data", which offers digital solutions for farm management (such as price setting, yield projections and production optimization).

As of 2021, Farmcrowdy had built a network of more than 420 000 farmers cultivating more than 862 000 acres of land. It had attracted more than USD 2.4 million in funding from various sources, including the GSMA Ecosystem Accelerator. For the future, its mid- and longer-term plans include growing its client base to 500 000 farmers and expanding its operations to Ghana, Kenya, Rwanda and different Caribbean countries.

As exemplified by these two cases, Fintech applications hold considerable potential to foster the financial inclusion of young entrepreneurs, especially when bundled with a range of non-financial services that seek to address critical pain points faced by agricultural business across all segments of value chains. At the same time, in the vast majority of developing contexts the cost associated with reaching this specific segment of clients in rural areas remains **unsustainable for most start-ups** without some kind of public support, especially in the development and pilot stage of a product. In this sense, development partners should play the role of **market enablers**, by supporting the Fintech sector in piloting youth-focused innovation in financially underserved areas where costs are higher. Box 4 at the end of this section details a recent and relevant case of a partnership in Ghana between a commercial bank, a development agency and a Fintech start-up, which led to the successful piloting of a digital solution aimed at young agricultural entrepreneurs.

Box 4 Digital bookkeeping to foster youth financial access: the OZÉ-Ecobank partnership

In developing and emerging contexts, a considerable challenge faced by rural entrepreneurs is that of ensuring proper bookkeeping, i.e. the ability to maintain regular, detailed and precise records of both financial and non-financial aspects linked to running an agribusiness. For young entrepreneurs especially, this can prove to be a major hurdle, as these actors are usually less experienced and educated than their older counterparts. In terms of access to finance, a lack of detailed data on income, expenses, payables and receivables increases the risk and uncertainty faced by the formal FI when it comes to deciding whether to provide or not a farmer with credit, which will translate into either overly strict loan terms, or no loan altogether.

An interesting pilot collaboration that sought to support young entrepreneurs in tackling this issue was launched in Ghana at the start of 2021, between OZÉ, a Fintech start-up, and the Youth Banking Department of Ecobank Ghana, part of a pan-African banking conglomerate. The partnership is supported by the UNCDF, in the frame of the GrEEn ("Boosting Green Employment and Enterprise Opportunities") programme. Through this collaboration, OZÉ and Ecobank seek to offer an integrated financial solution for young entrepreneurs, that comprises credit, savings, business education and credit risk assessment, through a combination of digital and non-digital channels.

OZÉ has developed a mobile app that allows small businesses to record their sales, expenses, payables, receivables and customer data. The platform then aggregates the data to provide context-specific recommendations and reports, as well as financial and business education, to

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its clients. The businesses' activity on the platform is also used by OZÉ to generate performance and behavioural data that can be then fed into credit risk scoring models, increasing their precision, which allows OZÉ to provide digital loans in a rapid and easy manner, and on considerably more advantageous terms. As of 2022, OZÉ boasted a client base of more than 125 000 businesses in Ghana and Nigeria, with a 1 200 percent increase in active monthly users registered in 2021.

In the frame of the partnership, which is expected to run from 2020 to 2023, OZÉ assists Ecobank in evaluating the creditworthiness of young entrepreneurs in the Ashanti and Western Regions of Ghana. The data generated by OZÉ's mobile app is used to refine the credit risk modelling used by Ecobank to decide which youth loan applications to approve and where to deploy its capital, enabling young entrepreneurs to access affordable loans when they would not otherwise be able to. The model also appears to have the potential to enable the complete automation of the loan appraisal process, which would further reduce the costs incurred by Ecobank. In synergy with the OZÉ app, Ecobank also offers an easy-to-open, zero-fee mobile account ("Xpress Account"), specifically designed for financially underserved youth. Both institutions had to adapt their offer in order to enable the collaboration: OZÉ updated its app with additional features to increase accessibility for the target group in the region, as well as to align it with Ecobank's products; Ecobank, on its side, extended its agent banking network to ensure adequate outreach towards the target group (the bank, notably, has one of the largest agent networks in Ghana, with 2 000 agents).

The joint OZÉ/Ecobank product was launched in March 2021, with 1 910 new users being registered in the first three months of rollout. The overall objective is to bring in 10 000 new clients by 2023. According to the UNCDF, in-person staff support provided to clients proved to be a critical factor to enhance uptake and use, given the low levels of digital literacy among youth registered in the Ashanti and Western Regions. Furthermore, the experience does appear to hint at the potential of using the OZÉ app in partnership with other financial service providers to enable the provision of affordable digital credit, although a considerably larger scale would need to be attained in this specific model to establish proof of concept (McCormick and Gasparri, 2021).

A young farmer on a climate-smart farm in Kakamega County, Kenya.

Section 3

Insights from select experiences linked to promotion of agricultural finance for youth

The following section seeks to analyze a series of select experiences at field level (such as programmes, business models and digital innovations) that either **explicitly aim to promote access to finance for young agripreneurs** (as well as, more generally, enterprise development and job creation), or that end up (indirectly) majorly benefitting this group from the standpoint of financial inclusion and entrepreneurship promotion. The goal of this section is to spark the interest of policymakers, development practitioners, angel investors and all other relevant stakeholders, with a view to exploring the potential to replicate and adapt these innovative business models and technologies to other contexts where access to youth-specific agricultural finance is absent or sorely lacking. Aside from the evident advantages and lessons that can be derived from the analysis of these experiences, the objective is also to underline the particular constraints and challenges that have affected the implementation of these models and technologies, together with the specific solutions that have been employed to overcome them.

3.1 SafariCom's DigiFarm

DigiFarm is an integrated mobile platform launched in early 2017 by Kenya's largest MMO Safaricom, in collaboration with MercyCorp's Agrifin Accelerate programme. Its goal is to leverage technology to enable small-scale agripreneurs to become wealthier in a commercially sustainable way, by tackling in a holistic manner a range of barriers (including access to finance) that limit their productivity and profitability. The mobile platform acts as a **one-stop shop** that is able to provide farmers with a suite of services, including direct input purchase (e.g. seed, fertilizers, agro-chemicals), input credit, harvest cash loans, crop insurance, business training, access to soil testing, customized information on agricultural best practices, and linkages to market channels. This last service was introduced in early 2018 in the form of a "digital marketplace" (DigiSoko) for registered farmers, connecting them with a range of major processors and wholesale buyers. While the platform does not focus exclusively on young Kenyan agripreneurs, these clients are **ideal recipients** for DigiFarm's range of services, given their higher levels of familiarity with mobile technology, their tendency to act as early adopters of such innovations, and the higher rates of mobile penetration registered among youth in the country compared with adults.

The platform can be accessed through a **basic mobile handset,** as it does not require an app installed on a smartphone to be used (only 22 percent of DigiFarm customers owned a smartphone, as of 2020). The platform can be accessed by dialing a specific number. From there, a menu opens that presents a range of services and options. All payments made on the DigiFarm platform rely on the M-Pesa mobile money system. Aside from remote interactions, a network of 1500 ground-level agents called **DigiFarm Village Advisors** (DVAs) is tasked with assisting prospective and current clients in registering to the platform and learning how to use it, as well as support them with making best use of the variety of services offered on the platform. They also coordinate input distribution among the contracted farmers. The DVA network was rolled out in 2018, in collaboration with the Kenya Livestock Producer Associations (KLPA) (Busara, 2021).

Figure 12 **DigiFarm's network of services**

Source: adapted from Shrader, L. 2021. *DigiFarm Presentation*. Portland, MercyCorps.
https://www.giz.de/expertise/downloads/AgriFin%20DigiFarm.pdf

As can be evinced from Figure 12, DigiFarm's model is centered around a **network of partners** responsible for providing its wide range of services, which has kept growing over the years as the platform adds more functionalities:

- **Training and education**: different interactive services provide a range of learning materials on a variety of agri-related topics. **Arifu** is a personalized learning platform that provides agronomic advice and financial skills training to farmers via interactive SMS. **ICow** is a similar application focused on dairy farmers. **IShamba** is a call centre of agricultural experts to which farmers can send SMS with their questions, or call in to ask for assistance. It also sends weather information via SMS, as well as alerts on farmer events such as shows and trainings.

- **Input purchase:** the agricultural supply chain platform iProcure enables this component, which allows farmers to purchase high-quality, certified inputs from a network of 26 trusted suppliers at an affordable price.

- **Input credit:** DigiFarm offers this service to its customers through a range of partner FIs that provide the funding for the loans, such as Stanbic Bank and Equity Bank. An agricultural data analytics company called **FarmDrive** collects and aggregates the constant stream of data generated by the clients' use of the platform's services to build a reliable credit score for potential , as well as the mobile transaction data provided by Safaricom. The amount of agri-related data generated on each user by the combination of the platform's services allows DigiFarm to refine its credit scoring capabilities and provide loans at competitive rates, while reducing default rates. The credit is provided in the form of a code that allows to purchase inputs directly on the platform (and only from it). A 20 percent deposit is required to access input credit on the platform.

- **Access to market:** market linkages are provided through DigiFarm's digital marketplace (DigiSoko), as well as other partners such as UNGA Group Ltd, East African Breweries Capwell Industries, which are agricultural holding companies focused on the manufacture and distribution of various consumer goods.

- **Insurance:** this product is provided by two private insurers that have partnered with DigiFarm: Pula and ACRE Africa (see Section 5 for a more in-depth analysis of these companies). The insurance product is bundled with the input loan also provided by DigiFarm. Nevertheless, it must be underlined that this particular product has so far been characterized by a low uptake rate among farmers, with less than 12 percent of farmers on the platform having used the service according to a 2021 evaluation. Lack of knowledge on the product was underlined as a main constraint to uptake (Busara, 2021).

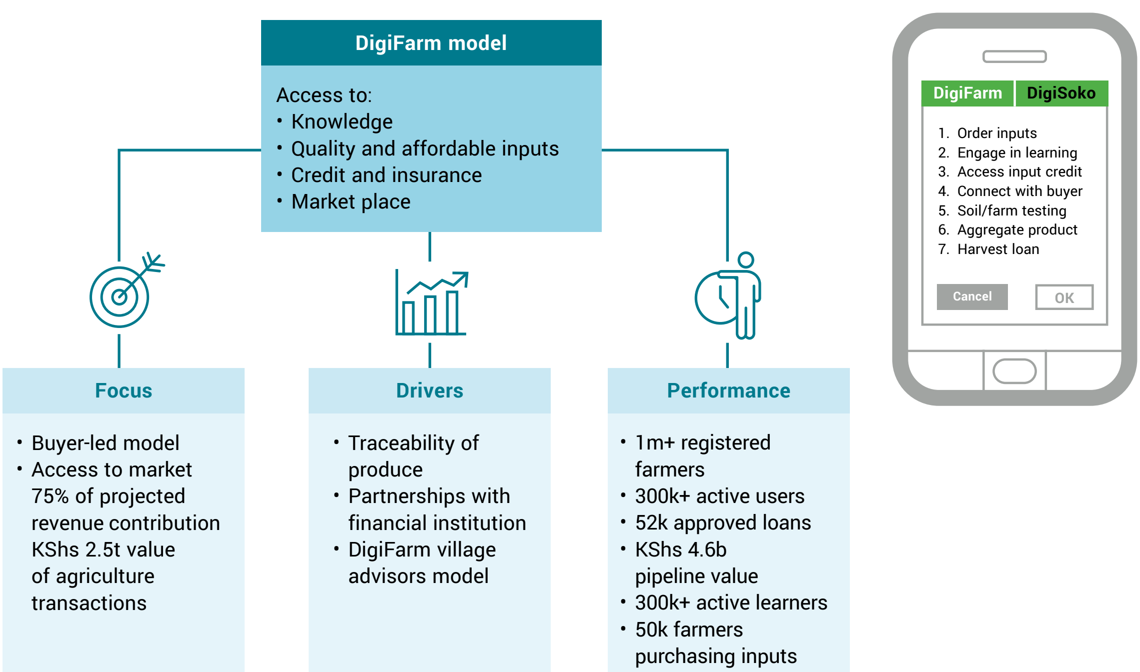
- **Soil testing:** this service was added in 2020 through a partnership with AgroCares, an Agritech company based in the Netherlands. DigiFarm's **SoilCare Adviser** is an app that allows to generate soil testing reports rapidly, providing information on soil status, suitable crop type, and advice on which fertilizer to employ. The testing is done by using dedicated scanners that are made available to farmers through the DVAs.

According to a recent evaluation by the Busara Center for Behavioural Economics, input credit and the Arifu learning service were the **two most popular services** on the platform as of 2021:

> "Services that address the users' urgent needs or daily needs are more likely to attract users and retain them such as inputs and input credit during planting season. The flexible and convenient learning experience with Arifu is highly valued. Farmers suggested including in-person contact to facilitate the learning process, such as calls to experts and in-person training for farmers with limited literacy." (Busara, 2021).

As can be seen from Figure 13, as of 2019 the DigiFarm platform had registered over 1 million farmers, with more than 300 000 of them being regular users. The average age of DigiFarm customers was 39 years, with 38 percent of them being women. Approximately 60 000 loans had been approved through DigiFarm with a repayment rate of approximately 90 percent, for a pipeline value of Ksh 4.6 billion (USD 42 million). As borrowers keep coming back to obtain more loans and strengthen their credit histories, DigiFarm has been working to increase the individual loan amounts to up to Ksh 28 000 (USD 254). The platform hosted more than 310 000 active learners engaged with its partner educational services, while more than 50 000 farmers had purchased inputs through the platform as of 2020 (Dalberg and Busara, 2021; Mercy Corps, 2019b).

Figure 13 **DigiFarm's strategic model and a sample interface of its mobile platform**



Source: Mercy Corps. 2019. *DigiFarm: A digital platform for farmers*. Portland, U.S.A. https://www.mercycorpsagrifin.org/wp-content/uploads/2020/03/DigiFarm-Platform-Case_Final_.pdf

In terms of the positive results generated by DigiFarm for its end clients, the following insights can be mentioned, drawn from a survey carried out by the Busara Center for Behavioural Economics (Busara, 2021):

- approximately 90 percent users agreed that DigiFarm had strengthened their capacity by providing them with better farming knowledge and information;
- approximately 80 percent of users agreed that DigiFarm had made them better prepared to deal with external shocks and risks;
- almost all users agreed that their levels of income and farm production had improved thanks to DigiFarm.

DigiFarm also has a strong focus on **women as a critical client segment**. As illustrated by a recent gender impact study carried out by Dalberg and the Busara Center for Behavioural Economics, although only 36 percent of farmers registered on the platform were women as of 2020, the gender gap in **the active use of DigiFarm's services** is considerably narrower, and has been moving towards parity over time. Input credit was only slightly more used by men (52 percent of total loans), and average loan amounts were similar for both genders. The access to markets service was actually used more by women than men, with a 6 percent difference in favour of women (Dalberg and Busara, 2021).

The same impact study shows that DigiFarm has generated **several positive effects** on its women clients: an increase in yields and farm productivity, especially thanks to better access to inputs and input credit; an increase in income and generation of additional income streams; better education on good agricultural practices and effective use of inputs; increased financial decision-making power and control over own finances; better capacity to hire extra labor and save time for other activities; a boost in self-esteem and confidence thanks to their entrepreneurial success; and better food security and nutrition.

Despite these promising results, the same study also underlines that DigiFarm still has to deal with a wide set of barriers when it comes to **reaching female clients adequately and effectively**, both in terms of delivering the product to their places of work and living, as well as ensuring a smooth registration and utilization process:

- **Limited mobility and time constraints**, due to household responsibilities, which reduces women's opportunities to be exposed to DigiFarm and become aware of the platform. These time and mobility constraints can also force women to sell more of their products to door-to-door traders and middlemen that are outside of the DigiFarm network, because they cannot incur the time and transportation costs associated with bringing their products to DigiFarm-linked aggregation points or offtakers (thereby missing the better prices that would be offered by the platform). Dalberg and Busara have recommended that DigiFarm attempts to reach female clients with a more targeted awareness-raising effort, by advertising the platform's services in their usual places of congregation (e.g. markets, churches), and by being more gender-inclusive in its media outreach.

- **The sociocultural expectation** that prospective female clients ask permission from either their husband (if married) or their parents (if unmarried) before registering to the platform. Furthermore, the higher risk aversion shown by women, compared to men, might lead them to discuss with multiple people to collect more information on DigiFarm before agreeing to register. All of these are factors that can slow down the adoption process considerably. One recommendation to overcome this challenge has been to engage "gatekeepers" directly, by raising awareness on the platform among husbands or parents during house visits or group meetings. This also includes providing gender-sensitivity training to DVAs that can help them navigate the onboarding process in a way that is respectful of the challenges faced by women in terms of household-related dynamics.

- **Lower levels of digital literacy**, as well as functional literacy in general. Women interviewed during the assessment stated that they faced considerable challenges in understanding how to connect to the platform on their phones. Furthermore, they also stated that the language used by the platform was sometimes too technical for them to understand properly. Recommendations to overcome this barrier include adapting training materials for women on how to use the platform's services, for example by leveraging commonly watched shows on farming to increase knowledge on DigiFarm's functioning, or sending SMS or voice-based messages to female farmers with suggestions and reminders on what they can do with the various DigiFarm's products.

- **Excessive reliance on DigiFarm Village Advisors.** Low levels of digital literacy and high risk aversion lead women to use mostly products and services of the DigiFarm platform that have been suggested to them by DVAs and on which they have received direct support. As such, there is little self-initiative on their part to try and use the other services provided by the platform, which limits the impact the platform can have on these clients. A recommendation to overcome this challenge has been to train DVAs so that they are more thorough in illustrating and explaining the full range of DigiFarm's capabilities to female clients. This can include creating a standardized checklist to be followed when engaging new female clients that DVAs have to go through during the onboarding process.

To conclude, it must be underlined how the DigiFarm model is an excellent example of how multi-service platforms can tackle **in a holistic manner** the multiple, compounding constraints that young agripreneurs might face when seeking to kickstart and expand a business idea. Oftentimes, one or two crucial constraints (such as, for example, lack of access to quality inputs) can spell the failure of a potentially viable business which carries all the other enabling factors to succeed. DigiFarm's approach allows to intervene strategically to fill these specific gaps, providing regular and diversified support even in contexts marred by multiple structural and regulatory constraints that limit youth-led agri-enterprises' growth from a variety of angles. Although such a model requires some vital enabling elements to be replicable in other contexts, chiefly a sophisticated digital financial regulatory framework (which includes financial consumer protection regulation), its undeniable results should spark the interest of policymakers and angel investors, with an eye to replicating its approach in other developing countries.

3.2 The ENABLE Youth programme

The "Empowering Novel Agribusiness-Led Employment for Youth in African Agriculture" programme ("ENABLE Youth") was launched in 2016 by the African Development Bank (AfDB) to create new business opportunities for young graduates in the agribusiness sector, all across the African region, and over a five-year period. The ENABLE Youth programme is a prime example of how to use an **incubation approach** to support the creation and expansion of youth-led enterprises, throughout their various stages of growth. Through this approach, young agripreneurs are able to avail of bundles of different services that seek to tackle the specific gaps their enterprises face at different stages of their lifecycle, with a view to overcoming the most common and traditional gaps (e.g. access to markets, financing and transformation processes) that can limit business growth either at its start-up, in its early growth, or in its expansion and consolidation phase.

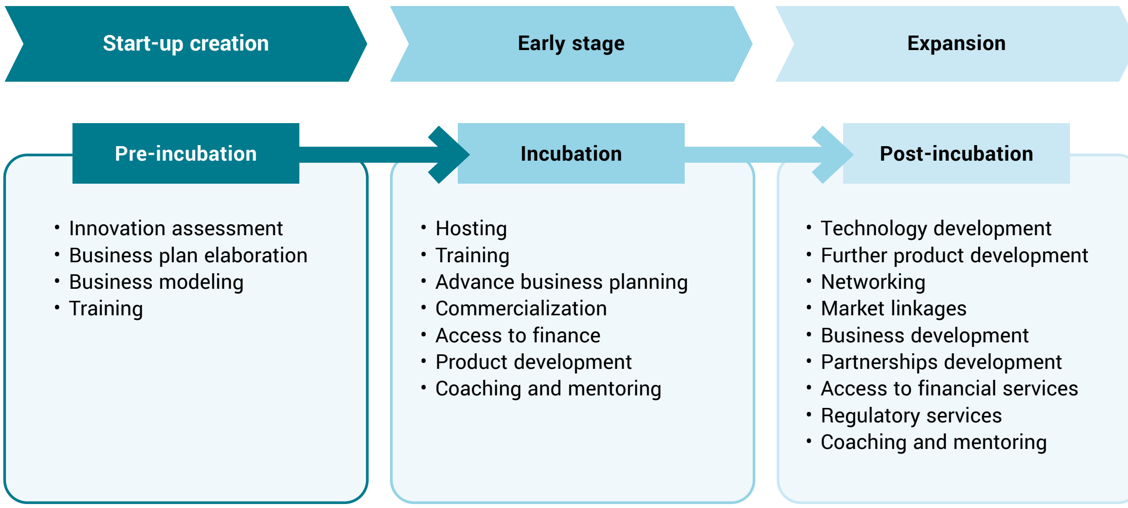
The programme seeks to train and empower young agripreneurs (under 35 years old) through the establishment of Youth Agribusiness Incubation Centers, which are one-stop shops through which these actors can receive a comprehensive set of services (including technical assistance, mentorship, training and financial support) to kickstart and expand their agribusiness ventures, with a view to attracting further private capital once the enterprise has been properly strengthened. The programme focuses in particular on harnessing innovative technologies and business models, such as digital agriculture, mechanization of production and processing, and value chain financing agreements.

As can be evinced from Figure 14, depending on the specific phase of the enterprise lifecycle (i.e. Start-up; Early Stage; Expansion) the young entrepreneur is able to receive different forms of support through the programme. From the viewpoint of financial access, ENABLE Youth seeks to improve the creditworthiness of young agripreneurs and reduce the risk faced by formal FIs when lending to these actors, for example through the establishment of partial credit guarantee schemes and risk sharing funds for local banks and MFIs. It also provides seed capital to young agripreneurs through concessional and interest-free loans, as well as grants. Along with investment, ENABLE Youth also broadcasts the agricultural sector's potential by convening high-profile events and promoting success stories.

Challenges of note that should be underlined in relation to the implementation of the ENABLE Youth programme include the following:

- **Departure of investee entrepreneurs during the course of the programme:** more than 20 percent of young entrepreneurs selected to participate in the ENABLE programme did not conclude the full cycle of incubation, usually accessing the grants and interest-free loans provided by the programme but dropping out of the mentorship and training components before they reached their natural end. The vast majority of these youth belonged to

Figure 14 **Range of support measures offered by ENABLE Youth depending on business lifecycle phase**



Source: AfDB (African Development Bank). 2017. *Agro-millionaires in the making*. Abidjan, Cote d'Ivoire. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Enable_Youth_brochure.pdf

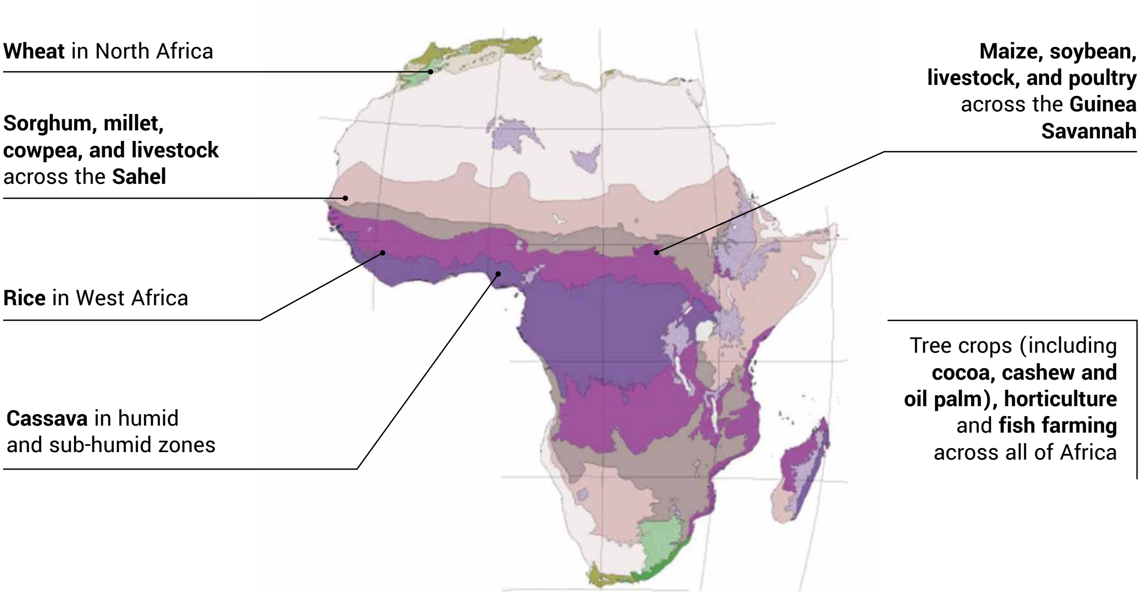
the "Start-up Creation" group (see Figure 13), which appears to suggest that the various challenges associated with kickstarting a start-up eventually led them to drop the original business idea, while those entrepreneurs in the "Early Stage" and "Expansion" group were already considerably more invested in their businesses.

- **Inability to attract formal credit despite ENABLE's support:** in a few specific countries (namely the Democratic Republic of Congo and Sudan) where traditional FIs have a history of very scarce engagement with the agricultural sector, the ENABLE programme was unable to strengthen the creditworthiness of its investee agripreneurs to a point where they became capable of attracting formal credit on their own. In other words, the additional guarantees and support provided by the programme to these young entrepreneurs did not manage to sway formal FIs towards providing them with loans. The fact that these entrepreneurs were left to rely solely on the financial resources provided by ENABLE directly (or by other public programmes) constitutes a major risk factor for the longer-term sustainability of their business initiatives, as the ability to attract financing from the private financial sector becomes increasingly more important as the enterprise expands.
- **Lack of specific expert profiles to mentor selected entrepreneurs:** a common challenge reported by various countries participating in the ENABLE Youth programme was the scarcity of suitable expert figures willing to act as mentors for the selected entrepreneurs. This can be explained by the fact that while coaching and training requires an overall lesser degree of

engagement on the part of experts, providing longer-term mentorship (i.e. for periods of one year or more) constitutes a considerably more time- and resource-consuming endeavour, one that highly sought-after technical experts might not always be willing to commit to.

As can be seen from Figure 15, ENABLE focuses on promoting agribusiness creation in different value chains, which vary depending on the specific country or subregion identified through the AfDB's Feed Africa Strategy 2016–2025. As of 2019, the ENABLE programme had carried out initiatives in 12 African countries,[22] for a total budget expenditure of USD 374 million. More than 120 000 applications for support sent by young agripreneurs had been approved and funded. The programme had also conducted more than 80 bootcamps in various African countries for agri-entrepreneurs' capacity building. The target of the AfDB is to support 300 000 agribusinesses through the programme by 2025, indirectly creating more than 1.5 million new jobs in 20 countries. Box 2 illustrates the specific experience of the ENABLE project in Kenya, to provide more insights on the types of activities carried out by this initiative.

Figure 15 **Value chains targeted by ENABLE Youth for agribusiness creation**



Source: AfDB (African Development Bank). 2017. *Agro-millionaires in the making*. Abidjan, Cote d'Ivoire. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Enable_Youth_brochure.pdf

[22] Namely Cameroon, Côte d'Ivoire, Democratic Republic of the Congo, Ghana, Kenya, Madagascar, Malawi, Nigeria, Sudan, Uganda and United Republic of Tanzania.

Box 5 Focus on the ENABLE project in Kenya

The Kenya ENABLE project is particularly noteworthy among the national iterations of the ENABLE programme for its scope and budget. In Kenya, ENABLE seeks to train and empower about 2 080 agricultural entrepreneurs aged 18–35 by 2023, out of which 1 200 agribusinesses are expected to be generated. The total budget allocated for the project is USD 36.3 million, and it carries out its activities in coordination with the Kenya Youth Agribusiness Strategy of the Kenyan Government (Benni, Berno and Ho, 2020).

The target population of the project is divided in two categories: 1) unemployed graduates who have completed post-secondary education and are looking to start their first enterprises; and 2) graduate youths who are already engaged in agribusiness entrepreneurship but have no or limited access to commercial loans to grow their businesses.

The project consists of four components: 1) creation of an enabling environment for youth entrepreneurship; 2) incubation of youth-led agricultural enterprises; 3) financing of youth-led agribusinesses; and 4) programme coordination and management. Under component 2, the project foresees both: standard incubation (for unemployed graduates with an interest in agribusiness and agripreneurship); and acceleration (for youth that seek to scale up an existing agribusiness but lack access to finance and market linkages). The training and incubation/acceleration of youth start-ups is carried out through eight Youth Agri-Business Incubation Centres in the country, which comprise universities, training centres and research institutes (Benni, Berno and Ho, 2020).

The financing component of the project, which accounts for 60 percent of the total budget, involves several facilities:

- A **USD 5 million grant facility** which provides grants of USD 5 000–15 000 to the graduates of the incubator and accelerator components of the programme. This seed capital is essential to support the early-stage business activities including, among others, the purchase of critical equipment. This allows the beneficiary entrepreneurs to purchase essential assets that will later become useful as a form of collateral when they approach banks for working capital or long-term financing (ADF, 2017).
- A **USD 6 million credit facility** that provides low-interest loans to the incubator and accelerator graduates, managed by the Agricultural Finance Corporation of Kenya (AFC), so that they can access the working capital they need to support their growth. The AFC has also provided USD 3 million in matching funding to the facility, bringing the total to USD 9 million.
- A **USD 8 million partial credit guarantee facility** to support licensed financial institutions in providing commercial credit to agricultural entrepreneurs. This facility is also managed by the AFC, with the institution assuming 10–50 percent of the risk, and participating FIs assuming the rest.

3.3 The UniBRAIN Initiative

The UniBRAIN Initiative, which stands for "Universities, Business, Research and Agricultural Innovation", is a **pan-African incubator programme** implemented during the 2010–2016 period by the Forum of Agricultural Research in Africa (FARA) and a network of partners, with financial support from the Royal Danish Ministry of Foreign Affairs (DANIDA). The initiative had three main goals:

- Support and promote the commercialization of agribusiness-related innovations to realize the potential of African youth in farming.
- Develop and implement collaborative programmes fostering innovation among universities, research institutions and the private sector, to produce young graduates of agribusiness-related courses equipped with quality entrepreneurial and business skills.
- Share and scale up the innovations created through the initiative, facilitating the exchange of experiences and knowledge dissemination.

The initiative established a network of **six agribusiness incubators** in five different African countries, each focused on promoting agribusiness innovation in a specific value chain of focus (see Table 1). Each incubator involves a network of universities, research centres and businesses, and functions as a training, research and advisory centre for youth-led agricultural enterprises and start-ups seeking to embark on a path of change and innovation. The services offered by the incubators are wide and diverse, and include:

- technical consultancy on customer, product and business model development;
- mentoring and tutoring;
- modular training programmes;
- facilitation of social and venture capital (which includes linking young, promising entrepreneurs with angel investors);
- access to relevant agricultural research;
- market research services;
- support in marketing and advertisement for the agribusiness;
- scaling of innovation and research outputs;

The financial component comes mainly in the **form of grants**, provided as early-stage capital or to test proof of concept of an innovation. The incubators are also businesses in their own right, providing problem solving, testing and validation, and business development services to innovators and agribusinesses (Odame *et al.,* 2014).

Table 1 **Incubators created by the UniBRAIN Initiative**

Name of incubator programme	Country	Focus value chains
Consortium for Enhancing University Responsiveness to Agribusiness Development	Uganda	Coffee
Afri-Banana Products Limited	Uganda	Banana
The Sorghum Value Chain Development Consortium	Kenya	Sorghum
Creating Competitive Livestock Entrepreneurs in Agribusiness	Ghana	Small-scale livestock rearing
West African Agribusiness Resource Incubator	Mali	Non-timber forestry products, cereals and fruits
The Agribusiness Incubation Trust	Zambia	Vegetables and tropical fruits

The UniBRAIN programme promotes businesses across all segments of agricultural value chains, as the incubator centres are meant to support innovations to tackle constraints and seize opportunities not just in production, but also input provision, processing, wholesaling and exporting. Throughout its existence, the programme has achieved substantial results, including:

- facilitating business development for 200 youth-led enterprises;
- supporting 140 start-ups from the ground up;
- indirectly creating more than 10 000 jobs in five African countries;
- commercializing 72 new agri-related technological innovations;
- ensuring 884 internships for students of agri-related study courses.

Another key result of the UniBRAIN Initiative has been the establishment of the African Agribusiness Incubator Network (AAIN), which came as a consequence of the Initiative converting to a self-financing, institutional model following its end in 2016. The AAIN seeks to promote advocacy, experience sharing and networking among both public and private actors in Africa, establishing a strong policy that can engage globally with other incubators and related organizations to achieve mutual benefits.

Despite these results, it must be underlined that the rollout of the UniBRAIN Initiative faced its own set of challenges, mainly related to the complex mechanism and management structure that governed the whole model. A 2016 assessment of UniBRAIN by DANIDA stated that:

> "the institutional setup [of the Initiative] as a whole is complex with many directly involved stakeholders representing universities, research institutions and the private sector in six different consortia as well as four regional institutions involvement, i.e. a total of more than 20 stakeholders."

Furthermore, the management structure of the Initiative was complicated by its unique setup, given that the incubators themselves focused on developing businesses, while the UniBRAIN Partners followed a project-led approach in which work plans and budgets drove the process, as opposed to revenue generation (DANIDA, 2016).

©FAO/Petterik Wiggers

A young Ugandan entrepreneur poses for a photo in the middle of his forest plantation.

On one side, the UniBrain Initiative represents an excellent example of how it is possible to support promising young agripreneurs in setting up and expanding their business idea by promoting partnerships and innovation-focused collaboration among universities, research centres and the private sector. It is, in fact, one of the few pan-African incubator initiatives focused solely on youth, and the promising results it has achieved can pave the way for tangible replications of such a programme in other, diverse contexts. With that being said, it is important to highlight that **the initiative has progressed relatively slowly over the years**, mainly as a result of the complex design of its underlying management model and the objectives it aimed to reach,[23] while failing to achieve the financial self-sustainability of the six incubator programmes it had implemented. As such, potential future replications of this model in other contexts will have to take into consideration the trove of lessons learned and challenges that have emerged from the rollout of the UniBRAIN Initiative, with the aim of developing a more sustainable and manageable model to promote the incubation of youth-led agribusinesses.

[23] Borrowing the words of an evaluation of the Initiative carried out by Hjortsø, Alexander and Hernandez Chea (2017): "...establishing agribusiness business incubators in an institutional environment with limited knowledge of the business incubation concept and practical experience in operating incubators is challenging. The tripartite rationale of bringing universities, research organizations and private businesses together to jointly operate business incubators has the potential to facilitate cross-sectorial collaboration on value addition and commercialization of new technologies, but the co-ownership governance model has also shown to be a challenging form of organization that requires substantial time and establishment of mutual trust to develop successfully."

3.4 The CommBanane digital platform

CommBanane is a digital platform launched at the end of 2019 in Senegal, as the result of a pilot carried out as a collaboration between UNCDF, Dimagi (a US-based provider of technical assistance to development organizations) and the MFI Baobab Senegal.[24] According to UNCDF, the driving motive behind the development of CommBanane was to:

> "explore how data-driven decision-making and new dimensions of information could reduce the risk of lending to the youth segment – in particular those working in agriculture – providing alternatives for those who do not have traditional credit records" (Gasparri and Ndyiaye, 2020).

CommBanane aims to **reduce the information asymmetry** between agricultural cooperatives engaged in the banana value chain and the MFI providing them with credit (Baobab Senegal). It serves as a "data tracking system" for agricultural production, and can be accessed by farmers to apply for loans via a custom-made mobile phone app. Thanks to the quality and granularity of the data provided on clients by the platform, CommBanane allows Baobab Senegal to make **data-driven lending decisions** that mitigate credit risk for the MFI and reduce its cost, as well as supporting the development of customized financial products that are tailored to the needs of young agripreneurs in the banana value chain. CommBanane builds on an already existing digital platform created in Senegal by Dimagi called CommAgri, benefitting from a number of new features developed expressly by Dimagi for this pilot.

The first step that Baobab Senegal undertook in the frame of the pilot was to carry out a **comprehensive market assessment of the banana value chain**, using human-centred design techniques to understand the financing potential of the chain, the flows and dynamics between the different chain segments and the specific financial needs of each segment. The MFI concluded that there was substantial business potential in lending to the chain, provided that the pilot platform was effective in digitizing the lender/client data flows and drive down the credit risk faced by the institution.

Building on the results of this market study, Dimagi set out to upgrade the original CommAgri tool with a number of additional features that could refine the granularity of the data produced on small-scale banana farmers, which was streamlined via the platform to Baobab Senegal, as well as strengthening the efficiency of the MFI's lending operations in the value chain. These new features were: (i) digital recording of farmers' business data; (ii) a needs assessment tool for inputs and related financial needs; (iii) a loan and reimbursement management tool; (iv) a

[24] Baobab Senegal is a member of France-based Baobab Group. As of 2020, the MFI had approximately 390 000 clients, 714 employees, and 48 agencies and service points. Baobab Group provides digital financial services to individuals and micro- and small businesses, primarily in Africa and China. Of its customers, 72 percent are microentrepreneurs, 53 percent are youth and 46 percent are women.

sales management tool to register clients and vendors; and (v) a portfolio management tool to provide Baobab Senegal with a data analysis and risk management framework (Gasparri and Ndyiaye, 2020).

Banana farmer cooperatives can apply for a loan to Baobab Senegal directly through the CommBanane app. The MFI's portfolio managers can view and analyze these applications through the loan processing tool developed by Dimagi, before submitting them to the MFI's loan approval board. Baobab Senegal has also developed a customized, **digital group loan product** that is tailored to the specific needs of agricultural cooperatives in the banana value chain. Loans per group range from USD 160 to 16 000, with loan periods of up to 12 months. Although small credit fees are applied to the loan, these can be also pre-financed by the MFI. The credit is provided directly to the cooperative, which is charged with distributing the funds among the various groups of farmers and managing the reimbursement process (Gasparri and Ndyiaye, 2020).

Figure 16 **Notable results of the CommBanane pilot (first year)**

9 of 10
cooperatives targeted
started using the application.

These cooperatives represent 170 hectares of agriculture area.

472 farmers
have been registered onto the App, 29% are women.

These farmers have registered a turnover of USD 79 000.

USD 118 000
worth of loan request
have been submitted via the App.

Loan applications have been approved for a total value of USD 42 000.

Source: adapted from Gasparri, A. & Ndiaye, C. 2020. *Bridging the financing gap for agriculture cooperatives through data-driven decision-making: recommendations and lessons learned for practitioners*. New York, UNCDF. https://www.uncdf.org/article/6247/bridging-the-financing-gap-for-agriculture-cooperatives-through-data-driven-decision-making

According to UNCDF's experience, the challenges faced during the implementation of this model can be broadly categorized across four main lines.

1. **The partnerships with the management of the farmer cooperatives** in the banana value chain were not easy to implement, due to a considerable lack of capacity and resources on their part. The expectation that the cooperatives would have eventually taken the lead in the use of the platform, reducing the burden on Baobab Senegal, was not met.
2. **Data validation and quality assurance** also proved to be a challenge: all data was self-reported by the farmer cooperatives in the banana value chain, for sustainability purposes, which could give rise to a conflict of interest on the part of the smallholders reporting. While these instances were easier to manage and correct for Baobab Senegal in the case of one single (and relatively small) value chain, it does pose a potential future risk if the model is scaled up to more value chains.
3. **The operational cost of serving the most remote areas** was also quite high for Baobab Senegal. Despite the fact that Baobab Senegal had a strong digital offer, connectivity and infrastructure availability in the most remote areas where banana farmers were located proved to be a challenge. UNCDF's support in terms of additional funding proved to be essential to temporarily bridge this gap.
4. Baobab Senegal was a **relatively new actor** in the agricultural credit market, despite having a clear institutional commitment to serve this sector. As such, a considerable internal investment to develop agriculture-specific capacity within the institution (e.g. hiring agricultural lending specialists) was necessary to enable the functioning of the model.

Overall, the results of the CommBanane pilot so far have been quite promising, as illustrated in Figure 16. In the first year of CommBanane's operation, Baobab Senegal used the platform to approve USD 42 000 in loans, providing working capital to 472 young smallholders – of whom 29 percent were women – via ten agri-cooperatives and one regional union of agri-producers. Overall, the pilot has been extremely useful in establishing proof of concept of a tailored D4Ag solution for a specific value chain characterized by strong added value, in which the **reduction of information asymmetry between lender and loanees** has been critical in driving down credit costs for the participating MFI, as well as increasing its overall lending efficiency. By further refining the platform and diversifying its features – depending on the specific needs of other, high-value agricultural value chains – it would be possible over time to capture a considerable market share of (as of yet) financially underserved, small-scale young agripreneurs, which can assist in establishing a pathway to advance digital financial inclusion in Senegal's agricultural sector on a much larger scale.

A young farmer in
Kyotera, Uganda.

Section 4

Conclusions and recommendations

The previous sections have contributed to outlining a present-day scenario in which young agripreneurs in developing and emerging contexts commonly struggle to access formal financial services due to a wide variety of legal, economic and sociocultural barriers. As a result, they are forced to resort to informal sources of financing that are usually more costly, less varied and substantially less flexible than those offered in the formal financial sector. Compared with their adult counterparts, young agripreneurs face considerably heightened challenges when it comes to accessing (and successfully using) savings, credit, insurance and money transfer services, including lower access to traditional collateral, weaker socioeconomic networks and lower starting capital.

Above all, the scarcity of granular, timely and insightful data on the needs and opportunities associated with investing in youth-led agricultural entrepreneurship contributes to keeping formal FIs disengaged from this client group, as these institutions lack the information, the expertise, the experience and the overall disposition towards lending to what they perceive to be a high-risk and unreliable client segment. This **engagement bias** is not only relative to the supply side of financial services, but also that of the demand: young agricultural entrepreneurs in most developing contexts feel ill at ease about engaging with formal FIs, due to their lack of familiarity with such institutions, their scarce levels of financial literacy and business expertise, as well as the overall weakness of the brick-and-mortar banking branch network in the rural contexts where they reside.

From the perspective of the public sector, most governments in developing countries still have not reformed their financial sector regulation in a way that makes it more conducive to youth-focused financing, with **drastic regulatory barriers to access**[25] still in place in most of these countries, such as age limitations and ID requirements, as well as a plethora of gender-specific discriminatory regulations.[26] Most of the existing public facilities that are tasked with fostering agricultural finance for young entrepreneurs face a range of **common design and implementation challenges** that majorly threaten their efficacy and sustainability.

Despite these challenging scenarios, a number of promising trends have emerged in recent years that have significant potential to mitigate the rural gap in youth financial inclusion, if properly supported and invested in by both the public and private financial sector. These include the rise of mobile money services, digital financial platforms and agent banking models, as well as the increasing use of alternative financing arrangements that benefit in particular vulnerable rural client categories with scarce access to collateral, such as value chain financing and contract farming. Based on these considerations, and building on the insights gleaned from the previous sections, it is possible to propose a number of **concrete recommendations** that

[25] Note that while these requirements cannot be always eliminated, an in-depth policy analysis can tell policymakers (as well as finance industry players) in what cases they could be appropriately mitigated, or substituted with alternative risk reduction arrangements.

[26] It is essential to underline that these barriers can actually be of two origins: they can either be imposed by the policymaker as regulatory prerequisites for financial access, or they can be autonomously set by formal FIs to decrease the risk they face when onboarding new clients. While solutions to the first instance will be mainly policy-related, in the second case other complementary interventions should be considered to lower the risk faced by FIs and encourage them to flexibilize their requirements, such as value chain financing arrangements or the provision of partial public credit guarantees.

represent, in the authors' opinion, the most immediate and impactful measures that have the potential to foster youth access to agricultural finance, regardless of the specific developing country being taken into consideration.

- **Refine public data collection mechanisms to produce more granular data on rural youth:** the majority of governments in developing contexts have not put in place public data collection systems that collect granular information on rural youth at a national level, especially when it comes to their involvement in the agricultural sector. As a result, there are **severe information gaps at national level** that encompass the state of employment of rural youth, their entrepreneurial capacity, their assets and capital, their financial needs and habits, their engagement in specific value chains and other critical areas of information. Even when such data is available, these data collection systems tend to clump youth into one single large age category (e.g. 15–29 years), making it impossible to grasp the likely stark differences that exist – in terms of financial needs and associated opportunities – between youth in different phases of their lifecycle (e.g. in the age ranges of 15–19, 19–25 and 25–29). As illustrated in Section 1.4, for example, the gender gap in youth financial inclusion can vary widely depending on the individual age range taken into consideration, which implies the existence of complex variables (both positive and negative) underpinning young women's capacity to access formal financial services.

  This type of granular, insightful data would be essential for all agents engaged in youth-focused financing to make their work more impactful and sustainable: private FIs can leverage this data to design tailored financial products that can effectively respond to the specific demands and needs found among young entrepreneurs; governments can use them to develop public financial inclusion policies and programmes, as well as to refine existing youth-focused financing facilities; and international development agencies can use this data as part of their own programming work.

  With regard to agriculture especially, there is a pressing need for improved data collection practices, as well as more effective data structuring and dissemination, related to financial flows (and demand for financial services). Granular data collection is essential to monitor the progress of the sector, as well as to bridge the information gap between supply and demand flows, especially among young clients. The results of a recent survey carried out in Uganda by Benni, Berno and Del Puerto Soria (2020), which involved both young agripreneurs and formal FIs, can give an idea of the extent of the provider/client information asymmetry, as the survey highlights a **clear mismatch** between FIs' and youth clients' perceptions of: 1) the main constraints to financial access faced by young agripreneurs in Uganda; 2) the actual range of financial services that formal FIs were offering to rural clients; and 3) the kind of requirements demanded by formal FIs to access these services.

  The example of the CommBanane platform, illustrated in Section 3.4, showcases how Fintech innovation has tremendous potential to overcome these information asymmetries, by providing the participating MFI with a steady stream of insightful, granular and timely information on its agricultural clients, that allows it to: take more efficient, data-driven lending approval decisions; mitigate the risk associated with lending to young, small-scale agricultural actors; and thereby drive down the cost of credit for all actors involved.

- **Promote agent banking as a tool for youth financial inclusion:** in most developing countries, a major factor behind relatively low levels of formal savings is the **weakness of FIs' physical networks** in rural areas. This is the consequence of a variety of factors, including the high cost to open and maintain brick-and-mortar branches in these areas, especially when the rural connectivity infrastructure is very weak; the projected low volume of transactions that these areas are expected to generate; and the general bias among rural dwellers (especially women and youth) against interacting directly with these branches, due to lack of familiarity and low levels of financial education. Even developing countries in which governments are notably active in fostering rural financial inclusion still register extremely low numbers of banking branches compared to the overall population. Uganda, for example, registers 2.9 banking branches per 100 000 adults, while the figure is 5.4 in Kenya and 6.1 in Rwanda.

  Agent banking[27] can act as a fundamental bridge between formal FIs and rural clients, holding considerable potential especially when it comes to the financial inclusion of vulnerable categories, such as youth and women. Banking agents can act as the first contact point between formal FIs and rural youth, supporting and guiding these actors on a gradual process of inclusion, empowering them to become familiarized with the formal financial sector.

  As illustrated in Table 2, agent banking brings a number of benefits and advantages to all actors involved in such a system: the rural young clients; the bank or other formal FI managing the system; and the banking agent him/herself.

Table 2 **Benefits for participants in a banking agent model**

Actor	Benefits
Rural young client	• Lower transaction costs • Shorter physical distance compared with a banking branch • Shorter queues than in a banking branch • More adequate for rural dwellers with scarce financial education that would feel uneasy in a brick-and-mortar branch
Bank	• Growth in client base and market share • Better outreach in rural areas • Additional income generated from loan repayments, commission fees and other services
Banking agent	• Additional income generated by commissions and incentives • Better overall sales due to the higher influx of clients • Boost in reputation due to being affiliated with a recognized formal FI

Source: Authors' own elaboration.

[27] A banking agent is the owner of a shop or other retail establishment (e.g. pharmacy) that is contracted by a formal FI to provide basic financial services (e.g. deposits, money transfer, bill payments, pension withdrawal) to the general population. Unlike bank employees, banking agents normally offer their services as a complement to their principal business activity.

In many developing and emerging countries, banking agents play a key role for rural financial inclusion. In **Guatemala**, for example, banking agents constitute 53.7 percent of the 14 878 financial access points present in the country (almost 8 000 agents, in absolute numbers). More than 98 percent of municipalities in Guatemala have at least one banking agent. Interestingly, the growth of the banking agent network in Guatemala in recent years has countered the reduction in numbers of brick-and-mortar banking branches, with 1 000 new agents contracted since 2016 against 1 000 banking branches being shut down (Benni, 2020).

With regard specifically to young entrepreneurs in rural and agricultural areas, the strengthening of the agent banking network can play a particular critical role as an enabler of financial inclusion. Rural youth face additional challenges when seeking to access brick-and-mortar financial services, in terms of, for example, reduced mobility and weaker socioeconomic standing (which might discourage interactions with the banking branch). As such, a rural banking agent can represent a safer, closer and more familiar window of interaction when seeking to establish a first linkage between a young entrepreneur and a formal FI, a relationship which has the potential to evolve over time to an established client/provider relation. In order to be effective in reaching young clients specifically, a number of considerations have to be highlighted when it comes regulating and implementing agent banking systems, based on past evidence. In this sense:

- Agents need to be **trained on how to attend to young rural clients in the best way,** which implies, for example, interacting with them in a respectful and enabling manner, without age-based discriminations; informing them in detail about the additional requirements that they will have to fulfil, given their young age, to access to the available financial offer; and monitoring that they do not sign up for financial services that are inadequate or even detrimental to their own personal and economic situation.
- Agent banking regulation needs to be **comprehensive but also flexible**, to avoid placing unnecessary restrictions on vulnerable clients especially. These restrictions include setting unnecessarily lengthy processes to approve new banking agents; restricting the use of agent banking to only specific categories of FIs; and placing age limits to the use of banking agents. In Uganda for example, although agent banking has been regulated since 2010, the current law limits the use of this model to commercial banks only, excluding providers such MFIs and financial cooperatives. In Guatemala, youth are constrained from opening an account at an agent banker because of the large amount of documentation requirements they have to provide, similar to those they would encounter in a brick-and-mortar banking branch (Benni, 2020).

- **Address youth financial empowerment in a holistic manner:** a good practice that emerges clearly from the analysis of recent public initiatives focused on strengthening young entrepreneurs' access to finance is setting said initiatives within the frame of a more holistic empowerment strategy that seeks to address **various dimensions of vulnerability faced by the rural youth**, of which financial exclusion is but one aspect. The strengthening of various aspects of youth vulnerability, through policy reforms, capacity building, cash injections and a variety of other interventions, is bound to have beneficial effects on the determinants of youth financial exclusion. For example:

- Assisting young agri-entrepreneurs in establishing market linkages with actors in downstream value chain segments (e.g. exporters, wholesalers) can strengthen the creditworthiness of these entrepreneurs in the eyes of formal FIs. Sometimes, contract farming arrangements can be established in order to facilitate access to formal loans at substantially more flexible terms.
- Strengthening young farmers' knowledge of climate-smart farming practices can reduce their exposure to adverse natural events, and improve their risk profile in the eyes of insurance providers engaged in the agricultural sector, thereby lowering premium costs.
- Ensuring young entrepreneurs' participation in a mentorship programme can set them on an upward path of growth, due to skills acquisition as well as access to professional networks and business contacts facilitated by the mentor. This, in turn, can strengthen the value proposition of investing in the youth's business plan for formal FIs and other financing providers.

- **Build and share an evidence base on proven, scalable and replicable business models for serving rural youth:** this recommendation is aimed mainly at development agencies, development finance institutions, non-governmental organizations and other non-profit/public actors whose work focuses on the promotion of the financial inclusion of rural youth. In many developing countries, there is substantial scope for the replication of successful business models and innovations targeting youth finance that have already been tried and tested in other contexts. Nevertheless, knowledge sharing and information on such experiences is often scarce and not properly formalized. Establishing an evidence base built on a range of good practices and effective business models, encompassing financial inclusion in general, and the financial inclusion of the rural youth in particular, could prove to be a considerable boon for public decision-makers, regulators, local FIs and other public-private stakeholders engaged in this domain at country level.

- **Foster a youth-specific financial offer among formal FIs by promoting internal restructuring:** Formal FIs that seek to develop a varied offer of youth-focused financial services should promote the creation of specific **divisions and teams** within their structures which focus exclusively on the design of such products. This process should be complemented by the adoption of a customer-centric approach that aims to capture the complexity of the youth client category in its entirety – supported by a rigorous client segmentation and value chain analysis – with the overall objective of matching the needs of different age ranges (and geographical locations) of young clients to specific subsets of the product offer. In general, it is essential that FIs develop the ability to break down their client analysis capacity – and their offer of financial services – to a more granular level, thus reaching a point where they can more accurately serve different segments of the young entrepreneur demographic through a more targeted range of services. Local public entities and development agencies can play a major role in supporting FIs in this process. Examples of this support include grants for technical assistance and product development, soft loans to pilot new products and risk-sharing mechanisms to support the expansion of such products.

In line with the previous point, formal FIs should place particular attention on the **under-18 client segment of young entrepreneurs.** This specific segment is the one which faces the greatest variety of access constraints among the youth category (e.g. ID access, collateral availability and financial education), while holding the greatest amount of untapped potential, derived from its unmet demand for financial services. From a development perspective, the gains that can be derived from fostering the financial autonomy and empowerment of under-18 entrepreneurs are particularly remarkable, given the proven linkages between strengthened financial inclusion and improved education, health, employment and a host of other aspects. Both governments and international development institutions can play an essential role in fostering awareness in the formal financial sector regarding the financial potential of this client segment, as well as supporting the process of developing tailored financial products and initiatives through subsidies, guarantee coverage, capacity building and other interventions.

- **Develop new lending approaches that rely on alternative collateral:** as illustrated throughout the study, young rural entrepreneurs usually lack "conventional" forms of guarantees that are required by formal financial institutions to unlock loans (such as houses, fixed assets and especially land titles), which can significantly impair their ability to access credit. In Uganda, according to an extensive survey carried out in 2020 by FAO, young rural entrepreneurs identified their inability to meet traditional collateral requirements, as demanded by formal financial institutions, as the main impediment to credit access (Benni, Berno and Del Puerto Soria, 2020). It is essential, therefore, to develop and implement clear and transparent collateral laws, allowing for the use of alternative forms of guarantees, such as warehouse receipts, future harvests or mortgages on moveable assets (e.g. farm machinery, livestock).[28]

  A promising example in this sense can be found in **Uganda**, where in 2019 the government introduced the Security Interest in Movable Property Registry Act, a new regulatory framework for the use of alternative collateral. The act established a Registry, hosted by the Uganda Registration Services Bureau, which allows micro-, small- and medium-sized enterprises (MSMEs) and individuals to use their movable assets as collateral for loans. The fully online Registry enables secured creditors to register their security interests in movable assets, such as livestock, crops, motor vehicles, electronics and furniture, while providing

[28] A clear example of this is the Uniform Act on Secured Transaction developed by the Organization for the Harmonization of Business Law in Africa (OHADA) and adopted by 17 West and Central African countries, which was amended in 2010 to allow potential borrowers to employ a wide range of alternative guarantee forms to obtain a loan from a financial institution, such as warehouse receipts and moveable assets (Filmer and Fox, 2014).

A young produce vendor in his stall, Bangladesh.

the public with notice of the existence of such security interests to register online movable assets as collateral (livestock, crops, motor vehicles, equipment and furniture, etc.). This new system has the potential for further expansion in the country, thus supporting greater financial inclusion among Ugandans, as well as increased security for lenders (Benni, Berno and Del Puerto Soria, 2020).

- **Refine the development of D4Ag platforms under a youth lens:** the widespread adoption of D4Ag technology has considerable potential to become a powerful driver for youth engagement in agriculture and agribusiness, with Agritech companies having launched a wide range of digital solutions to support agricultural value chains in recent years. In sub-Saharan Africa, according to the Technical Centre for Agricultural and Rural Cooperation (CTA), the D4Ag sector is booming at present, **with over 33 million smallholder farmers and pastoralists registered as customers**, among which youth represent more than 70 percent of total users. Kenya plays a leading role in the African D4Ag landscape, with almost 200 D4Ag companies active in the country, accounting for more than 9 million registered customers.

Emerging experience is showing that D4Ag platforms that offer a bundled package of financial and non-financial services (such as Digifarm, illustrated in Section 3.1) have considerable potential to reach large numbers of unbanked farmers, acting as **one-stop shops for agriculture-related services in the digital market.** By leveraging these multi-service platforms, youth would be able to receive support with a variety of agribusiness-related issues, such as quality input provision, training on good farming practices, increased market linkages for their produce and weather forecast services. As channeling these different products through one platform **reduces transaction costs and increases user efficiency**, their bundled offer of services can become quite appealing for young entrepreneurs.

There is space for considerable advances in the expansion of the D4Ag market in developing and emerging countries if this receives the continued support of governments and other development stakeholders. Smart incentives for D4Ag companies that offer bundled financial services can be taken into consideration as a measure to foster the financial inclusion of young entrepreneurs in the agricultural sector. **Linking D4Ag companies' activities with existing youth empowerment programmes** managed by international development agencies at country level could also prove to be a beneficial form of collaboration, as it allows the development agency to leverage the substantial technical capacity and multi-service platform offered by the D4Ag company, while the latter can see its client base expanded and its brand strengthened by the partnership with a renowned development agency.

In this regard, D4Ag platforms appear to have considerable potential as partners in a **public-private incubator programme** for young entrepreneurs**,** given the range of services they are already able to provide. The incubation model is emerging as an effective solution to foster youth agripreneurship, promoting value-adding ideas for new businesses across all value chain segments. It combines business education, advisory services, mentorship and access to concessional funds, providing youth with the basic enabling factors they require to kickstart their own enterprise.

References

ADF (African Development Fund). 2017. *Kenya – Enable Youth – Appraisal report.* Abidjan, Cote d'Ivoire. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Project-and-Operations/KENYA_-_Enable_Youth_-_Approved.PDF

AfDB (African Development Bank). 2017. *Agro-millionaires in the making.* Abidjan, Cote d'Ivoire. https://www.afdb.org/fileadmin/uploads/afdb/Documents/Generic-Documents/Enable_Youth_brochure.pdf

Aga Khan University. 2016. The Uganda Youth Survey Report 2016. In: *Aga Khan University East Africa Institute*. Kampala, Aga Khan Development Network. Cited 14 April 2022. https://www.aku.edu/eai/Pages/uganda.aspx

Ansar, S., Deshpande, R., Klapper, L. & Koning, A. 2021. What drives the financial inclusion gender gap for young women? *FinDev Gateway, 4 March 2021.* New York, USA. Cited 14 April 2022. https://www.cgap.org/blog/what-drives-financial-inclusion-gender-gap-young-women

Arslan, A. 2019. How old is the average farmer in today's developing world? *IFAD Blog,* 1 July 2019. Rome. Cited 14 April 2022. https://www.ifad.org/en/web/latest/-/blog/how-old-is-the-average-farmer-in-today-s-developing-world-

Benni, N. 2020. *Inclusiòn financiera de los jòvenes rurales en Guatemala.* Rome, FAO. https://www.fao.org/documents/card/en/c/cb2598es

Benni, N., Berno, D. & Del Puerto Soria, M. 2020. *Agricultural finance and the youth: prospects for financial inclusion in Uganda.* Rome, FAO. https://doi.org/10.4060/ca7873en

Benni, N., Berno, D. & Ho, H. 2020. *Agricultural finance and the youth: prospects for financial inclusion in Kenya.* Rome, FAO. https://doi.org/10.4060/cb2297en

Benni, N. 2022. *Assessing the state of youth financial inclusion in developing contexts - Methodological guidelines.* Rome, FAO [FORTHCOMING]

Busara. 2021. *DigiFarm - Panel Study.* Nairobi, Busara Center for Behavioural Economics. https://www.mercycorpsagrifin.org/wp-content/uploads/2021/05/DigiFarm-Impact-Study-Panel_Aggregated-Report-1.pdf

CYFI (Child and Youth Finance International). 2014. *Banking a new generation: developing responsible retail banking products for children and youth.* Amsterdam.

Dalberg Global Development Advisors & Busara Center for Behavioral Economics. 2021. *DigiFarm – Gender Impact Study: Final Consolidated Report. Nairobi.* https://www.mercycorpsagrifin.org/wp-content/uploads/2021/05/DigiFarm-AgriFin-Gender-Impact-Study-Final-Report.pdf

DANIDA. 2016. *Support to Universities, Business and Research in Agricultural Innovation (UniBRAIN).* Copenhagen.

Demirguc-Kunt, A., Klapper, L., Singer, D., Ansar, S. & Hess, J. 2018. *Global Findex Database 2017. Measuring Financial Inclusion and the Fintech Revolution*. Washington, DC, World Bank. https://openknowledge.worldbank.org/handle/10986/29510

Ernst & Young. 2015. FinTech is gaining traction and young, high-income users are the early adopters. *The Journal of Financial Perspectives: FinTech,* 3(*3).* https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3083976

Ernst & Young. 2017. *EY FinTech Adoption Index 2017.* London. https://assets.ey.com/content/dam/ey-sites/ey-com/en_gl/topics/banking-and-capital-markets/ey-fintech-adoption-index-2017.pdf

Ernst & Young. 2019. *Global FinTech Adoption Index 2019.* London. https://www.ey.com/en_uk/ey-global-fintech-adoption-index

EPRC (Economic Policy Research Centre). 2019. *Agricultural Finance Year Book – 2019: Development Financing for Agro-Industrialization.* Kampala. https://eprcug.org/publication/agriculture-finance-year-book-2019-development-financing-for-agro-industrialisation/?wpdmdl=10120&refresh=625807e7089681649936359

FAO (Food and Agriculture Organization of the United Nations). 2016. *Estrategias innovadoras de gestion del riesgos en mercados financieros rurales y agropecuarios – Experiencias en América Latina*. Rome. http://www.fao.org/3/a-i5503s.pdf

FAO. 2017. *Niñez y adolescencia rural ocupada en la agricultura*. Rome. https://www.fao.org/3/i7180s/i7180s.pdf

Filmer, D. & Fox L. 2014. *Youth Employment in Sub-Saharan Africa. Africa Development Series.* World Bank, Washington DC. http://hdl.handle.net/10986/16608

FSD (Financial Sector Deepening) Kenya. 2019. *2019 FinAccess Household Survey. Access, Usage, Quality and Impact*. Nairobi. https://www.centralbank.go.ke/uploads/financial_inclusion/1035460079_2019%20FinAcces%20Report%20(web).pdf

FSD (Financial Sector Deepening) Uganda. 2018. *Finscope Uganda 2018: Analysis of Status of Financial Inclusion for Women and Youth In Uganda.* Kampala. https://fsduganda.or.ug//wp-content/uploads/2018/06/FinScope-Uganda-2018-Report.pdf

Fundaciòn Capital. 2020. *MuJeR – Informe Final (Mayo 2017 – Junio 2020).* Bogotá. https://lac-conocimientos-sstc.ifad.org/documents/262275/200a9f3c-275c-f9fc-40d0-a5ce89b30365

Gasparri, A. & Muñoz, L. 2018. *Inclusive finance and rural youth. Background paper for the Rural Development Report 2019.* Rome, IFAD. https://www.ifad.org/documents/38714170/41187395/11_Gasparri+and+Munoz_2019+RDR+BACKGROUND+PAPER.pdf/1446b159-ed1b-5ae9-fb1f-c0af77e698c8

Gasparri, A. & Ndiaye, C. 2020. *Bridging the financing gap for agriculture cooperatives through data-driven decision-making: recommendations and lessons learned for practitioners.* New York, UNCDF. https://www.uncdf.org/article/6247/bridging-the-financing-gap-for-agriculture-cooperatives-through-data-driven-decision-making

GSMA (Global System for Mobile Communications Association). 2019**.** *The State of the Industry - Report on mobile money 2019.* London. https://www.gsma.com/sotir/wp-content/uploads/2020/03/GSMA-State-of-the-Industry-Report-on-Mobile-Money-2019-Full-Report.pdf

Hamp, M. & Singh, E. 2019. Pathways for rural youth to financial inclusion. *IFAD Blog,* 8 October 2019. Rome. Cited 14 April 2022. https://www.ifad.org/en/web/latest/-/blog/pathways-for-rural-youth-to-financial-inclusion

Hjortsø, C. N. P., Alexander, I. K. & Hernandez Chea, R. R. 2017. *Experiences and Lessons Learned from the UniBRAIN Agribusiness Incubation Programme.* IFRO Report No. 266. Frederiksberg, Denmark, University of Copenhagen. https://static-curis.ku.dk/portal/files/188232225/IFRO_Report_266.pdf

IFAD (International Fund for Agricultural Development). 2015. *Lessons learned: Youth access to rural finance.* Rome. https://www.ifad.org/documents/38714170/40184033/Lessons+learned+-+Youth+Access+to+Rural+Finance/9b1436a7-5f9d-4fb6-b522-5974e8cbe5a4

IFAD. 2016. *2016 Rural Development Report – Fostering rural inclusive transformation.* Rome. https://www.ifad.org/documents/38714170/40724622/Rural+development+report+2016.pdf

IFAD. 2019. *2019 Rural Development Report – Creating opportunities for rural youth.* Rome. https://www.ifad.org/documents/38714170/41133075/RDR_report.pdf/7282db66-2d67-b514-d004-5ec25d9729a0

ISF Advisors. 2021. *Agricultural "platforms" in a digital era – Defining the landscape.* New York, USA. https://isfadvisors.org/wp-content/uploads/2021/03/ISF_RAFLL_Agricultural_Platforms_Report.pdf

Kam, B. 2011**.** *Legally, how young is too young to open a savings account? CGAP Blog,* 10 January 2011. Washington, DC. Cited 14 April 2022. https://www.cgap.org/blog/legally-how-young-too-young-open-savings-account

Kassa, G., Arowojolu, A., Odukogbe, A-T. & Worku, A. 2018. Prevalence and determinants of adolescent pregnancy in Africa: a systematic review and meta-analysis. *Reproductive Health, 15: 195.* https://doi.org/10.1186/s12978-018-0640-2

Lee, R. & Mason, A. 2006. *What is the Demographic Dividend? Finance and Development,* 3(43). Washington, DC, IMF. https://www.imf.org/external/pubs/ft/fandd/2006/09/basics.htm

Mastercard Foundation. 2020. FinTech Company Aims to Address Challenges in Ag Economy. *In: Mastercard Foundation.* Toronto, Canada. Cited 14 April 2022. https://mastercardfdn.org/fintech-company-aims-to-address-challenges-in-ag-economy/

McCormick, M. & Gasparri, A. 2021. *A digital bookkeeping App to Improve access to finance - A case study from Ghana.* New York, USA, UNCDF. https://www.uncdf.org/article/7271/a-digital-bookkeeping-app-to-improve-access-to-finance-a-case-study-from-ghana

Mercy Corps. 2019a. *AFA case study: Digital pathways for youth in agriculture.* Portland, USA. https://mercycorpsagrifin.org/wp-content/uploads/2018/12/230118_afa-youth-final-vF-compressed.pdf

Mercy Corps. 2019b. *DigiFarm: A digital platform for farmers.* Portland, U.S.A. https://www.mercycorpsagrifin.org/wp-content/uploads/2020/03/DigiFarm-Platform-Case_Final_.pdf

Miller, C., Ono, T. & Petruljeskov, M. 2018**.** *Agricultural investment funds for development.* Rome, FAO. https://www.fao.org/3/I8226EN/i8226en.pdf

Muhura, A. 2019. Accelerating digital inclusion for women in Kenya. *GSMA Blog,* 28 May 2019. London. Cited 14 April 2022. https://www.gsma.com/mobilefordevelopment/blog/accelerating-digital-inclusion-for-women-in-kenya/

Odame, H., Methu, J., Kangai, E., Akishule, D., Owino, W. & Alokit, C. 2014. *The Universities, Business and Research in Agricultural Innovation (UniBRAIN Initiative) - Opportunities for commercialisation and research under the banana, coffee and sorghum value chains in Kenya and Uganda. Kampala,* Association for Strengthening Agricultural Research in Eastern and Central Africa. https://www.asareca.org/sites/default/files/publications/BEST%20BET%20TECHNOLOGIES%20FINAL%20PDF%20%28for%20web%29%20copy_0.pdf

OECD (Organization for Economic Co-operation and Development). 2020. *Advancing the digital financial inclusion of youth.* Report prepared for the G20 Global Partnership for Financial Inclusion by the OECD. Paris. https://www.oecd.org/daf/fin/financial-education/advancing-the-digital-financial-inclusion-of-youth.pdf

Rutten, L. & Fanou, S.L. 2015. Innovative and inclusive finance for youth in agriculture. In: AGRA (Alliance for a Green Revolution in Africa). *Africa Agriculture Status Report: Youth in Agriculture in Sub-Saharan Africa,* pp. 94-117. Nairobi, AGRA. https://www.tralac.org/images/docs/8202/aasr-2015-youth-in-agriculture-in-sub-saharan-africa.pdf#page=94

SEEP (Small Enterprise Education and Promotion Network) Network & Mastercard Foundation. 2013**.** *Understanding youth and their financial needs.* Toronto, Canada. https://seepnetwork.org/files/galleries/1058_Understanding_Youth_and_their_Financial_Needs_April_2013.pdf

Shrader, L. 2021. *DigiFarm Presentation. Portland, MercyCorps.* https://www.giz.de/expertise/downloads/AgriFin%20DigiFarm.pdf

UNCDF (United Nations Capital Development Fund). 2012. *Policy Opportunities and Constraints to Access Youth Financial Services. Insights from UNCDF's YouthStart Programme. New York, USA.* http://ifconsulting.co/attachments/Policy-Opportunities-and-Constraints-to-Access-YFS_YouthStart.pdf

UNDESA (United Nations Department of Economic and Social Affairs). 2013. *Financial inclusion of youth.* New York, USA. https://www.un.org/esa/socdev/documents/youth/fact-sheets/youth-financial-inclusion.pdf

UNDESA. 2015. *Youth population trends and sustainable development. Population Facts No. 2015/1.* New York, USA. https://www.un.org/esa/socdev/documents/youth/fact-sheets/YouthPOP.pdf

UNDESA. 2018. *Youth and the 2030 Agenda for Sustainable Development.* New York, USA. https://www.un.org/development/desa/youth/wp-content/uploads/sites/21/2018/12/WorldYouthReport-2030Agenda.pdf

UNDESA. 2019. *World Population Prospects 2019: Highlights.* New York, USA. https://population.un.org/wpp/Publications/Files/WPP2019_Highlights.pdf

YouthSave Consortium. 2015. *The Youthsave Program: Key Findings For Financial Inclusion And Financial Education Policy Makers.* London. https://static.newamerica.org/attachments/12261-key-findings-from-the-youthsave-project-in-brief/PolicyMakersBrief.f096cc56b3d346e7990ff271cd47db4f.pdf

The aim of this publication is to provide a comprehensive overview of the current state of agricultural financing for youth in developing and emerging countries, underlining the trends, core challenges, opportunities, innovative solutions and initiatives associated with this undertaking.

The study makes use of the latest and most relevant literature on youth finance, while also relying extensively on insights and case studies that have emerged during the development of a series of FAO country-level assessments on the state of agricultural finance for youth. Building on the analysis of this data and experience, the study aims to provide a range of recommendations and lessons learned that can be leveraged by interested stakeholders to develop new modalities to promote youth access to agricultural finance, in their own specific contexts.

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