



FinScope
TANZANIA

2017

**DEDICATED
FARMERS:**

Their Needs

How can they be served?

FinScope Tanzania 2017
Agriculture Niche Report

INSIGHTS THAT
DRIVE

INNOVATION

ACKNOWLEDGMENTS

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GLOSSARY

AMCOS	Agricultural Marketing Society
BOT	Bank of Tanzania
FSP	Financial Service Provider
MFI	Microfinance Institution
MoF	Ministry of Finance and Planning
NBS	National Bureau of Statistics
NHIF	National Health Insurance Fund
OCGS	Office of the Chief Government Statistician - Zanzibar
SACCO	Savings and Credit Cooperative Organisation
SAGCOT	Southern Agricultural Corridor of Tanzania
WRS	Warehouse Receipt System

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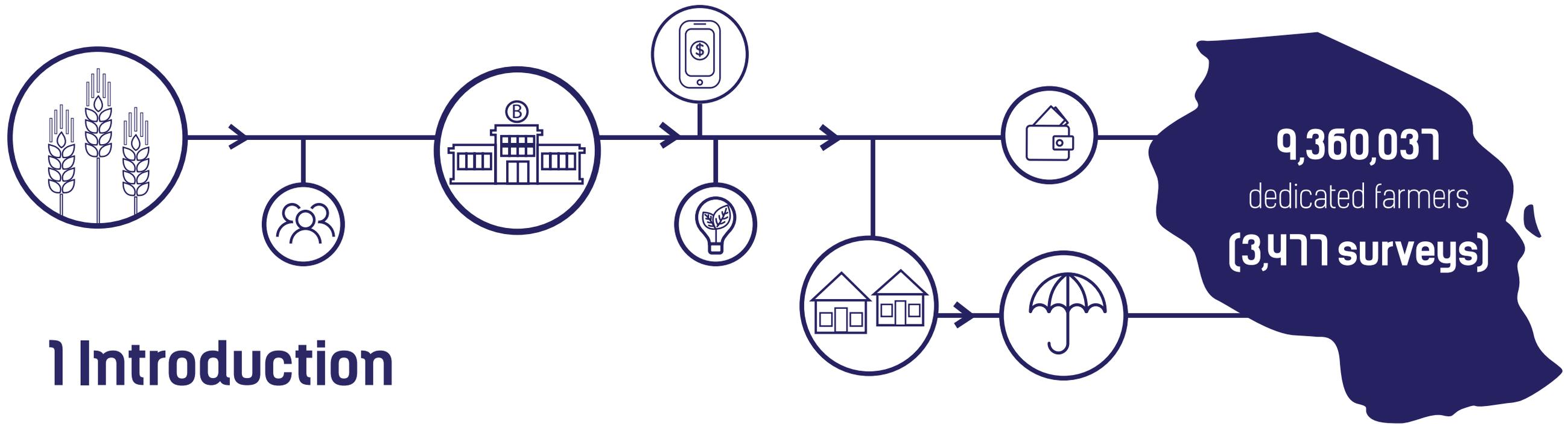
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1 Introduction

Agriculture is the backbone of Tanzania's economy, as the largest single sector, contributing 29% (2016)¹ to the country's GDP. Nearly 80% of the households in the country engage in agriculture according to the latest FinScope Tanzania survey,² with one third gaining more than half of their income from agricultural activities.³ Access to finance is a key factor in the continued growth of this economy. Yet the characteristics of individual farmers in Tanzania differ, both from the general population and from one another, and as a result, their financial behaviour and needs vary greatly.

This report looks at the Tanzanian farmer through the lens of the private and public sector. Farmers are defined as a specific group with a commercial interest in agriculture: the dedicated farmer. The demographic, economic, and financial behaviour of dedicated farmers is then explored in detail in order to identify commercially viable business opportunities for the financial sector. The aim of the report is to facilitate innovation and identify exciting opportunities for the private sector to both develop new financial products and fine-tune existing ones. An improved understanding of the circumstances and needs of this dedicated customer segment can help to inform product design and communication, shed light on untapped markets, and improve the use cases for a potential market of over 9 million people.

This study relies on the FinScope Tanzania 2017 data, which is the fourth wave in the FinScope Tanzania series with previous waves in 2006, 2009 and 2013. FinScope Tanzania reports have been made available by the Financial Sector Deepening Trust (FSDT) and key

partners (Ministry of Finance and Planning (MoF), Bank of Tanzania (BOT), National Bureau of Statistics (NBS) and the Office of the Chief Government Statistician Zanzibar (OCGS).

The FinScope Tanzania 2017 survey is a nationally and regionally-representative demand-side survey covering the entire population of Tanzania. Using the survey's data, key players in financial services set objectives for growth in financial inclusion and implement innovative policy, product and service development strategies across the country.

Key highlights emerging from the analysis include:

- Addressability is not a key issue for this customer segment. Nearly 80% of dedicated farmers live within 5KM of a financial access point and 93% have access to a mobile phone. Reaching these farmers has, in this sense, never been easier or more affordable. Basic uptake has also been increasing, reaching a peak in 2017 with 58% of dedicated farmers taking-up formal financial services.
- There are opportunities both to expand uptake further and to deepen customer usage of financial services. For example, 65% of dedicated farmers that have taken-up mobile money use their accounts less than once a month. Though lack of usage is a complex issue, there is evidence that a lack of use cases is a key barrier. Well adapted financial products with better use cases can create a win-win scenario where both the private sector and dedicated farmers benefit.

The potential for sustainably reaching dedicated farmers is huge in light of the high addressability of this segment. By applying rigorous statistical analysis to state-of-the-art FinScope Tanzania 2017 data, this report aims to help the private sector identify a number of commercially viable business opportunities targeting dedicated farmers.

1 Tanzania Economic Outlook 2016 - The Story Behind the Numbers (Deloitte, Page 11). Accessible online: <https://www2.deloitte.com/content/dam/Deloitte/tz/Documents/tax/Economic%20outlook%202016%20TZ.pdf>.
 2 FinScope Tanzania 2017 data
 3 FinScope Tanzania 2017 data

2 Segmentation

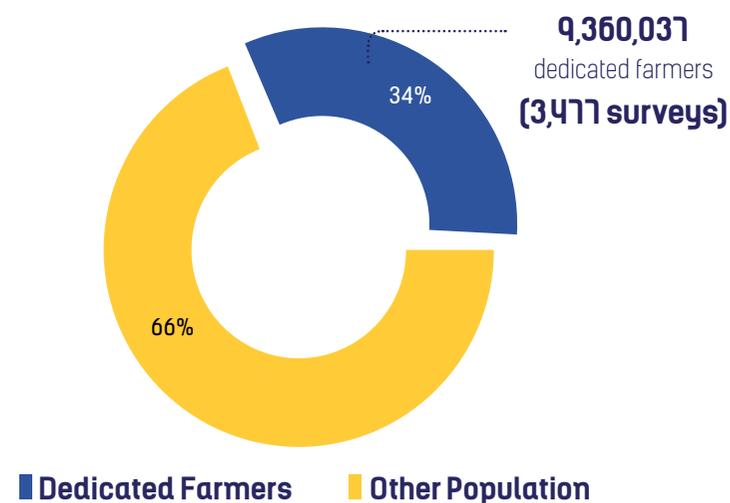


According to the FinScope 2017 data, more than 3 out of 4 Tanzanian households (79%) are engaged in agriculture. This number includes households that grow crops in the backyard to supplement domestic consumption, and farming is therefore not always a core activity for them. To narrow Tanzanian farmers down to those that focus on agriculture as their main source of income – i.e. farmers that are dedicated to agriculture and keen to invest in agriculture on a commercial basis – the overall data was broken down into sub-segments.

This study defines a sub-group of households engaged in agriculture as dedicated farmers, namely those whose income from agriculture contributes to a significant portion (>50%) of the total household income. These farmers may or may not have a personal preference for agriculture, but as derived from the data the majority of their income is derived from agriculture. Traders and retailers of agriproducts have been excluded from the definition in order to enable a specific focus on farmers that grow and sell their own products.

Applying this definition yields a sub-group of dedicated farmers that make-up 34% of the overall Tanzanian adult population (Figure 1), adding-up to 9.36 million farmers across Tanzania, 2.34 million of which (or 25%) are based in the Southern Agricultural Corridor of Tanzania (SAGCOT) region. These 9.36 million dedicated farmers are the focus of this report.

Figure 1: Proportion of Dedicated Farmers in Tanzania



Although dedicated farmers are spread across the country, analysing the regional distribution across Tanzania shows that regions such as Dodoma, Geita, Morogoro, Kagera and Mtwara have a higher number of dedicated farmers than other regions (Figure 2). Together, these regions (outlined in blue) account for nearly 27% (or 2.5m) of dedicated farmers in the country. The SAGCOT region⁴ (outlined in red) houses 21.8% of Tanzania's dedicated farmers.

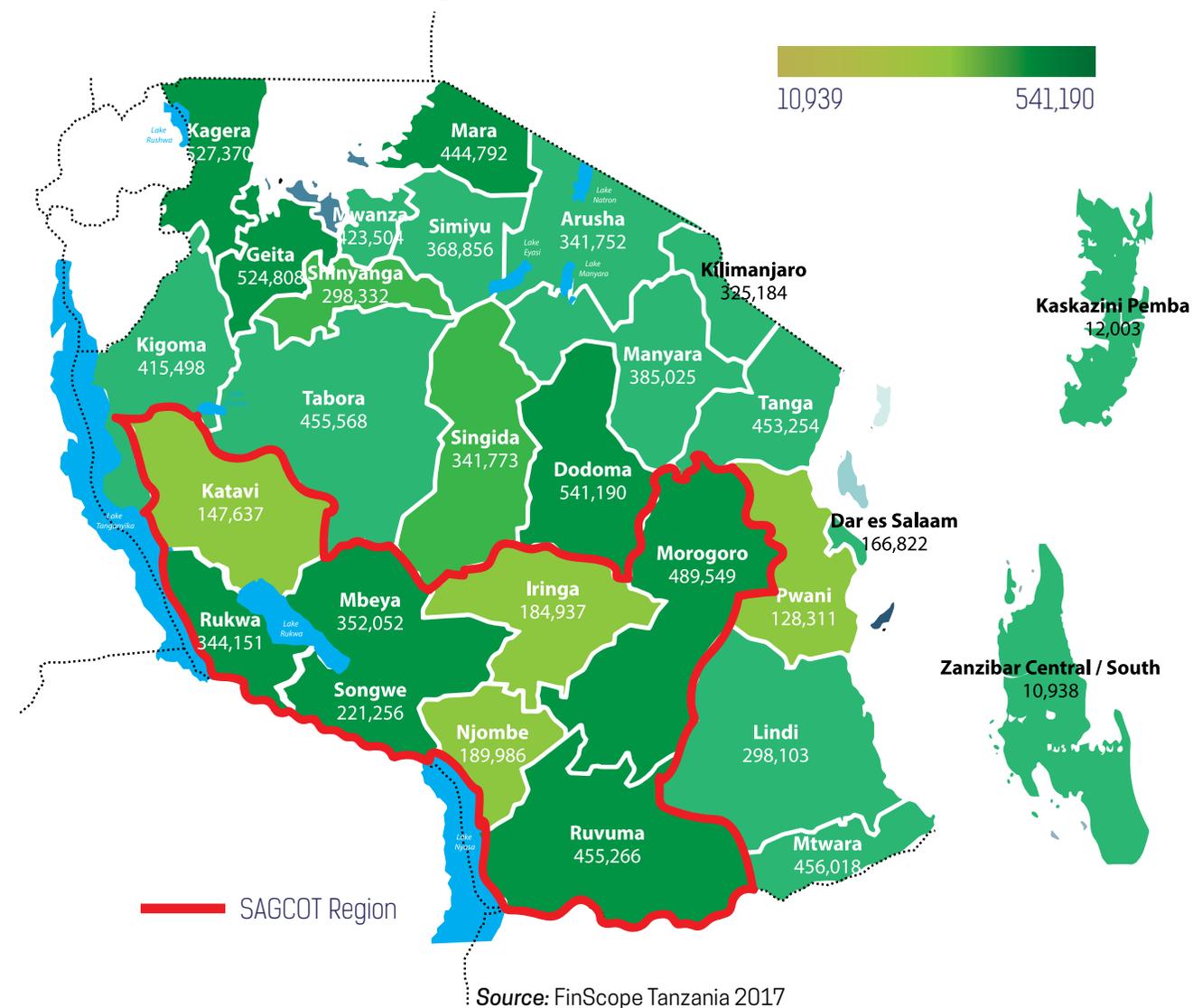
⁴ SAGCOT region comprises of Iringa, Njombe, Mbeya, Morogoro, Songwe, Rukwa, Katavi, Ruvuma

Note that throughout this study, dedicated farmers across Tanzania are compared with dedicated farmers from the SAGCOT region and the 'average Tanzanian'. This is helpful to understand how dedicated farmers compare to other populations and the nature of their special characteristics.

The average Tanzanian: The entire sample data from FinScope, which are representative of the entire Tanzanian population, is taken as a benchmark of the behaviour of the average Tanzanian.

Dedicated farmers from SAGCOT: This segment includes only those dedicated farmers that live in the SAGCOT region.

Figure 2: Regional Distribution of Dedicated Farmers



Source: FinScope Tanzania 2017

3 Analysis



FACT 1

Most dedicated farmers live in rural areas



FACT 2A

Educational attainment among dedicated farmers is limited

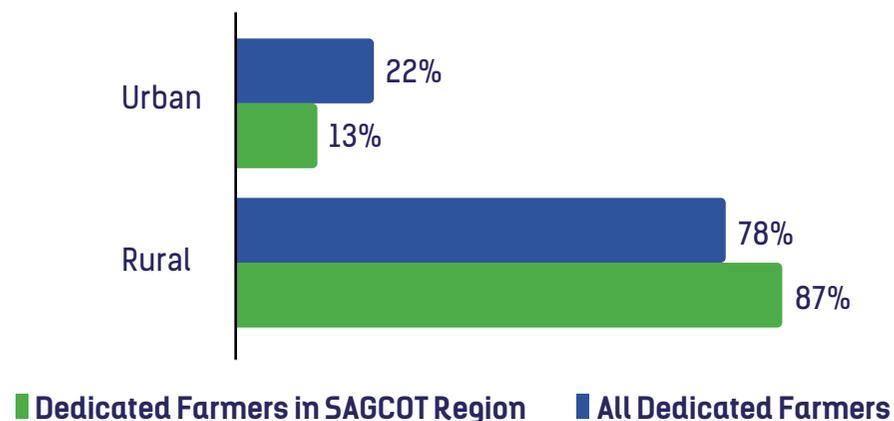


This section presents the key demographic characteristics of the dedicated farmer segment. Understanding factors such as gender, age, location, education and income are crucial to designing products and services that look to address the specific use cases of the 9.36m dedicated farmers across Tanzania.

SECTION 1: DEMOGRAPHICS

Of the dedicated farmers in Tanzania, 87% live in rural areas, implying that out of every 10, nearly 9 live in rural areas (Figure 3). A slightly larger portion of dedicated farmers in SAGCOT region live in urban areas compared to the overall dedicated farmers in the country. This could be a sign of SAGCOT farmers moving to cities to supply essential food crops to urban markets. These farmers can be an interesting segment for Financial Service Providers (FSPs) to service, as they are closer to the established financial infrastructure.

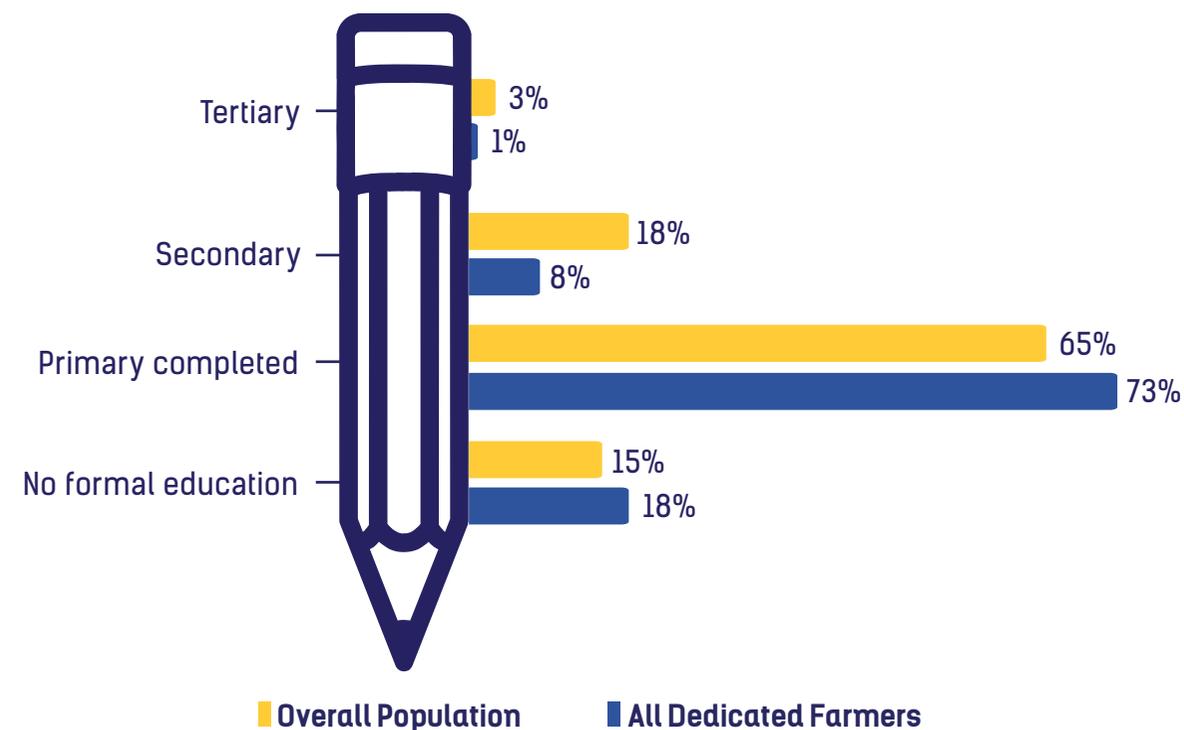
Figure 3: **Rural Urban Split of Dedicated Farmers**



Source: FinScope Tanzania 2017

Understanding the level of education among potential clients, particularly for financial literacy, supports FSPs to design and market products responsibly, and enhance long term client retention. Less than 1 in every 10 dedicated farmers have attended secondary education (Figure 4) – which is less than the average Tanzanian.

Chart 4: **Highest Level of Education**

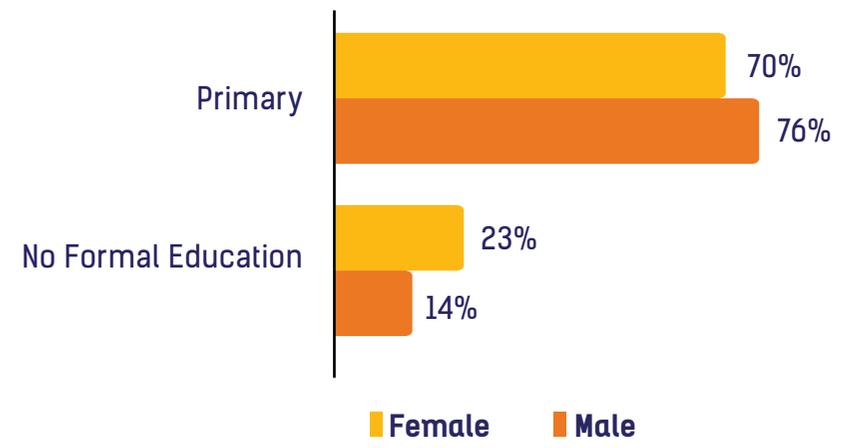


Source: FinScope Tanzania 2017

FACT 2B
Almost a quarter (23%)
of dedicated female farmers don't have any formal education

FACT 3
Dedicated farmers are **OLDER**
older than the average Tanzanian, especially **SAGCOT** farmers

Chart 5: Highest Level of Achieved of Dedicated Farmers by Gender



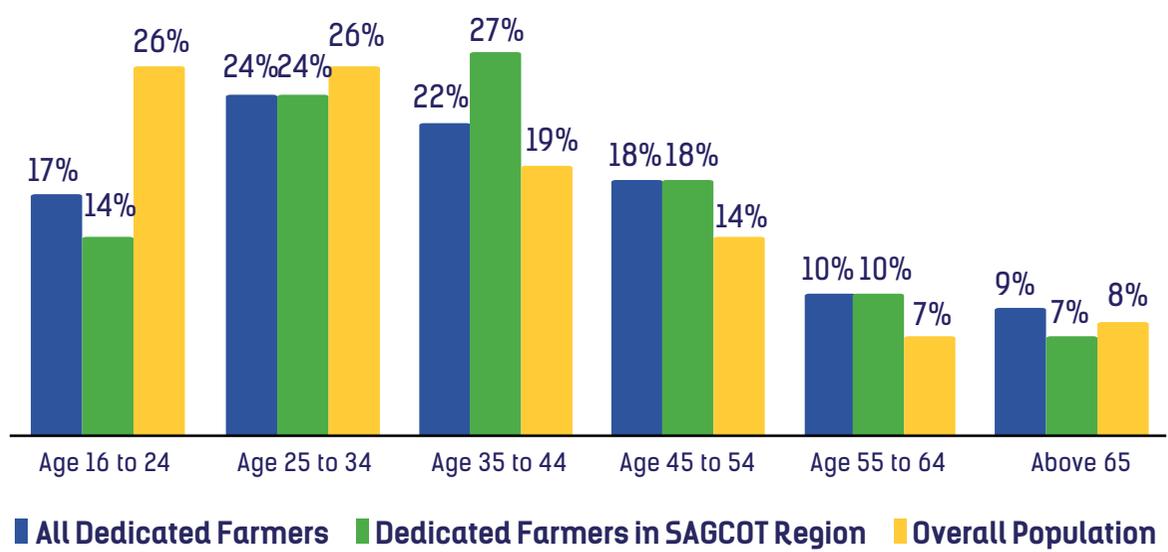
Source: FinScope Tanzania 2017

Education levels are high for men (14%), where only every 7th man does not have any formal education. This is important to realise for FSPs, since for women that have not received any form of education, the likelihood of uptake is lower. To overcome this challenge, reliance on appropriate measures, for example, a simple interface with clear, straightforward instructions, is key to communicating the different functions of a product to groups with low education levels.

Only every 7th man does not have any formal education.

Only 17% dedicated farmers are aged between 16 and 24, in comparison to 26% in the overall population (Figure 6). Most dedicated farmers are between 25 and 54 years old, with an average age of slightly over 40 years. This is greater than the average age of Tanzanians of around 37.

Chart 6: Age Distribution of Dedicated Farmers



Source: FinScope Tanzania 2017

Age can often be a determinant of different lifestyle choices, financial needs, and aspirations, creating an average life cycle which FSPs can refer to when they design and market appropriate products. Knowing which age group to target helps to narrow the focus of the product design. For example, older clients may be interested in products carrying lower risk, i.e. long-term savings products or insurance, while middle-aged clients are more inclined to make significant investments in their businesses. Younger clients may be interested in short term loans as well as savings products.

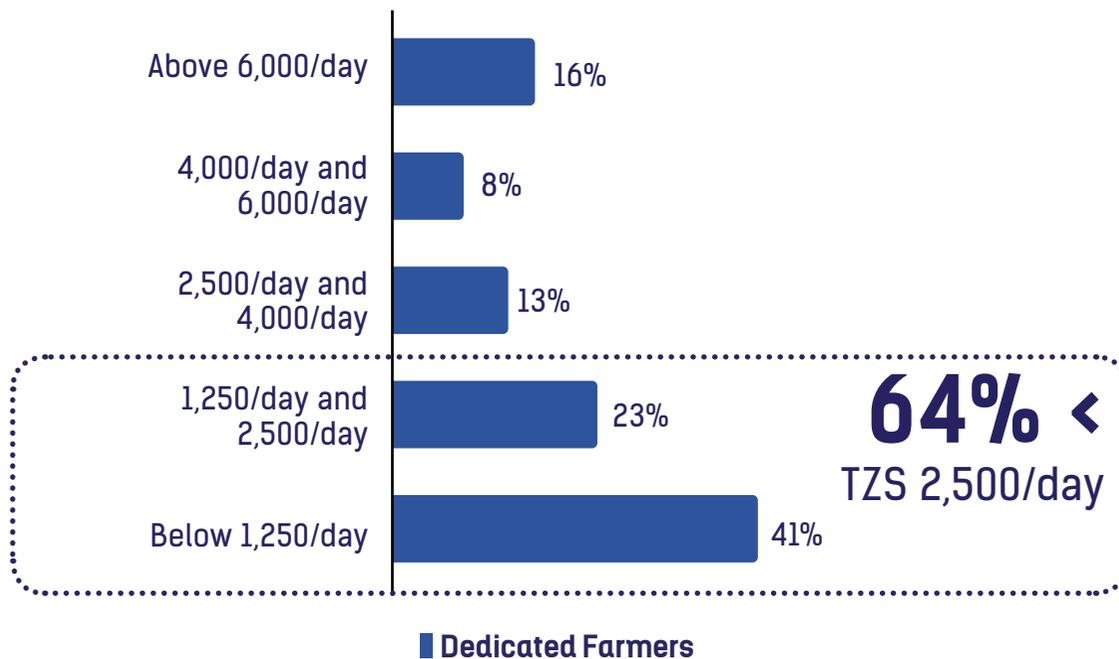
FACT 4

Dedicated farmers
earn less
than the average Tanzanian



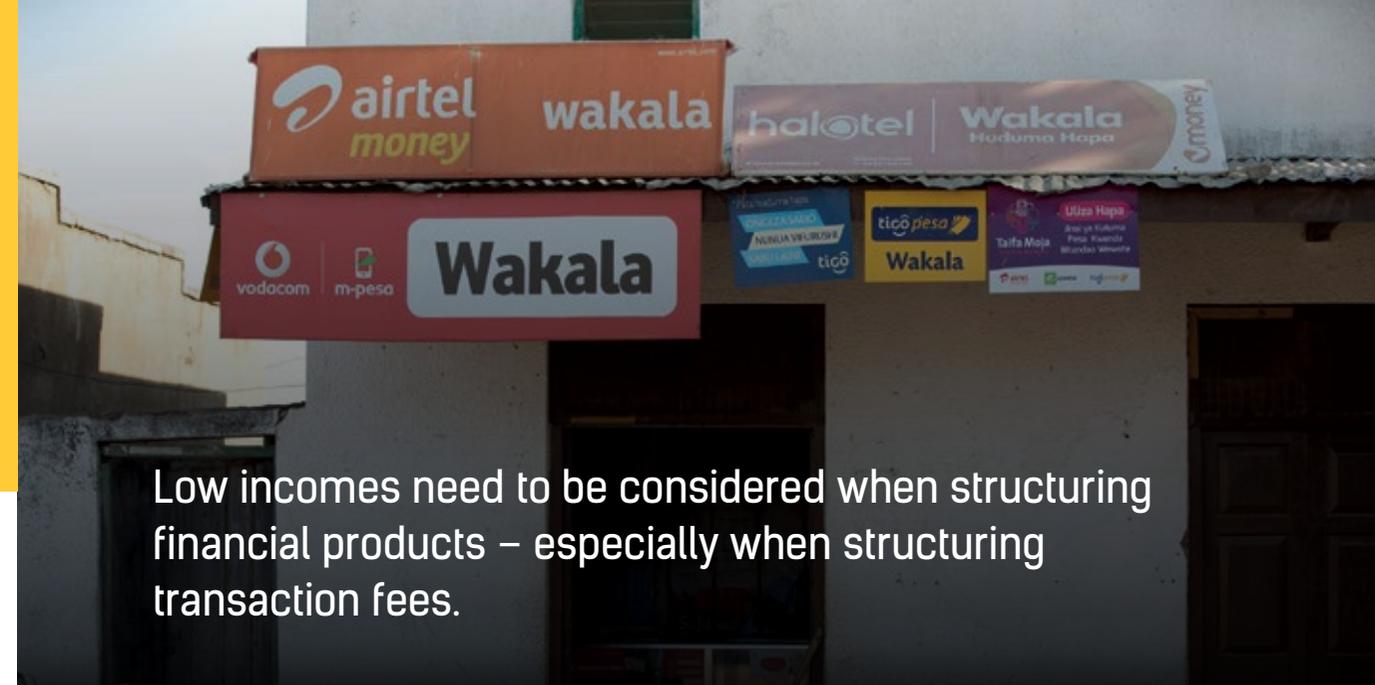
Understanding disposable income and financial pressure points can assist FSPs in determining the cost and commercial viability of their products for a particular segment. The average monthly income of dedicated farmers from sales of their produce⁵ is about TZS 135,628, which is 13% lower than the national average (median income is much lower - TZS 50,000). The average is however skewed by a small group of very successful, large-scale farmers and nearly 64% of all dedicated farmers in the country still earn less than TZS 2,500 a day (Figure 7). This finding has important implications for FSPs.

Chart 7: **Income Distribution of Dedicated Farmers**



Source: FinScope Tanzania 2017

⁵ Note that this does not include in-kind income or crops that farmers consume, but only the amount of cash income from selling agriculture produce.



Low incomes need to be considered when structuring financial products – especially when structuring transaction fees.

An inappropriate slab-based fee structure can be a significant barrier to dedicated farmers that are looking to transfer small amounts of money. Addressing this barrier however could unlock a large quantity of transactions, with the associated returns to scale. *See also Live! From the Market 1 below.*

Live! From the Market 1:

Interoperability can reduce transaction costs

Interoperability between mobile network operators such as Tigo, Airtel, Tigo, TTCL and Zantel, is one example where partnerships are aiming to increase utilisation of mobile money services by reducing transaction costs, simplifying transactions and adding speed and convenience to their customers' daily routines. A regulatory shift to reduce the barriers for similar partnerships and interoperability between FSPs and non-FSPs could lead to a national switch in the reduction of transaction costs. This would also encourage more financial innovations that offer more services to smallholder farmers at a lower cost.

FACT 5

Different segments of dedicated farmers have huge variations in their monthly incomes

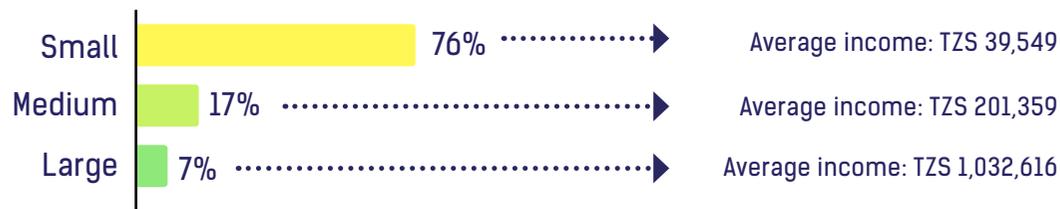


As shown above, dedicated farmers are a diverse group with varying incomes. It is important for the private sector to better understand the composition of this group. Therefore, dedicated farmers have been further segmented into small, medium, and large-scale farmers based on their monthly income.^{6, 7} More than three-quarters of the dedicated farmers in Tanzania are small-scale with an average income of TZS 39,549 per month (Figure 8). The size of these three distinct groups, as well as the average income, needs to be considered by financial service providers (FSPs) when tailoring products to the respective segments.

Medium and large-scale farmers could benefit from **long-term loans to finance inputs and investment, leasing solutions** for machinery, or digital solutions for value chain financing.



Chart 8: **Segmentation of Dedicated Farmers by Size**



Source: FinScope Tanzania 2017

While medium and large-scale farmers could benefit from long-term loans, small-scale farmers should be encouraged to engage more frequently with financial systems, hence transaction costs for small volume transactions should be revisited. Large-scale farmers, which only account for 7% of the dedicated farmers on the other hand, present an interesting target market for MSME-lending, considering that they earn more than TZS 1 million.

⁶ Ward's Linkage clustering method was used to segment the dedicated farmers into small, medium and large categories. Small farmers were defined as those with monthly income less than TZS 114,192. Medium scale farmers had monthly income more than TZS 114,192 but less than TZS 358,251, and the monthly income of large-scale farmers was more than TZS 358,251.

⁷ Income was used for segmentation since farm size does not always predict income and productivity well. Consider for example that highly productive greenhouses can generate high income and yield on a relatively small farm size.

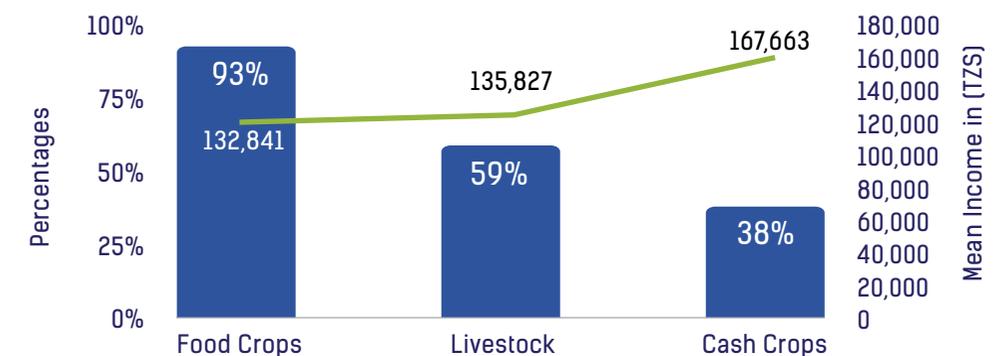
FACT 6

Farmers that grow cash crops have higher incomes



93% of the dedicated farmers in Tanzania produce food crops, 59% are engaged in livestock, and only 38% produce cash crops (Figure 9)⁸. As might be expected, average income from sales of produce⁹ is highest for farmers engaged in production of cash crops, followed by those engaged in livestock; average income is lowest for farmers producing food crops.¹⁰ The median income of farmers engaged in production of cash crops and livestock is the same, but is lower in the case of farmers engaged in food crops. The lower income of farmers producing food crops could be due to farmers consuming part of their own produce. While this lowers the output available for sale in the market, it also reduces the amount of food they need to purchase from the market.

Chart 9a: **Percentage of Farmers Engaging in Different Livelihoods and Average Monthly Incomes**



■ Percentage All Dedicated Farmers — Mean Income All Dedicated Farmers

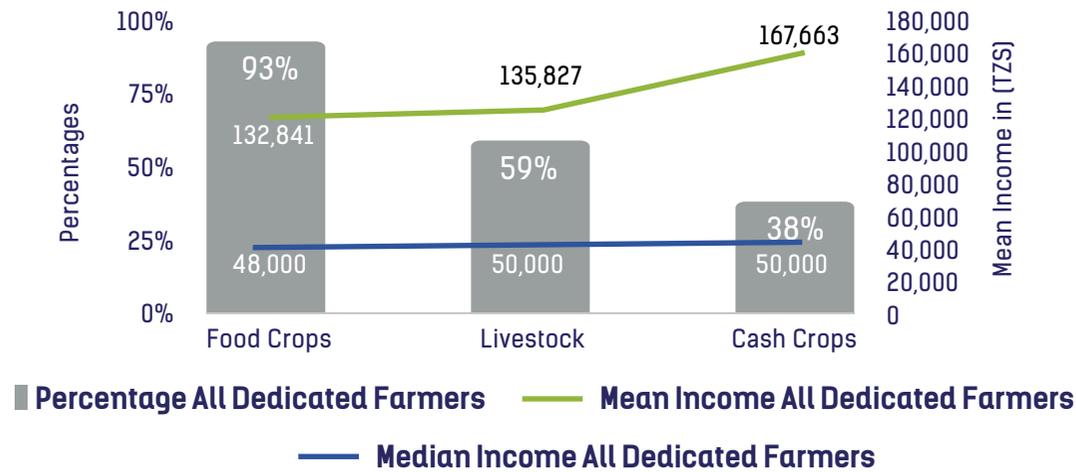
Source: FinScope Tanzania 2017

⁸ Food crops include food crops and vegetables, cash crops include cash crops, beekeeping, and fruit and livestock include cattle, goats, fishing and other livestock.

⁹ Note that this does not include in-kind income or crops that farmers consume, but only the amount of cash income from selling agriculture produce.

¹⁰ In order to obtain average monthly income, 11 farmers who earn more than TZS 25,000,000 per month were removed as outliers

Chart 9b: **Dedicated farmers involved in farming activities and average income of subgroups**



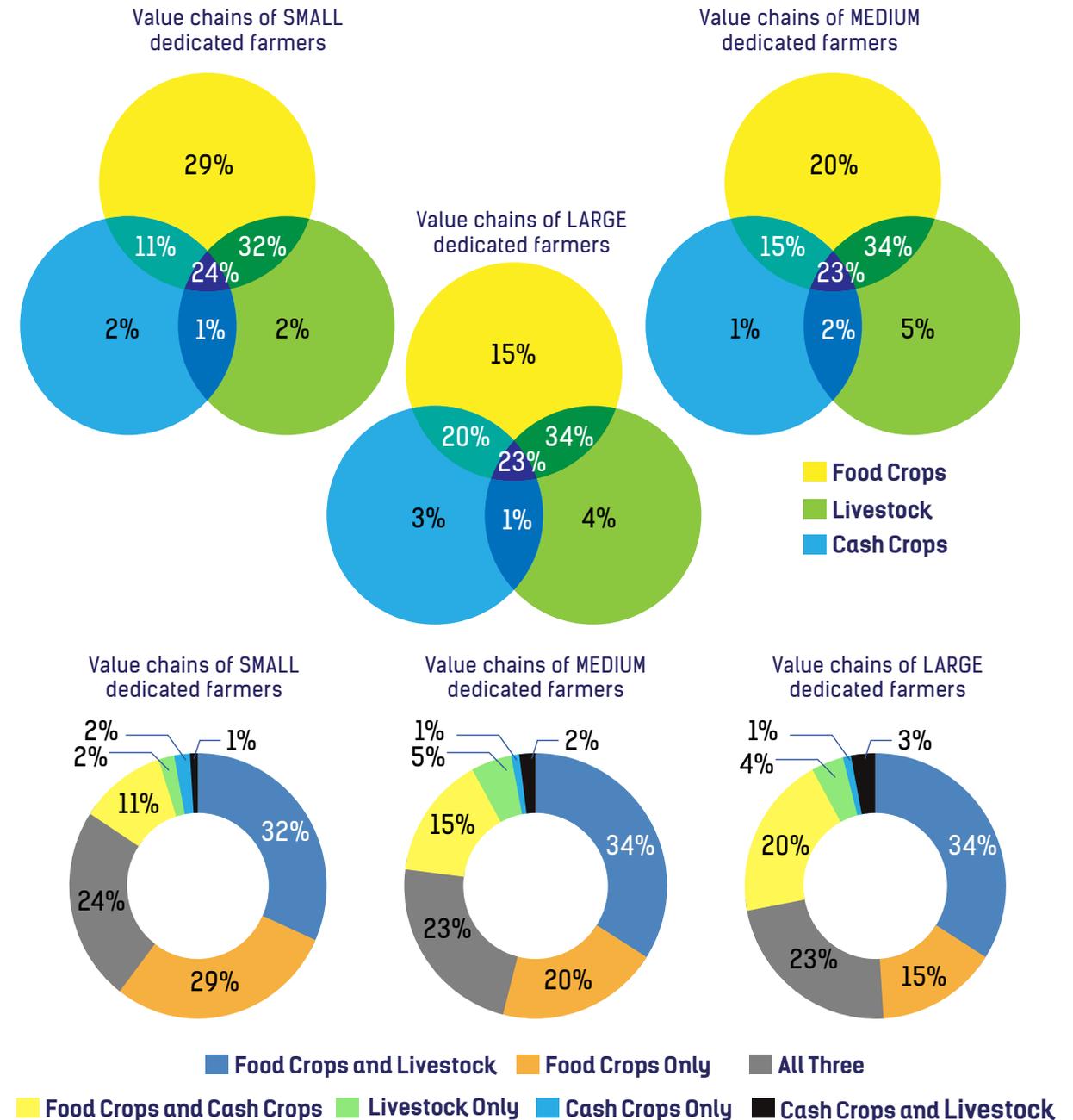
Source: FinScope Tanzania 2017

FACT 7

Small-scale farmers focus more on **food crops** while **medium and large-scale farmers** focus more on **cash crops**

The correlation between income and cash crops can also be seen in the case of small, medium and large-scale farmers. The percentage of farmers engaged in only food crops is highest among small-scale farmers, followed by medium-scale farmers; it is the lowest among large-scale farmers (Figure 10). The opposite is observed in the case of percentage of farmers engaged in both food and cash crops – it is highest among large-scale farmers, followed by medium and small-scale farmers. As the income of farmers increases, the focus shifts from only food crops to both food and cash crops. Access to financial services for small-scale dedicated farmers could, for example, enable them to shift from production of only food crops to include cash crops, which would eventually translate to higher income, liquidity and likelihood of repayment.

Chart 10: **Percentage of Small, Medium and Large-Scale Dedicated Farmers Engaging in Different Livelihoods**



Source: FinScope Tanzania 2017

Tailor repayment terms to the agricultural cycle of specific crops to **mirror the cash flow periods of farmers** and **increase the likelihood of repayment**

FACT 8

Land size, additional labour on-farm and overall productivity varies for small, medium and large-scale farmers

Small, medium, and large-scale farmers also differ in terms of their available land size (Figure 11) and additional labour engaged by them for farming activities (Figure 12) which are key factors in determining efficiency and scale, and potential growth of an agri-business.

Chart 11: **Average Land Size by Type of Farmer (by acre)**

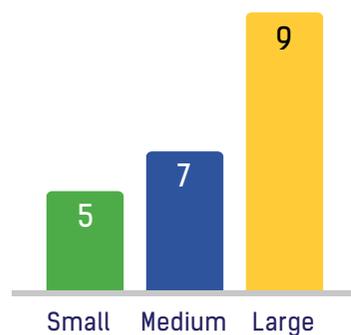
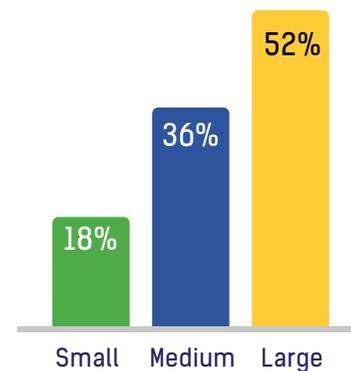


Chart 12: **Percentage of Farmers who Hire Additional Labour for Farming Activities by Size of the Farmer**



Source: FinScope Tanzania 2017

Medium-scale farmers make 5 times more money than small-scale farmers but **only use 25% more land**

Hence, land size is not always the barrier to improved livelihoods. Greenhouses, for example, offer higher efficiency and can be operational on land sizes available even to small or medium sized farms.

It would be important to conduct further research to understand the source of the difference in productivity between small, medium and large-scale farmers so that tailored products can be developed to address these factors and align credit scoring. One factor could be the level of mechanisation and application of modern technologies, demand for which could be addressed through leasing products.

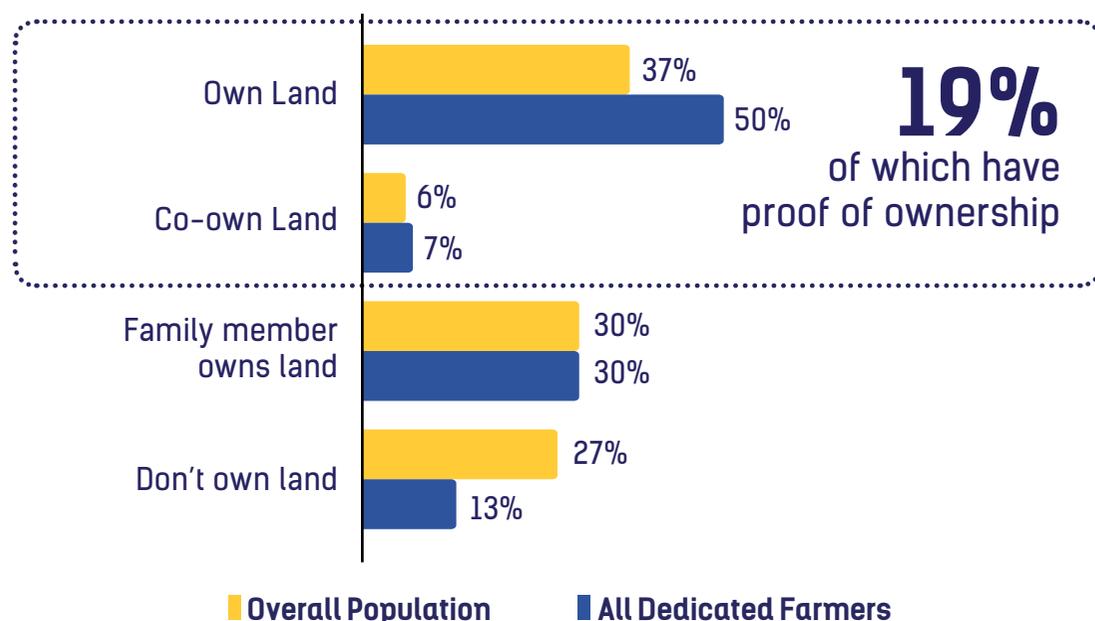
Live! From the Market 2:

EFTA Ltd (a subsidiary of Equity for Africa) is a Tanzanian finance company which specialises in serving SMEs and farmers. They are successfully offering agricultural leasing solutions for dedicated farmers, namely equipment loans of up to USD 60,000 (TZS 137 million), with no collateral except for the equipment itself. This zero-collateral requirement addresses one of the key constraints on small enterprise borrowing levels and enables customers to pursue more ambitious growth plans. The overall size of this market segment implies there is potential for larger companies as well.

Stanbic Bank Tanzania offers leasing solutions in other African markets. For example, in Nigeria, the bank has developed a value chain financing model called “the smallholder farmer finance scheme” to provide smallholder producers with access to finance for improving the volume and quality of their production. This model takes an innovative approach in identifying key stakeholders along the value chain and brokering agreements. This has resulted in a guaranteed minimum price for smallholder outputs and access to quality agricultural input service providers. It also mitigates some of the risk involved in lending to individuals, by lending to cooperatives instead and paying agricultural suppliers directly for their services rather than providing cash loans.

See also *Live! From the Market 3* below for a discussion of alternative approaches to credit scoring.

Chart 13: Percentage of Farmers that Own Land



Source: FinScope Tanzania 2017

Live! From the Market 3:

Collateral-based loans and creditworthiness

In designing loan products which require securities, FSPs may need to look at alternative risk management mechanisms, aside from traditional land collateral-based loans, given that the majority of farmers may be otherwise excluded from accessing such products.

For example, L-Pesa in Tanzania uses a customer's repayment track record to evaluate credit-worthiness, while Tala Mobile uses phone data, mainly based on data on routine habits. The use of such big data analytics is critical in reducing the associated costs of credit screening.

Credit Reference Bureaux may also need to consider a nuanced approach to credit scoring in order to support new farmers accessing formal finance.

SECTION 2: ADDRESSABILITY

Dedicated farmers in Tanzania have reached a basic level of addressability, meaning that most of them fulfill the basic conditions for accessing formal financial services. These requirements are here defined as:

- Proof of identification;
- Literacy and numeracy skills;
- Mobile phone ownership; and
- Proximity to a financial access point

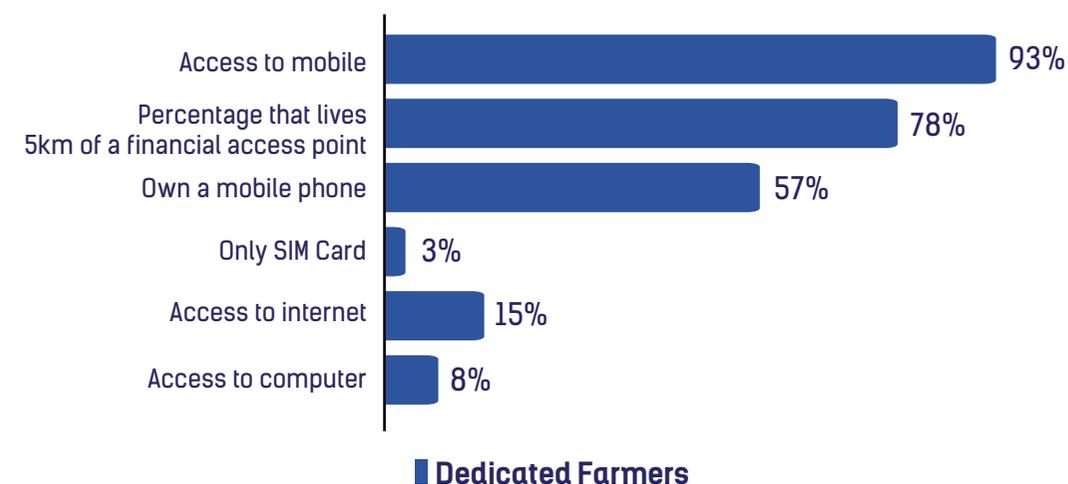
FACT 1

78% of dedicated farmers are within 5KM of financial access point



Proximity is not necessarily the problem. Nearly 8 in every 10 dedicated farmers live in close proximity to a financial access point and over 90% have access to a mobile phone (Figure 14). More than half of these farmers (across Tanzania and in the SAGCOT region) own mobile phones.

Chart 14: Dedicated Farmers with Access to Digital Technology and Financial Access Points



Source: FinScope Tanzania 2017

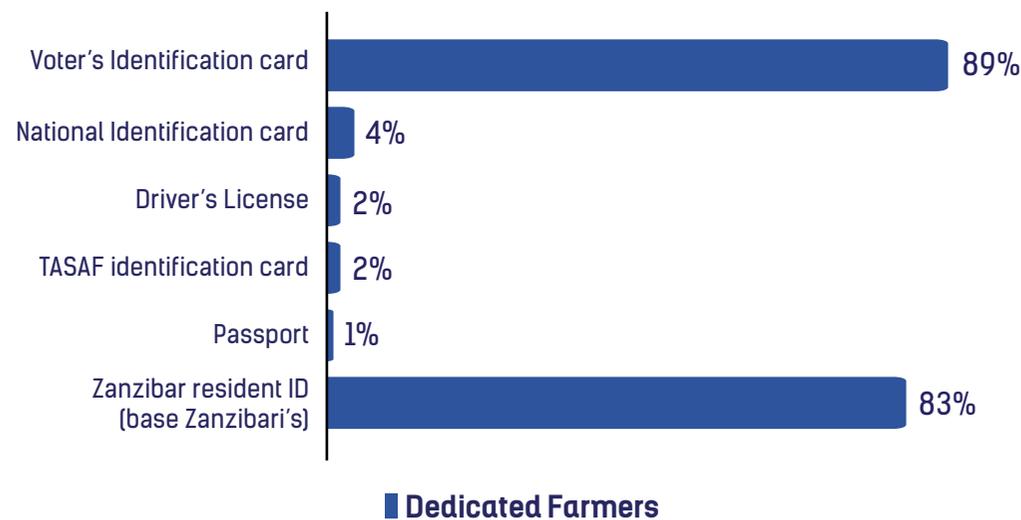
FACT 2

KYC requirements
are not a challenge
for dedicated farmers



Nearly 89% of dedicated farmers have a proof of identification (Figure 15). As a result, availability of documents required for Know-Your-Customer (KYC) requirements will not be a barrier to providing them with access to financial services.

Chart 15: **Identification Documents Ownership Among Dedicated Farmers**



Source: FinScope Tanzania 2017

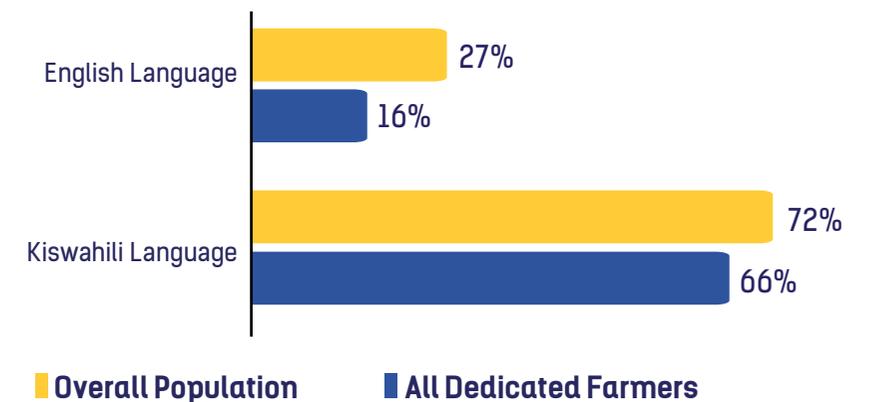
FACT 3

Dedicated farmers have
basic
literacy and numeracy skills



The proportion of dedicated farmers that can read and write in Kiswahili is high, 66% versus a national average of 72% (Figure 16). While about 1 in 5 average Tanzanians can speak and write in English, only about 1 in 7 dedicated farmers can do so. Ensuring that clients understand the product is essential for uptake and responsible usage. Using Kiswahili in this instance for product marketing and design will support uptake. See also Live! From the Market 4 below.

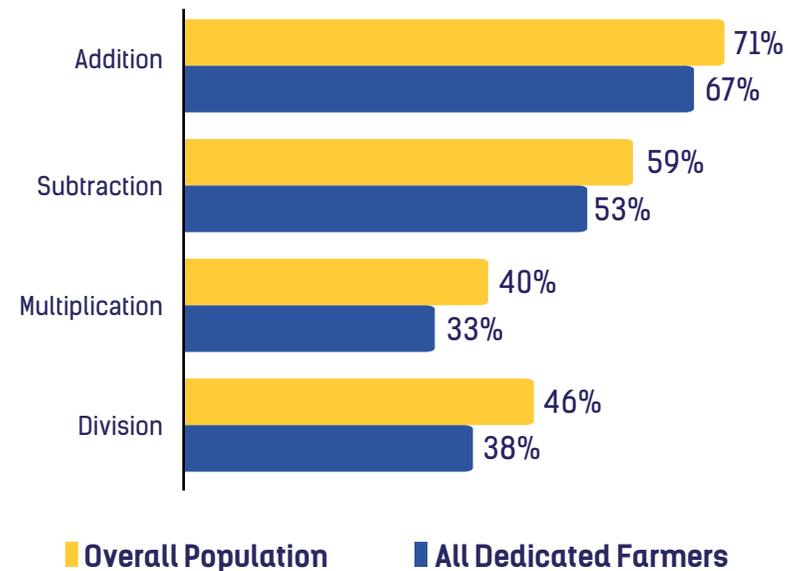
Chart 16: **Ability to Read and Write**



Source: FinScope Tanzania 2017

In terms of numeracy, the performance of dedicated farmers is close to that of the average Tanzanian with respect to addition and subtraction exercises. While 7 out of 10 dedicated farmers can solve basic addition tasks, only half of the dedicated farmers can solve basic subtraction tasks (Figure 17). Multiplication and division tasks can only be solved by 3-4 out of 10 farmers. With lower multiplication and division skills, it is however, unlikely that dedicated farmers have a good understanding of concepts like percentages or interest rates.

Chart 17: **Percentage of Farmers who Responded Correctly in the Numeracy Test**



Source: FinScope Tanzania 2017

Live! From the Market 4:

Communication is key

Stanbic Bank Tanzania has recently offered a Swahili language option on their Biashara Direct product for SMEs, allowing their clients to transact in their preferred language and through a mobile phone, making it accessible to a bigger population.

The Biashara Direct product also offers SME clients the opportunity to call or email a team of dedicated business bankers for any business needs including advice on suitable banking products and informed conversations around their business.

While focusing on the language to use for products, use of terminologies also needs to be considered. A report prepared for the Mastercard Foundation in 2017 highlighted the challenges farmers face in comprehending terms such as “interest” and “percentages”, which are standard in many product descriptions. Rather they prefer using fixed monetary amounts. This study also highlighted how even more educated clients sometimes struggle to understand financial products, and a lack of consistency across institutions makes it even harder to compare products.

Simplify communication and marketing strategies for a customer group that only **has basic literacy and numeracy skills**

For example, when communicating features of loan products, it is important to simplify the language around repayment rates and use the precise amounts as opposed to interest rates and percentages. See also Live! From the Market 4 below.

Income streams can be predicted according to the agricultural cycle and thus incorporated into product design

SECTION 3: FINANCIAL BEHAVIOUR

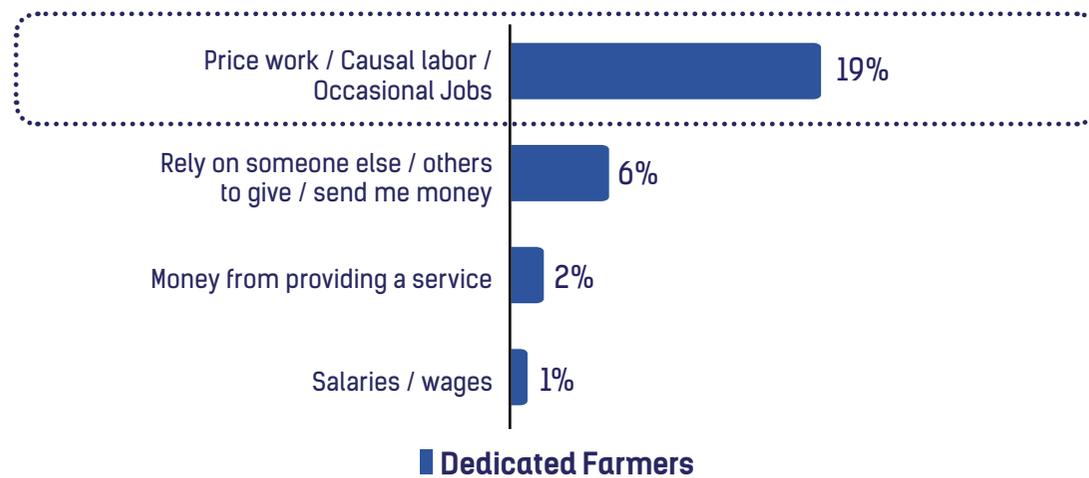
This section draws key insights related to financial behaviour of dedicated farmers in Tanzania. It is crucial to take the financial behaviour of dedicated farmers into account when designing financial products, as they are part of the essence to defining use cases.

FACT 1

Dedicated farmers supplement income through occasional jobs

In addition to income from selling their produce, a fifth of dedicated farmers receive income from casual labour/ occasional jobs (Figure 20). This additional source of income should be considered by FSPs when they assess the capacity of farmers to save or repay loans.

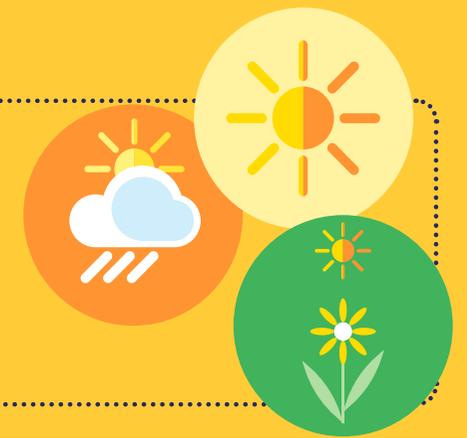
Figure 20: **Additional Income Sources of Dedicated Farmers**



Source: FinScope Tanzania 2017

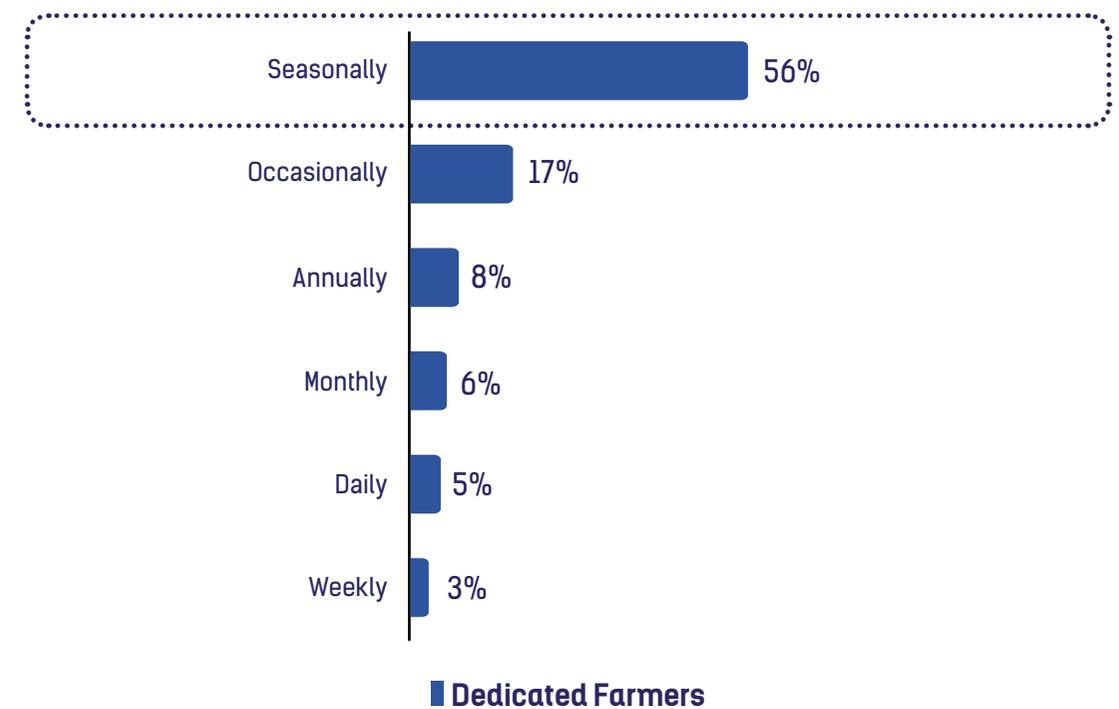
FACT 2

Income is mostly **seasonal** and comes in **tranches**



Almost 60% of dedicated farmers in Tanzania receive their income seasonally (Figure 21). Given this irregular flow of income, financial services – particularly the ability to flexibly save post-harvest and borrow pre-planting – presents a significant use case for dedicated farmers.

Figure 21: **Frequency of Receiving Agricultural Income by Dedicated Farmers**



Source: FinScope Tanzania 2017

Income streams can be predicted according to the agricultural cycle and thus incorporated into product design

FACT 3

Despite growing uptake, cash remains king



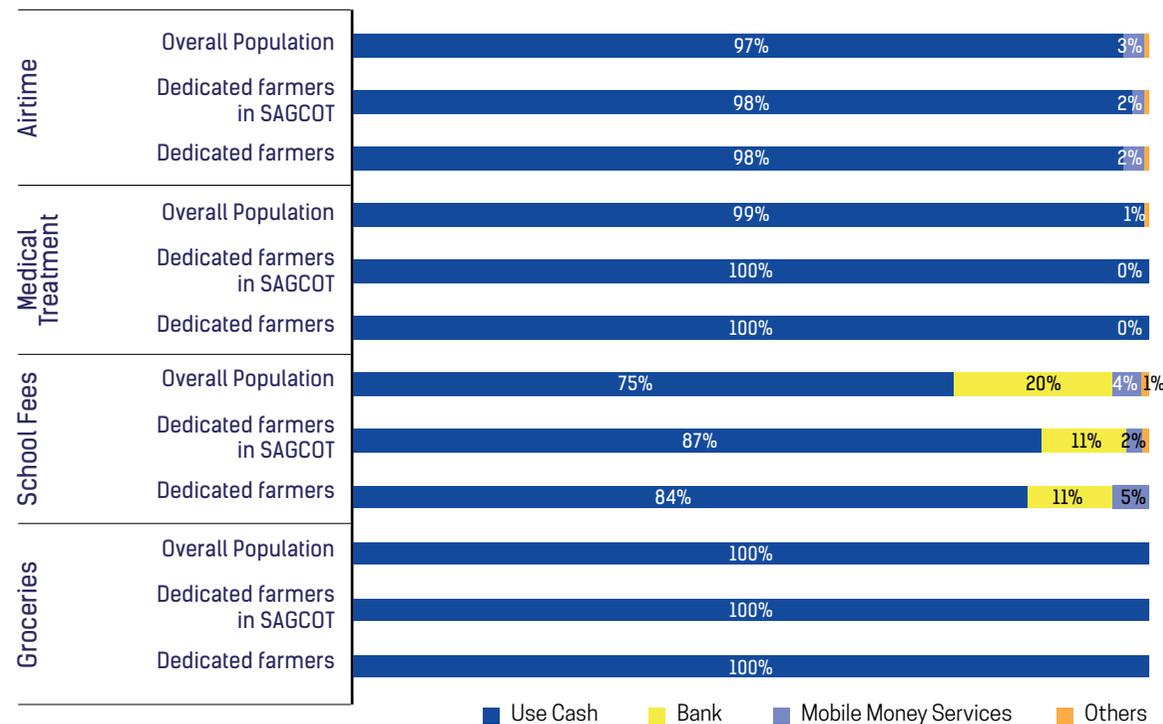
Presently, almost all income payments to and from farmers (groceries, school fees, medical treatment, and airtime) are made in cash (Figures 22 and 23). Significant sums of money therefore still circulate outside the formal financial system.

Figure 22: How Do Dedicated Farmers Receive Income



■ Dedicated Farmers
Source: FinScope Tanzania 2017

Figure 23: How Do Dedicated Farmers Pay for Groceries, School Fees, Medical Treatment, and Airtime



Source: FinScope Tanzania 2017

Reliance by dedicated farmers on informal channels like family and friends to meet their financial needs and the extensive use of cash for transactions, limits their ability to build a credit history which can help them apply for formal credit in the future. For example, mobile money transactions help to build a credit history, which in turn can help to apply for loans in the future. Improving communicating of this link to farmers could encourage them to transact more frequently. Promoting the advantages of a digital footprint can be particularly attractive when cross-selling transaction products and loan products. Another opportunity would be to offer digitised transactions related to livestock investments, as these form a large part of dedicated farmers' investments (see Figure 26 and 27).

FSPs that use digital delivery channels and products are in a good position to do this as they reach new markets at lower cost. Partnerships with market counter parties (agri-business, commercial farms, etc) who already engage with this customer segment could however speed-up the on-boarding process.

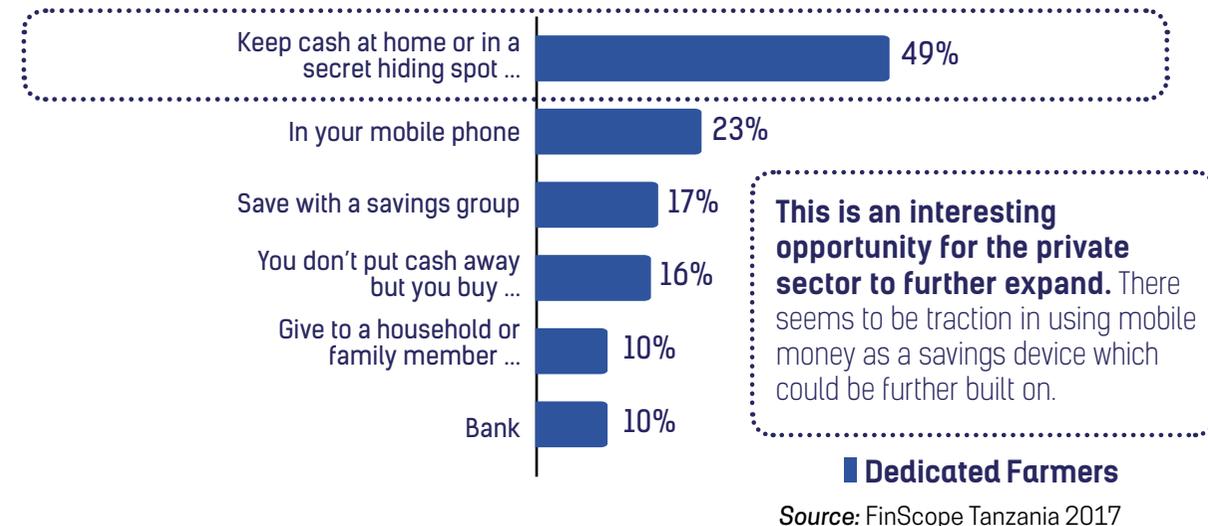
FACT 4

Using mobile money is becoming a viable alternative to saving at home, with **2 out of 10** dedicated farmers who save already using their e-wallet



Only 47% dedicated farmers in Tanzania save money. Nearly half of them keep the saved money as cash at home or in a hiding place (Figure 24).

Figure 24: Savings Channels Used by Dedicated Farmers Who Save



This is an interesting opportunity for the private sector to further expand. There seems to be traction in using mobile money as a savings device which could be further built on.

■ Dedicated Farmers
Source: FinScope Tanzania 2017

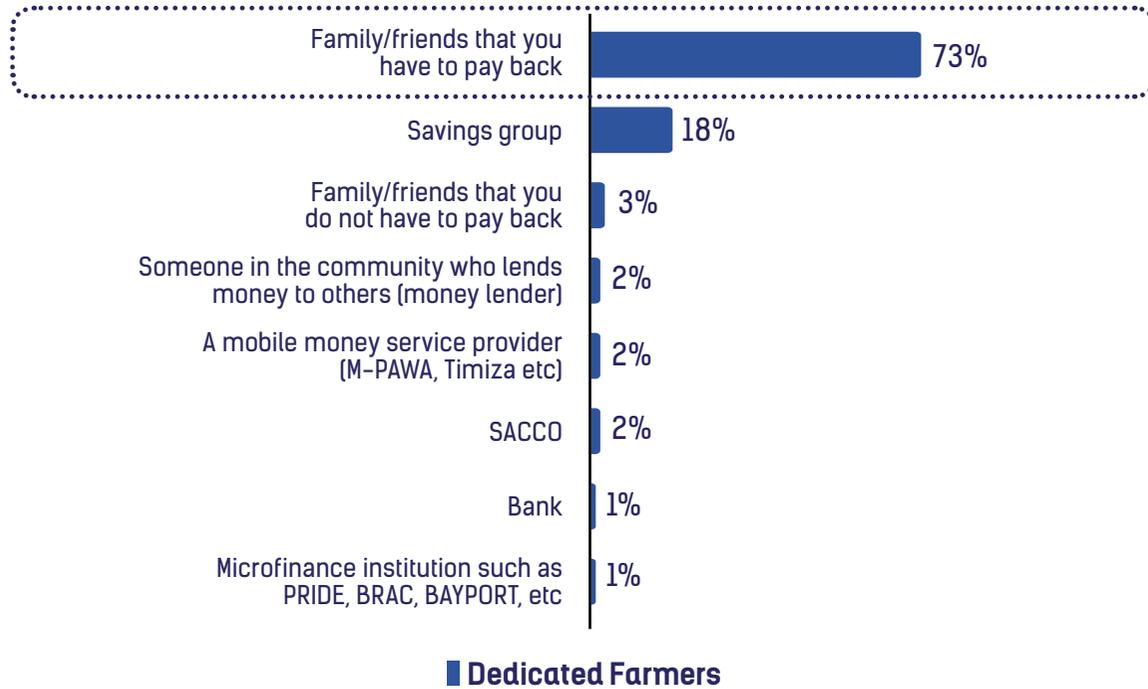
FACT 5

More than 7 out of 10

such dedicated farmers borrow from family and friends, with the only alternative being savings groups



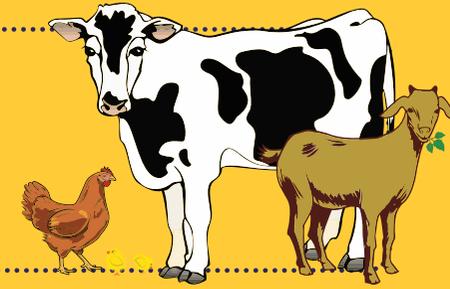
Chart 25: **Borrowing Channels Used by Dedicated Farmers Who Borrow**



Source: FinScope Tanzania 2017

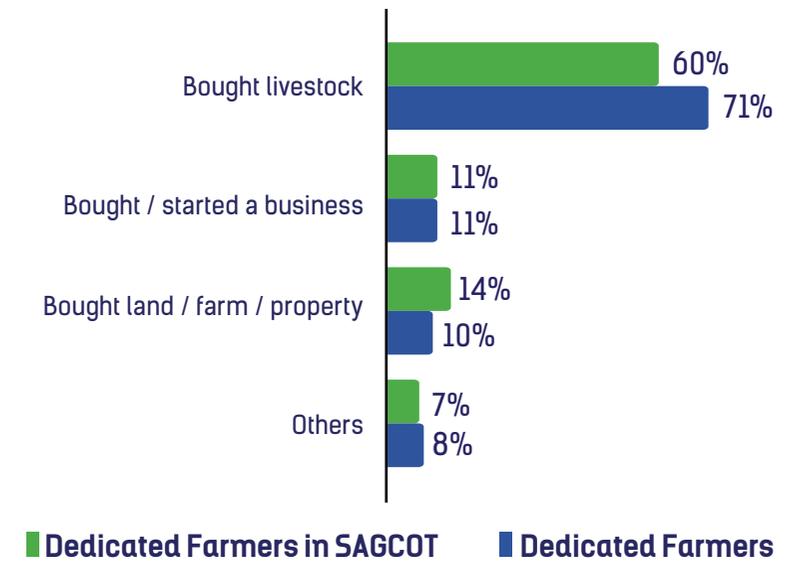
FACT 6

Dedicated farmers prefer investment in assets (livestock) to formalised savings



One third of the dedicated farmers bought assets in the last 12 months with the aim of selling these for profit in the future. Of these farmers, 71% bought livestock (Figure 26).

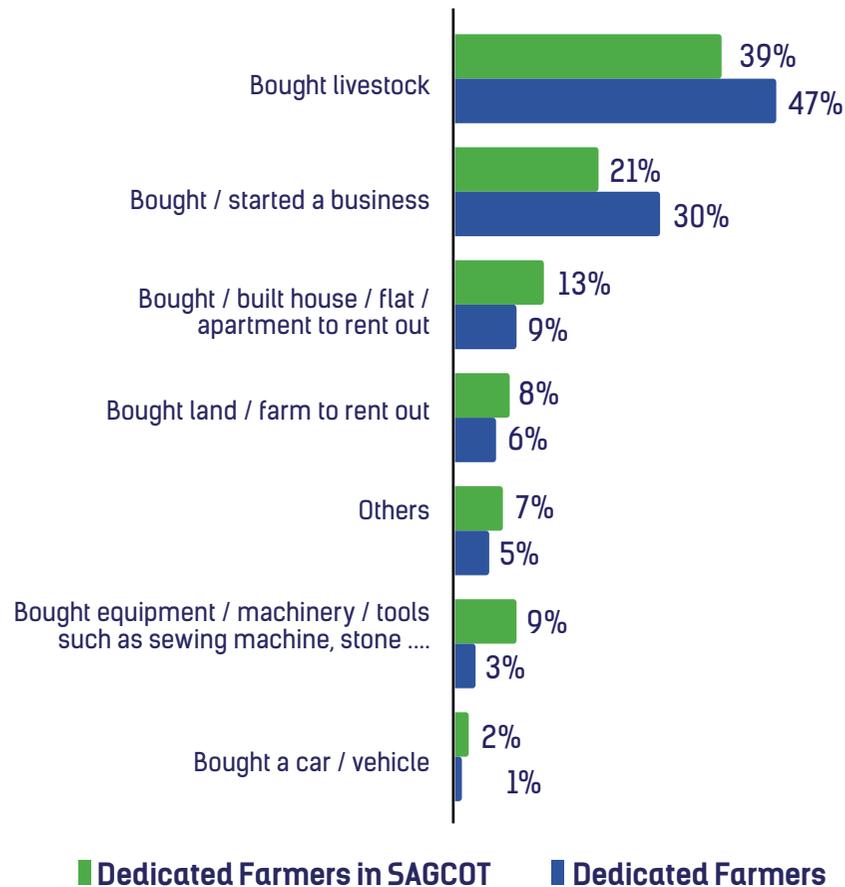
Chart 26: **What Was the Last Thing Dedicated Farmers Bought/ Built/ Started to Sell for a Profit in the Future**



Source: FinScope Tanzania 2017

A fifth of dedicated farmers invested in assets to increase their productivity, and thereby their future income. Of these, nearly 50% bought livestock for this purpose (Figure 27).

Chart 27: **What Was the Last Thing Dedicated Farmers Bought/ Built/ Started to Earn Income in the Future**



Source: FinScope Tanzania 2017

This suggests that tying-up capital by investing in livestock and selling this for a higher price in the future is still a preferred way of saving for dedicated farmers. The returns, if perceived or real, seem to outweigh the benefits of formal savings products that are at their disposal. As such, this is attractive financial behaviour, as it implies calculated investments in long-term assets (livestock).

Farmers prefer investments in livestock to formal savings since returns are higher and they bear a social value

Changing this behaviour is challenging and instead FSPs should look to innovative products that mimic the features of farmers' current investments. This is done, for example, by the chicken coin or Kuku coin; a financial product that offers similar benefits to an investment in a chicken. The product speaks to farmers both in terms of communication approach and product design – not asking farmers to drastically change their behaviour. This has the potential to increase uptake and usage.

Complement current behaviours instead of re-engineering

Farmers invest in livestock to protect themselves from economic shocks in the future. Here FSPs could offer different types of insurance, including that for livestock, to de-risk dedicated farmers' main assets (see also Live! From the Market 5 below).

Live! From the Market 5:

Insurance for livestock

In 2010, The International Livestock Research Institute (ILRI) formulated and piloted the Index-Based Livestock Insurance (IBLI), to protect livestock keepers from drought related asset losses, specifically Kenyan and Ethiopian pastoralists in Arid and Semi-Arid Lands (ASALs). IBLI uses a combination of satellite observations of forage conditions with longitudinal livestock mortality rates to calculate clients' seasonal pay outs. Over the last 8 years IBLI has been scaled up through partnerships with insurance partners, NGOs, the Government of Kenya and other donors. It has also adapted its offering in response to demand, including a sharia-compliant IBLI product in 2013.

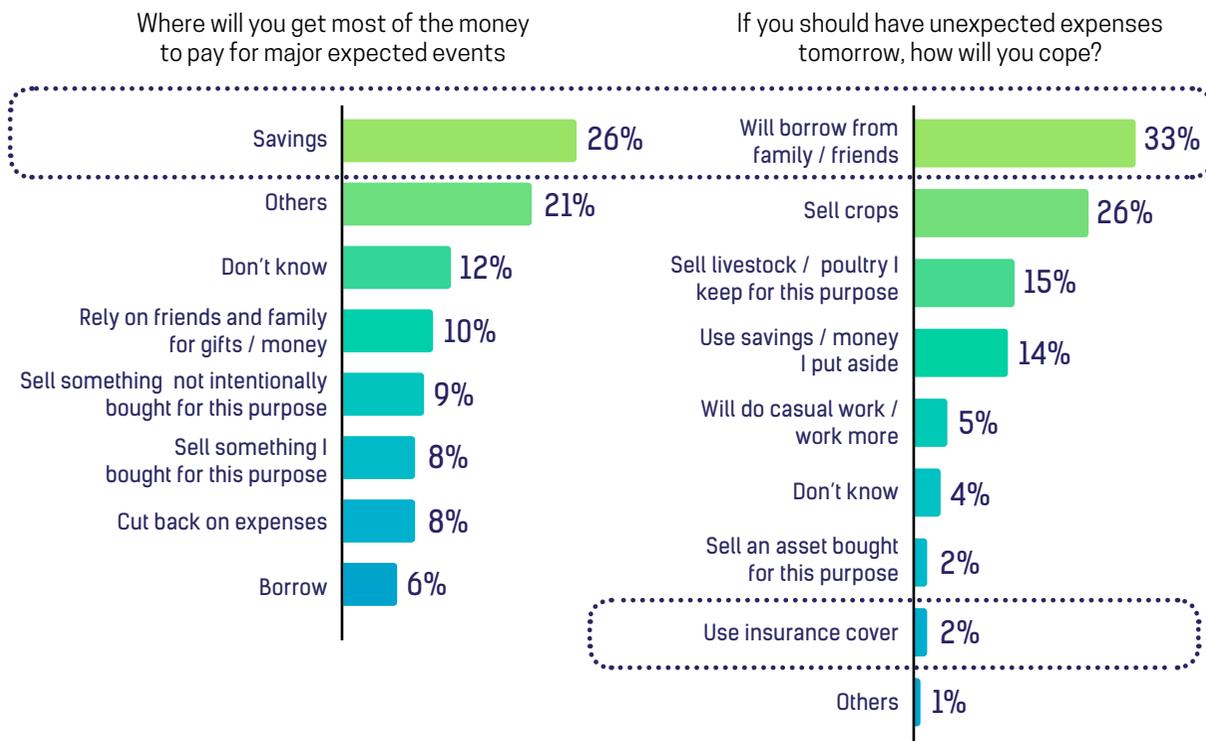
Part of the success may be attributed to ILRI's emphasis on continuous learning and in creating "informed demand". Building capacity in its Market and Capacity Development Team to implement trainings and design capacity building activities that are appropriate to the needs of pastoralists, helps to improve understanding about IBLI and insurance, resulting in sustainable and positive demand for IBLI in pastoral areas.

FACT 7

Reliance on borrowings from friends and relatives by farmers to pay for unexpected expenses highlights the need for insurance cover for the farmers

While savings are the most commonly relied on source for dedicated farmers to pay for major expected events (such as marriage or birth), to pay for unexpected expenses (such as droughts or death of family members), farmers mostly rely on borrowings from friends and relatives (Figure 28). Only 2% of dedicated farmers use insurance cover to pay for unexpected events. This seems at odds with the relatively high number of dedicated farmers who invest in long term assets, implying a potential market opportunity for FSPs, especially if premiums can be paid in small, regular amounts or in one larger installment just after harvest (as opposed to during planting).

Chart 28: **Source for Dedicated Farmers to Pay for Expected and Unexpected Expenses**



Source: FinScope Tanzania 2017

FSPs can develop this market potential by developing insurance products for them based on a deep understanding of their specific requirements. Live! From the Market 6 below discusses a case study in more detail.

Live! From the Market 6:

Opportunities for rolling-out insurance products

Insurance penetration in lower income markets can be sluggish for two main reasons. The first is low demand for insurance due to limited understanding by potential customers on insurance concepts as well as negative perceptions and attitudes towards insurance. The second includes limited capacity by providers to provide adequate distribution channels, skilled insurance personnel and product offerings.

Multi-stakeholder partnerships are emerging to address these challenges. ACRE Africa, (Agriculture and Climate Risk Enterprise Ltd), links farmers to insurance products so that they can confidently invest in their farms. By 2017, over 1,000,000 farmers in Kenya, Tanzania and Rwanda insured over USD 75 million against a variety of weather risks underwritten by UAP Insurance Kenya, CIC Insurance Group Limited, APA Insurance, Heritage Insurance, UAP Insurance Tanzania and SORAS Insurance Rwanda. The insurance was distributed through four main channels: seed distribution linked to a mobile network operators location service, agribusinesses with out-growers or contracted farmers, lending institutions and savings and credit cooperatives (SACCOs) providing input loans and medium-scale professional farmers.

FACT 8

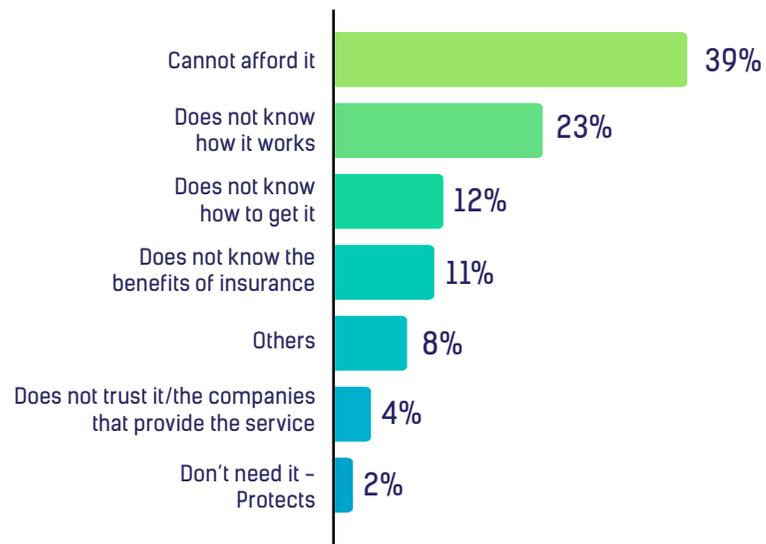
Some take-up of **health insurance** by **wealthier farmers** but **no agri-insurance** registered



While some dedicated farmers take up health insurance products, they are mostly wealthier, urban and highly educated.

Value propositions for Insurance need to be directly matched to farmer's needs

Chart 29: **Main Reason for Dedicated Farmers Not Having Health Insurance**



Source: FinScope Tanzania 2017

This presents an opportunity for the market players to tap into a market segment that has a great need for insurance products and of which a larger part is already connected through digital services such as mobile money. There is also a market opportunity in supporting farmers to save for anticipated expenses and events, ideally through a flexible facility considering the income profiles of these farmers.

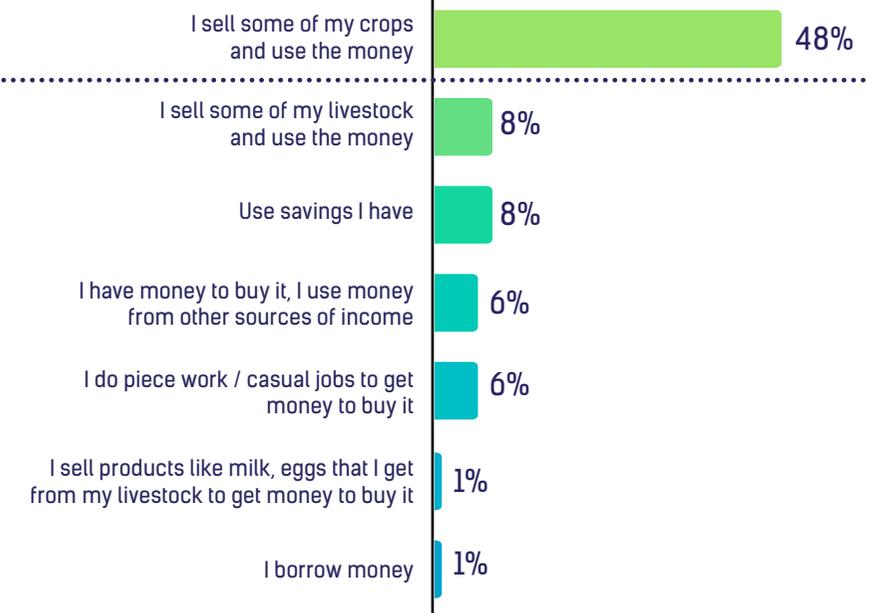
Input finance is mainly financed sporadically through selling crops or livestock, not through formal services, although potential productivity gains are large.

FACT 9

Despite the growth in financial inclusion, **very few farmers use formal financial services** to finance farming inputs

Informal mechanisms and cash savings are also uncommon sources of funds. Instead, dedicated farmers mostly liquidate savings in the form of crops or livestock to finance seeds or fertilizers, leaving them vulnerable to fluctuating returns (Figure 30). Only 8% use savings and only 1% take out a loan.

Chart 30: **Sources for Financing Farming Inputs**



Source: FinScope Tanzania 2017

This creates an opportunity for innovative products financing agricultural inputs, especially for dedicated farmers that already use mobile money. While the roll-out of a new product can present challenges, there are many ways to leverage existing structures. See also Live! From the Market 7 below for an example of how existing linkages can be used to reach dedicated farmers in Tanzania.

Live! From the Market 7:

Product roll-out through Agricultural Marketing Cooperative Society (AMCOS) and the warehouse receipt system

FSDT designed an intervention to improve livelihoods of the rural poor through an innovative linkage model and product design. AMCOS, a key institution in the linkage model, helps farmers with marketing and selling through the warehouse receipt system (WRS). Working with FSPs, FSDT encouraged the design of three solutions including a health insurance solution for farmers and their households with the National Health Insurance Fund (NHIF); an alternative savings and investment solution with a pension company; and a payment solution for farmers with Tigo, initially targeting cashew nut farmers. The health solution which is being rolled out this year is designed to cover healthcare expenses in order to allow for households to take advantage of various forms of long term savings options and investment opportunities. The Tigo solution saw a huge demand from farmers with over TZS 1.9 billion distributed in just a few months and is projected to reach over 200,000 farmers in 2018.

Digitising different components of key value chains can thus have positive spill-over effects, impacting the success of other products.

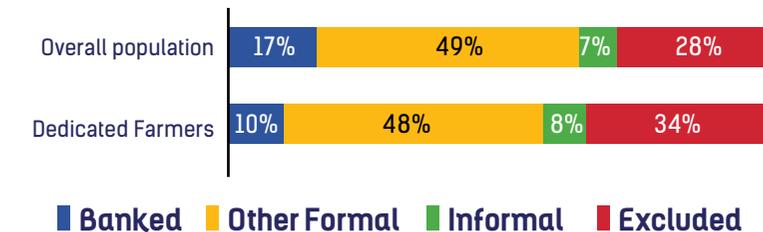
SECTION 4: FINANCIAL INCLUSION (UPTAKE AND USAGE)

This section assesses how dedicated farmers fare in terms of financial inclusion with specific focus on the extent of their uptake and usage of financial services. Based on an understanding of factors hindering adoption and use of financial services by dedicated farmers, appropriate measures can be undertaken by FSPs to overcome these issues.

Tanzania has been a success story in terms of financial service uptake over the last decade. Uptake has been increasing, drive by the expansion of mobile money services, and financial access points have been rolled-out even to more remote rural areas. This is also reflected in uptake rates of dedicated farmers.



Chart 31: **Financial Inclusion of Dedicated farmers Compared to the Average Tanzanian**



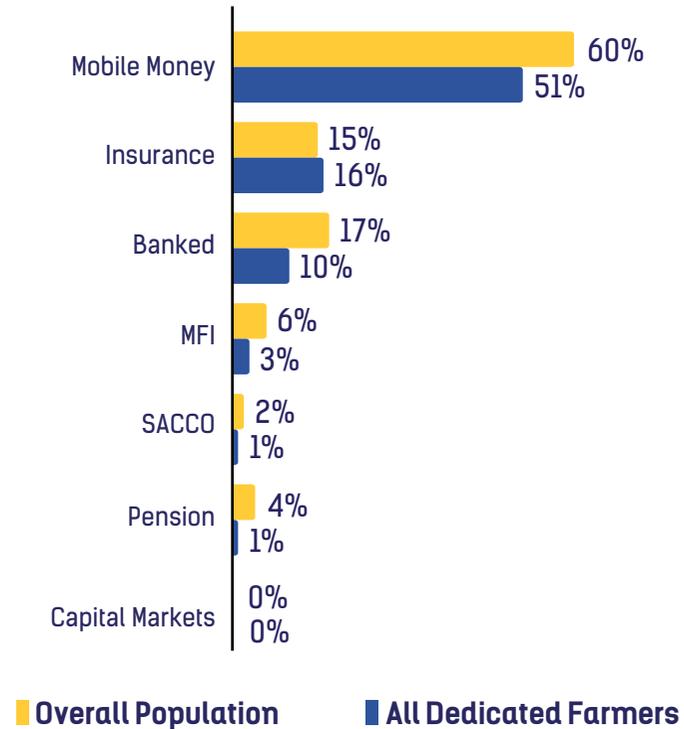
Chanzo: FinScope Tanzania 2017

FACT 2

About half (51%) of dedicated farmers have taken up mobile money



Chart 32: Uptake of Different Types of Formal Financial Services



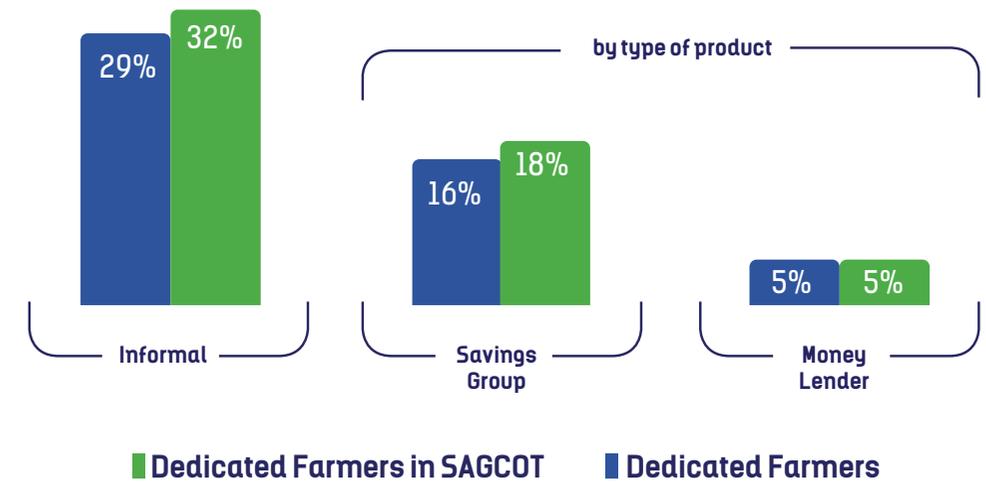
Source: FinScope Tanzania 2017

This offers an opportunity for the market to engage more with dedicated farmers as a large share of them are already digitally connected, paving the way to roll-out additional products or further deepening the usage of existing products through new features.

FACT 3

SAGCOT dedicated farmers use informal services slightly more often than dedicated farmers in other regions

Chart 33: Uptake of Different Types of Formal Financial Services



Source: FinScope Tanzania 2017

This could present an interesting opportunity to link informal to formal financial services. Please see Live! From the Market 8 below for more details on this opportunity. Of the farmers that have a high Addressability Index score, 69% are already using mobile

Live! From the Market 8:

Use case for including savings groups – moving from informal to formal

Savings groups are a proven pathway to formal financial inclusion. CARE International's work with partners including Maendeleo, Barclays, National Microfinance Bank (NMB) Tanzania, Equity Bank and many others have helped 1.3 million members open their first bank accounts, leading to financial as well as non-financial gains, such as increased women's control over resources. In Tanzania, CARE worked with Barclays and NMB bank to design group savings products as a first step for bringing savings group members into the formal financial sector. This suited the needs of groups who had concerns over the security of their savings. Business skills training and further financial education was delivered to members in order to improve management and increase investment in their businesses. With this training, members could then make informed decisions about other formal products that would suit their needs.

However, there are still challenges around distance to FSPs. With the support and guidance of the Financial Sector Deepening Trust (FSDT), the Aga Khan Foundation (AKF), Selcom and BFA are working together to leapfrog the 'savings group linkage' models and fully digitise savings groups. Savings group transactions include a variety of use cases: paying in, sharing out, checking balances, keeping track of loans, and getting paid out on a loan. By digitising these transactions, members have the opportunity to familiarise themselves with digital financial services within a safe environment. It also offers the ability to capture data that would generate a credit score which could eventually be shared with FSPs to enable access to a variety of formal services.

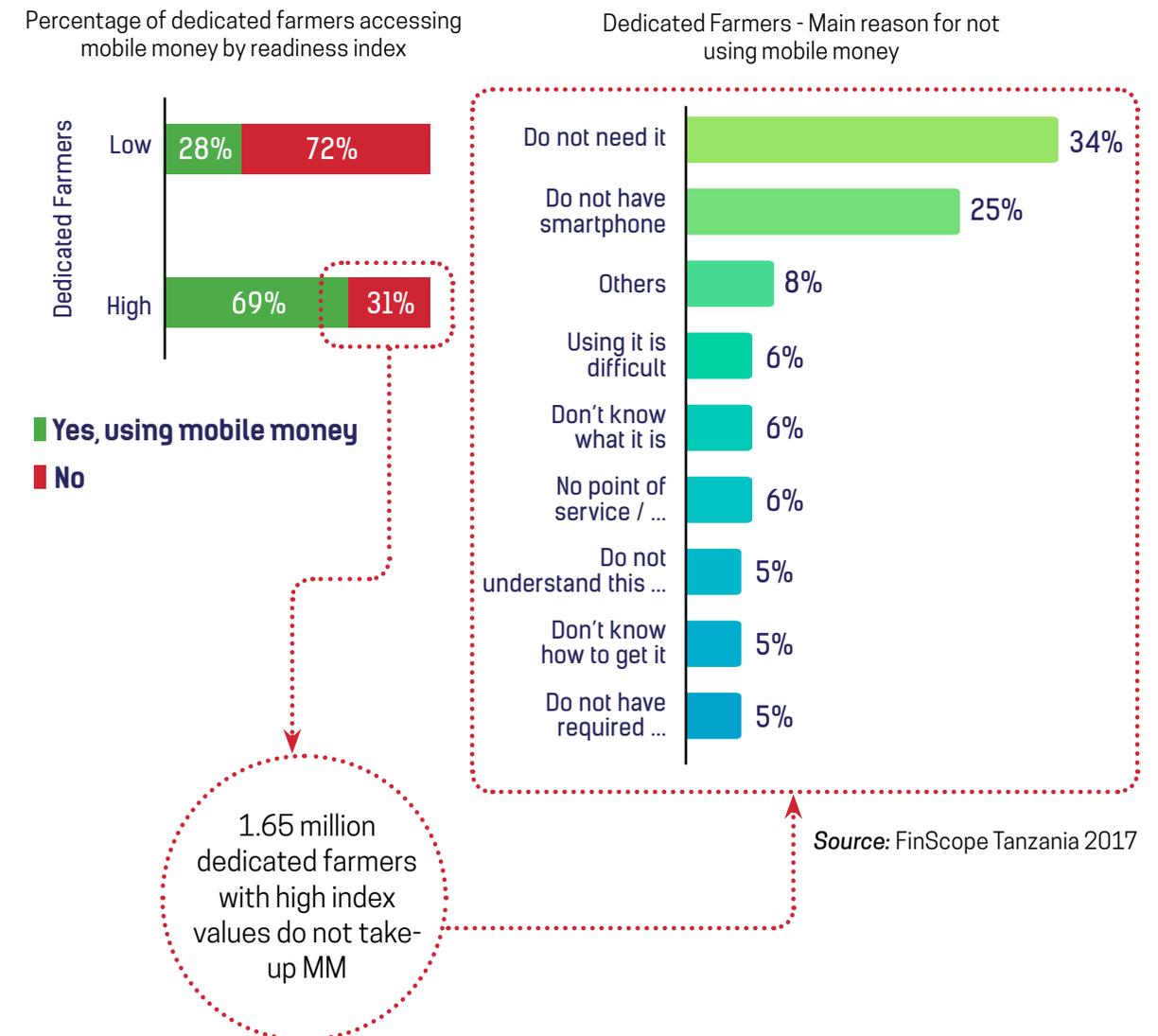
FACT 4

The Addressability Index identifies a market gap of 'low hanging fruit' for formal service uptake

money services (the blue area in the bar on the bottom in Figure 34). 31% of the farmers with a high index score have not however yet taken up mobile money (see dashed box in lower bar).

For those 31% farmers who are easy to reach, considering they are likely to own a mobile

Chart 34: Usage of Mobile Money by Dedicated Farmers



FACT 5
1.65m dedicated farmers across Tanzania **could easily take up mobile money services,** but lack use cases

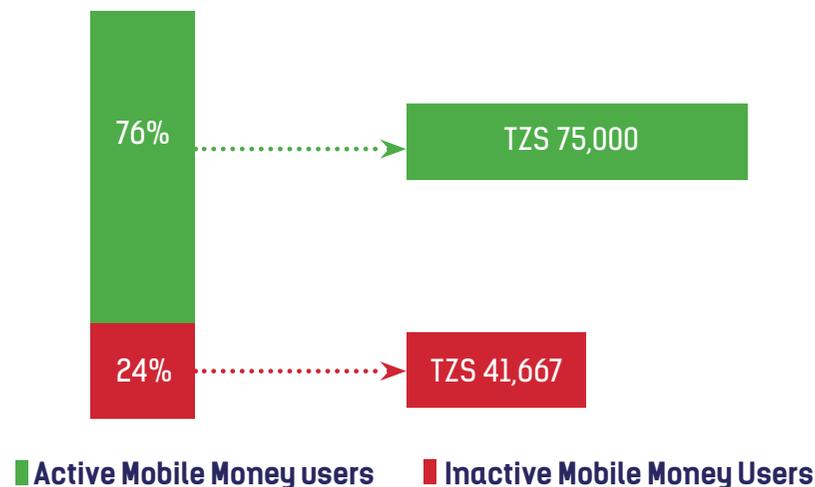
phone, live close to a financial access point, have positive attitudes towards digital technologies, but have not taken up mobile money, more than a third claim that they “do not need [mobile money]” (see box in Figure 34). A main barrier for this specific customer segment is communication. The initial mass media campaign, promoting mobile money as a “send money home” service, has not served these consumers’ needs, hence usage beyond send-receive services is key.

Lack of use cases for low income segment: inactive mobile users have lower incomes

Low incomes are a real barrier to using mobile money more frequently as shown by the split of active and inactive mobile money users among the dedicated farmers (Figure 35). Inactive users have much lower incomes: the median monthly income of active users is almost twice as high as that of inactive users. This is likely related to the slab-based transaction fee structure, which makes it too costly in relative terms to transact small amounts.

This can also be seen when looking at the average transaction fees for different sizes

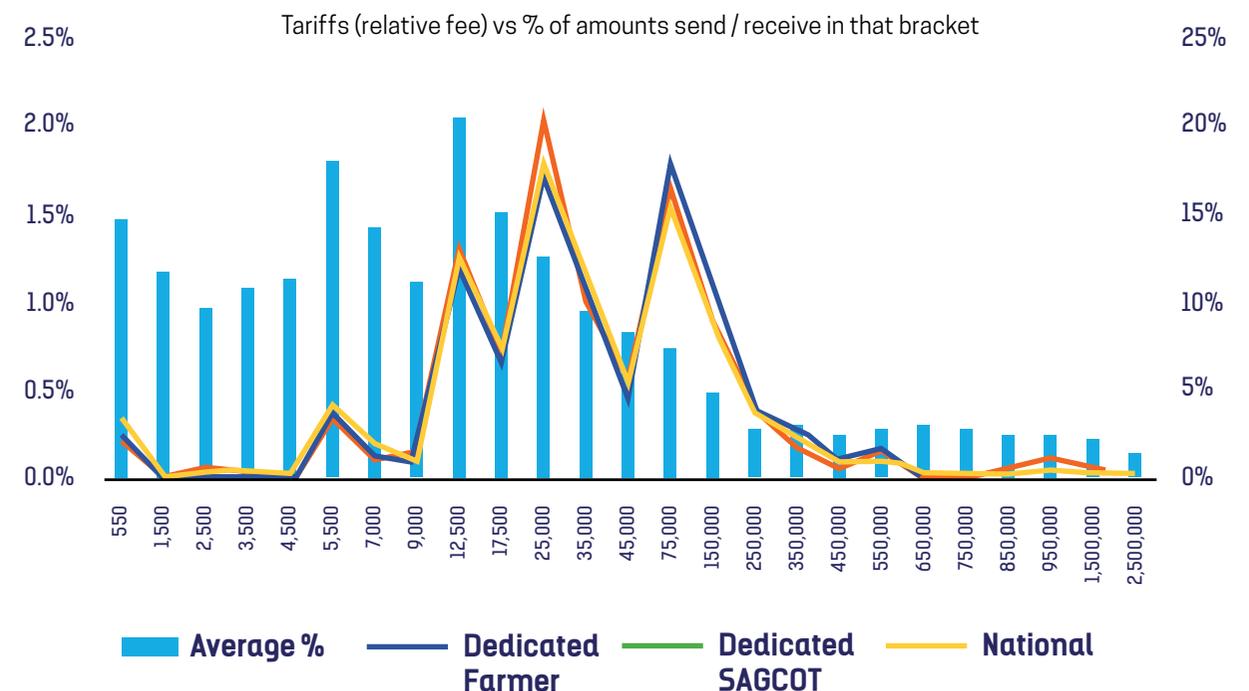
Chart 35: **Inactive and Active Mobile Money Users and Median Monthly Incomes in TZS**



Source: FinScope Tanzania 2017

of transaction amounts (Figure 36). For smaller transaction brackets, the transaction fee represents a higher percentage of the transaction amount, compared to the larger transaction brackets (blue columns are higher for lower amounts than for larger amounts). The line then shows the percentage of overall transaction that are made. Below TZS 12,500, barely any transactions are made. A strong relation is observed between relative transaction fee size and dedicated farmers willing to transact. In other words, when comparing the size of the fee with the amount that they are looking to transact, transactions below TZS 12,500 might not seem worth it for dedicated farmers.

Chart 36: **Average P2P Transaction Costs Compared to Percentage of Overall Transactions Made Per Transaction Size Bracket**



Source: FinScope Tanzania 2017 and Average tariffs as published by mobile money providers

For the poorer segment of dedicated farmers earning TZS 41,667 and below, a TZS 12,500 transaction makes-up 30% of their monthly income and is therefore a high amount which they are unlikely to transact often.

Finance is not gender neutral (Figure 37); men and women have different financial needs

Adjusting fee structures to reduce fees for smaller transactions could help build a use case for lower income farmers and increase transaction volumes over time.

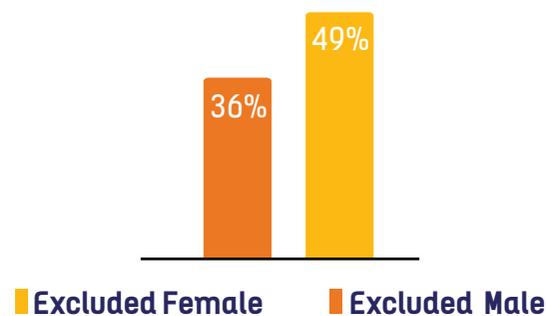
FACT 6

Female dedicated farmers are more likely to be excluded from formal finance, but are more active in savings groups



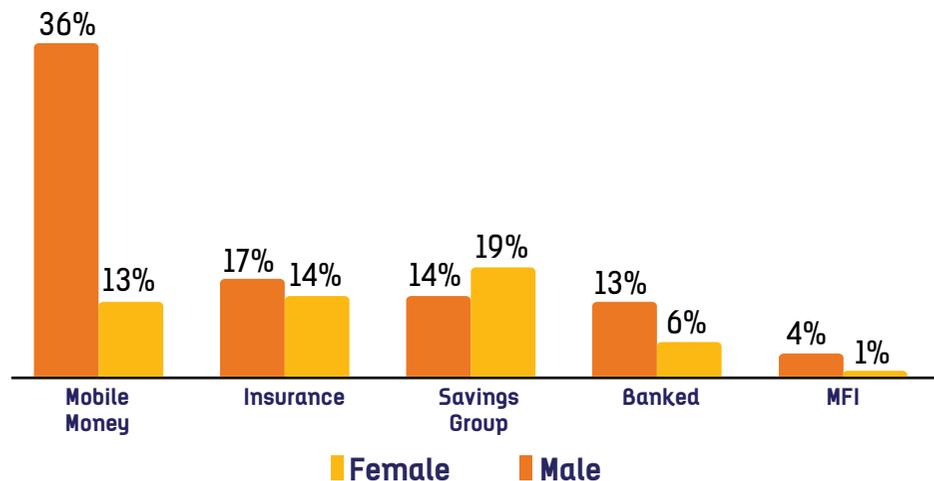
and capabilities. Financial products and services designed around these nuances are more likely to maximise uptake, usage and impact. The uptake of different financial services varies between males and females (Figure 38). The gender gap is still strongly pronounced for mobile money services and commercial banking services. **Savings groups however are more often used by females.** Location has a high impact on mobile money uptake of the dedicated farmer population.

Chart 37: **Percentage of Financially Excluded Population by Gender**



Source: FinScope Tanzania 2017

Chart 38: **Uptake of Financial Services by Gender**



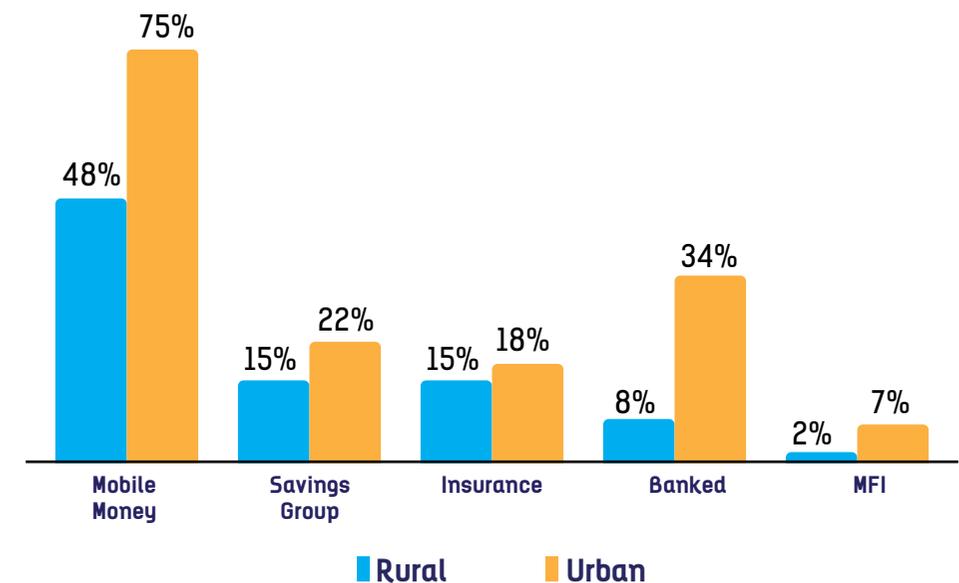
Source: FinScope Tanzania 2017

FACT 7

Uptake of financial services in urban areas is higher than rural areas

While in the rural areas, only 2 out of 4 dedicated farmers have adopted mobile money, the uptake in urban areas is 3 out of 4 (Figure 39). The higher uptake of financial services in urban areas is in line with the idea that mobile money eco-systems roll out from urban areas – spilling over to rural areas as they gain more traction among the population. Though this process is to some extent inevitable, FSPs who specifically position themselves to serve agricultural populations effectively can gain a first mover advantage and benefit from consumer loyalty.

While uptake has been increasing, driven by mobile money, usage of formal financial
Chart 39: **Uptake of Financial Services in Rural and Urban Areas**



Source: FinScope Tanzania 2017

FACT 8

Usage of mobile money and banking services is low in terms of frequency and in terms of taking-up the full breadth of the service offer to save and borrow

services is still low. Nearly 7 out of 10 dedicated farmers that have a mobile money account (65%), use services less than once a month (Figure 40). Only 1 in 10 farmers that have a mobile money account use this on a weekly basis. Less than 1 in 100 farmers uses mobile money on a daily basis.

Chart 40: **Frequency of Usage of Different Financial Services by Dedicated Farmers**



Source: FinScope Tanzania 2017

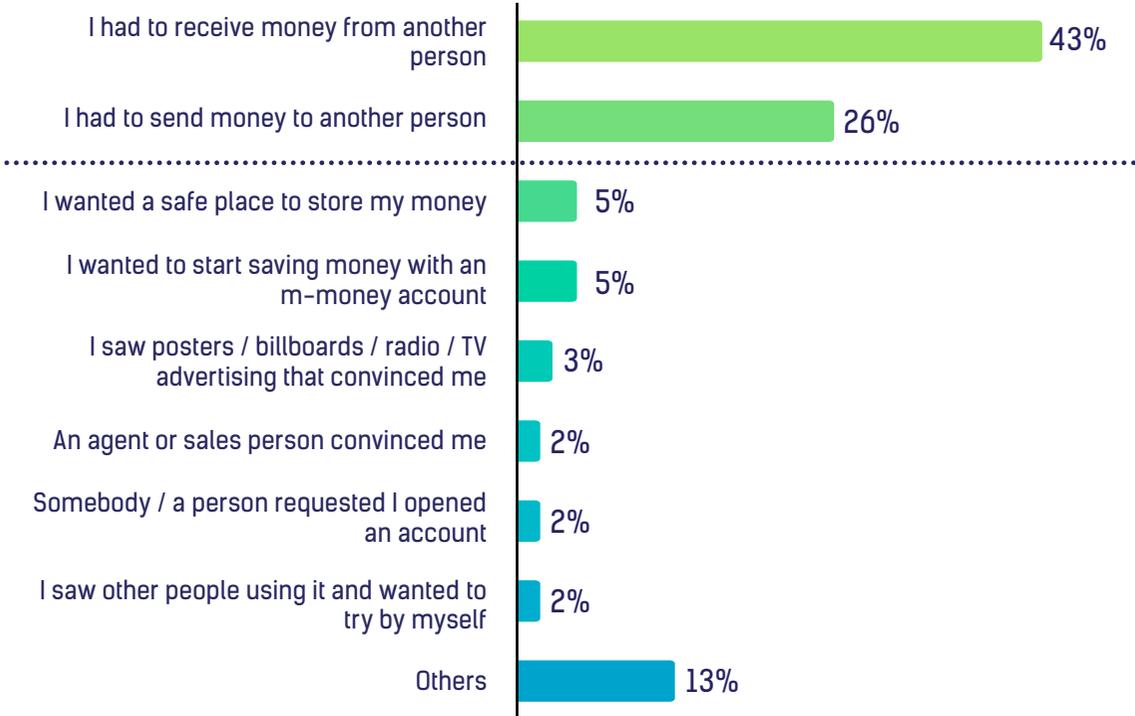
The picture is similar for usage of banking services. Nearly 6 out of 10 dedicated farmers (55%) that have access to a bank account, use this less than once a month. Most dedicated farmers still prefer going through personal networks, such as family and friends, to save or borrow money (see Figures 24 and 25 above).

To achieve the volume and scale required for profitability, the private sector will need to better tailor products to dedicated farmers. Though access is expanding, many dedicated farmers choose not to use the products at their disposal. This

is likely driven by a number of factors, such as transaction fees and a lack of financial awareness.

As shown in the previous section, most dedicated farmers that save just hide cash at home.

Chart 41: **Reasons for Dedicated Farmers Using Mobile Money Services**



Source: FinScope Tanzania 2017

This presents an opportunity especially for mobile money service providers to better understand the use cases of dedicated farmers and barriers to using other services more often. FSPs need to improve communication efforts for dedicated farmers to understand the use case of the full-service spectrum.

Overall, usage of savings and credit products is low despite the relatively high uptake of formal financial services by 58% of dedicated farmers. It seems as if the major use case of formal financial services still revolves around transactions.

Reasons for low uptake and usage can relate to either the product design which

fails to present a use case for the dedicated farmer, or poor communication of existing use cases, leaving farmers not fully aware of the full product spectrum and its applications:

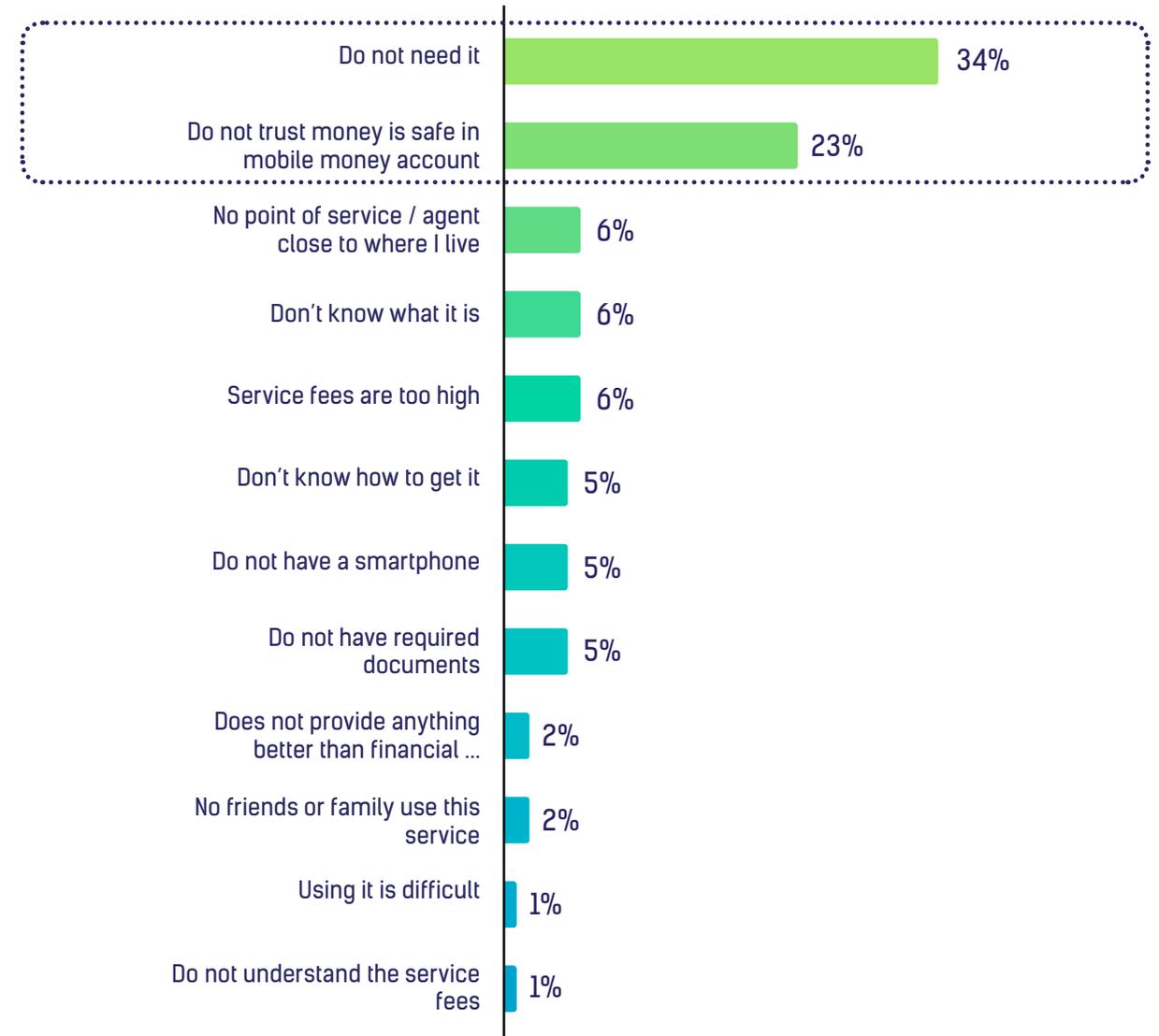
- **Communication:** Some dedicated farmers have a lack of understanding of existing products. This could be addressed through, for example, financial literacy campaigns increasing the understanding of use cases of already existing products and services. For example, better communication around the advantages of a digital footprint and how this helps to build a credit history, could increase the frequency of digital transactions. Further linking this to loan products can create powerful synergies to expand product usage and frequency of usage of this customer segment.
- **Product design:** There is a lack of use cases for dedicated farmers especially for savings products, loan products and services that are beyond financial services but close to improving productivity among farmers. Most dedicated farmers still prefer to save at home or through tying-up cash in assets by investing in livestock, although formal financial services are available to them. These practices seem more profitable for them than using a bank account, hence FSPs need to offer a product that is of similar nature. A better understanding of the financial behaviour of dedicated farmers is key to designing products that are useful and complement the daily lives of this customer segment.

Lack of communication and product design are reflected in responses to the question why dedicated farmers would not take-up mobile money. The two main responses were that either they would not need mobile money (34% - an indication of either lack of communication or lack of use case/product design) or that they did not trust mobile money providers (23% - an indication of lack of communication) (Figure 42).

The Southern Agricultural Growth Corridor of Tanzania (SAGCOT) region¹⁴ plays a crucial role in the nation's economic transformation and is home to 21.8% of dedicated farmers across Tanzania. Dedicated farmers from the SAGCOT region stand out in terms of certain characteristics, bearing viable opportunities for FSPs.

14 SAGCOT region comprises of Iringa, Njombe, Mbeya, Morogoro, Songwe, Rukwa, Katavi, Ruvuma

Chart 42: **Main Reasons for Dedicated Farmers Not Using Mobile Money**



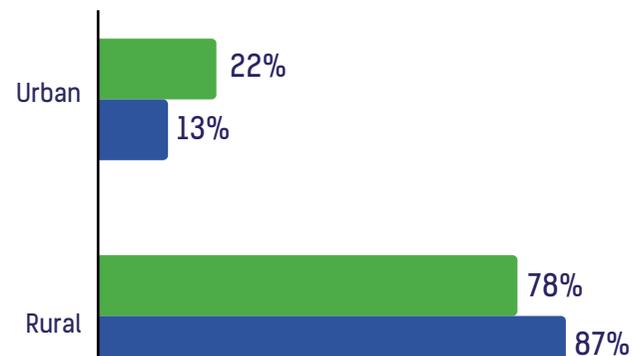
Source: FinScope Tanzania 2017

SECTION 5: DEDICATED FARMERS IN THE SAGCOT REGION)

FACT 1

Compared to dedicated farmers across the country, **more SAGCOT farmers live in urban areas**

Chart 43: **Urban–Rural Split of Dedicated Farmers**



More SAGCOT farmers have a formal proof of land ownership than their peers across the country. This presents an opportunity for FSPs to innovate loan products that use land as collateral. See [the Live! From the Market 8 above](#) for alternative data collection methodologies.

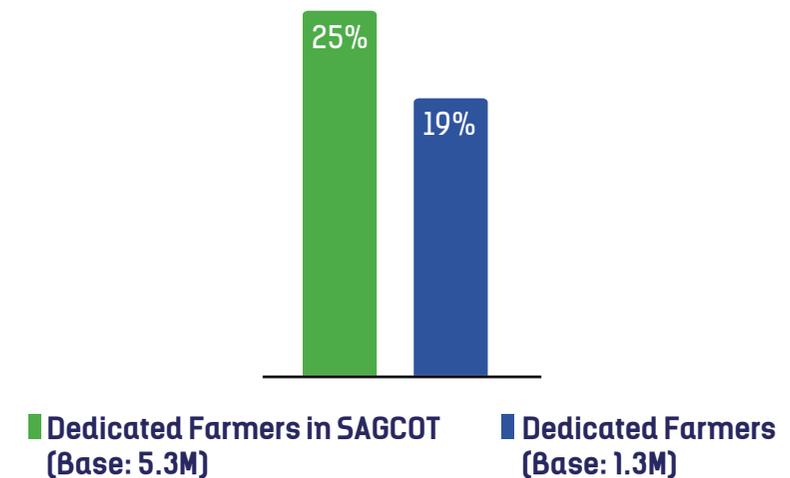
Source: FinScope Tanzania 2017

FACT 2

1 in 4 SAGCOT farmers that own land, have a proof of land ownership



Chart 44: **Proof of land ownership**



Source: FinScope Tanzania 2017

Compared to dedicated farmers across the country, more SAGCOT farmers use savings groups, with nearly 1 out of 5 SAGCOT farmers proving to be a member of a savings group (Figure 45). Savings groups are a proven pathway to formal financial inclusion (see also Live! From the Market 8 above). This presents an interesting opportunity for FSPs to link informal to formal financial services.

FACT 3

SAGCOT farmers use **savings groups more often**

Chart 45: **Use of savings groups**



■ Dedicated Farmers in SAGCOT ■ Dedicated Farmers

Source: FinScope Tanzania 2017

Chart 46: **Got goods/services in advance and paid for them later**



FACT 4

1 in 10 SAGCOT farmers have bought goods on credit before, including farming inputs

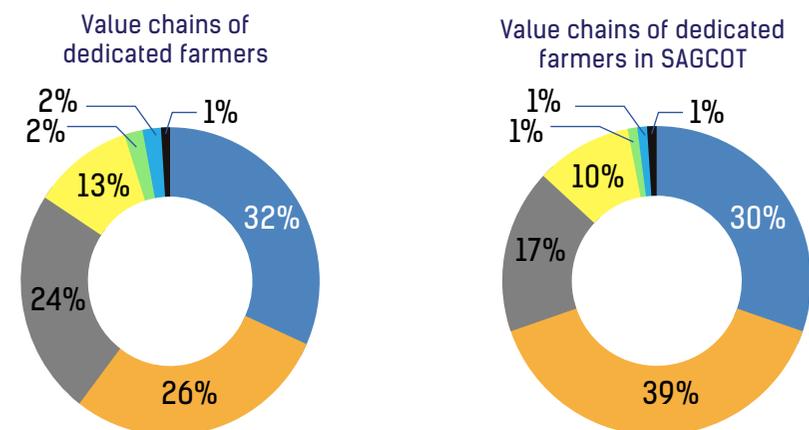


similar in terms the proportion of farmers engaged in only cash crops (1-2%), only livestock (1-2%), cash crops and livestock (1%), food crop and livestock (30-32%), and food crop and cash crop (10-13%).

FACT 5

Dedicated farmers in SAGCOT **focus more on food crops** and have lower incomes

Chart 47: **Value chains of dedicated farmers in SAGCOT**



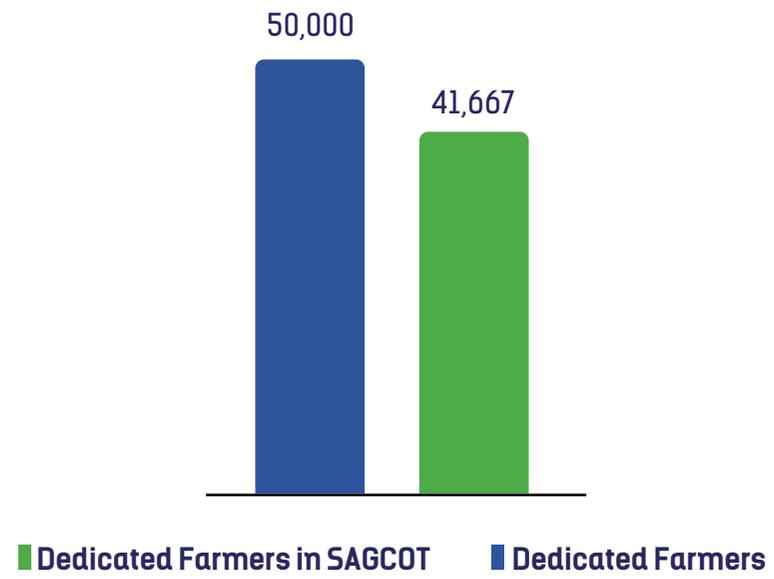
This is mirrored in lower monthly incomes and more reliance on the seasonality of food crops, leaving SAGCOT farmers more vulnerable to shocks. This bears an opportunity for both savings and insurance products. See also Live! From the Market 5 and Live! From the Market 6.

The income/wealth of farmers is assessed based on two parameters - Progress out of Poverty Index (PPI) and daily personal income.¹⁵ 73% of the dedicated farmers in Tanzania fall in the lowest two quintiles as per PPI, indicating the low levels of wealth for a large portion of the farmers. The low level of income of farmers is also highlighted by the fact that 64% of the dedicated farmers earn less than a TZS 2,500 a day.

¹⁵ The PPI is a statistically sound, simple, and country-specific calibrated index (for Tanzania it is based on the 2011/2012 household budget survey). The index uses scores given to answers on 10 questions about a household's characteristics. With the PPI scores, households are classified into 5 quintiles according to the different wealth levels. For the analysis, the first two quintiles and the last two quintiles have been combined.

Annex

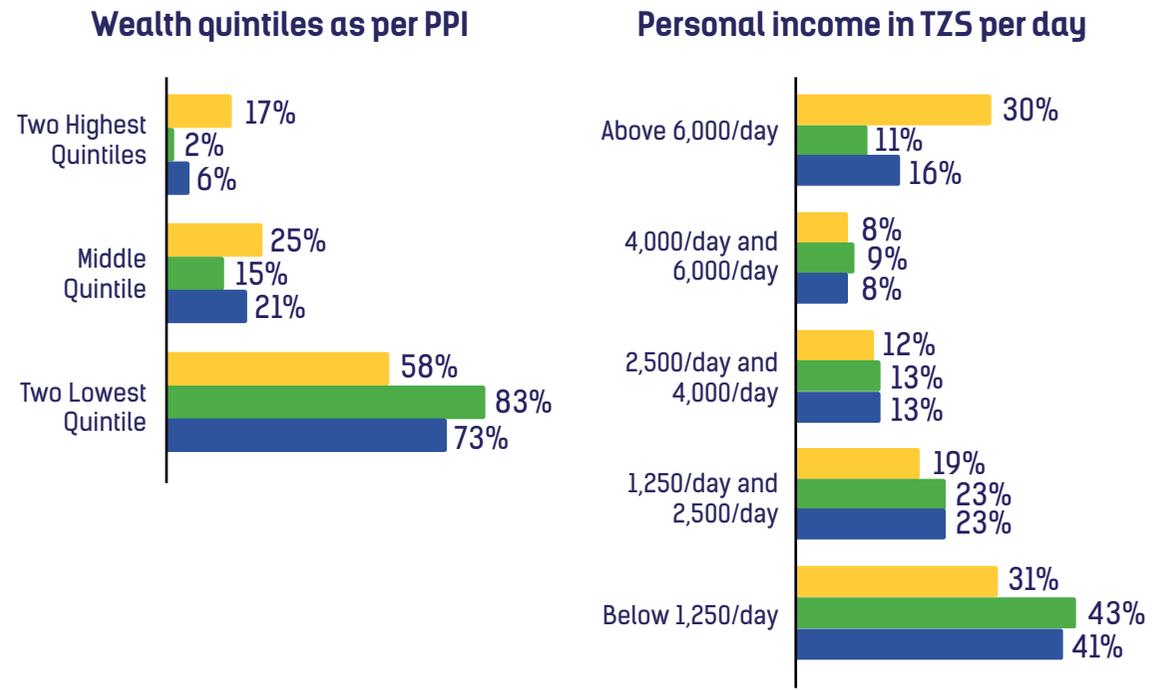
Chart 48: **Median Monthly Income**



Source: FinScope Tanzania 2017



ANNEX 1: INCOME OF DEDICATED FARMERS IN TANZANIA

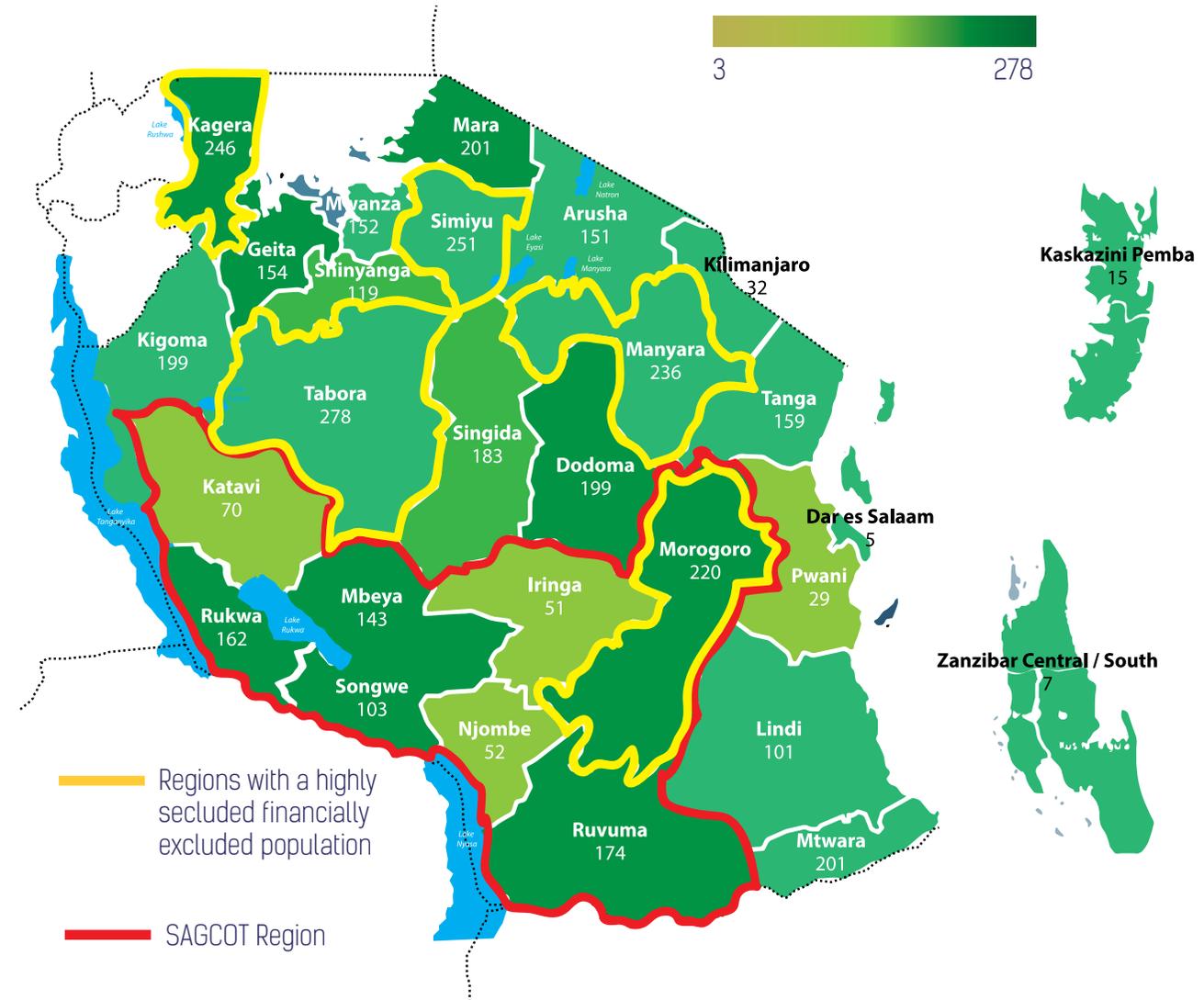


■ All Dedicated Farmers ■ Dedicated Farmers in SAGCOT Region ■ Overall Population

31% of the dedicated farmers in the country who are financially excluded are located in Tabora, Simiyu, Kagera, Manyara, and Morogoro regions (bordered in blue). FSPs can strategically focus on these regions when introducing products designed to increase adoption of mobile money and other financial services by the currently excluded farmers.

Source: FinScope Tanzania 2017

ANNEX 2: GEOGRAPHIC DISTRIBUTION OF FINANCIALLY EXCLUDED FARMERS



ANNEX 3: FINANCIAL INCLUSION OF SMALL, MEDIUM AND LARGE-SCALE FARMERS

Four out of 10 small farmers do not access any formal or informal financial services. This value is double that of medium-scale farmers and over 4 times that of large-scale farmers.

Dedicated Farmers: Financial Inclusion Status by Type of Farmers

