

# Women's Access to Agricultural Finance in Kenya: Baseline Report 2019

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## Women's Access to Agricultural Finance in Kenya: Baseline Report 2019

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## EXECUTIVE SUMMARY

The Agricultural Finance Corporation (AFC) aims to enhance access to agricultural finance by women across the agricultural value chains by increasing agricultural loans advanced to women to approximately Ksh 1.4 million per day in a calendar year or Ksh 1 billion (US\$ 10,000,000) in a period of 2 years. In this regard, AFC has designed the Women Affirmative Access Window (WAAW) programme to drive financial inclusion in agricultural finance. This is in line with the Constitution of Kenya that requires measures be put in place to strengthen inclusivity and redress past disadvantages among vulnerable segments of the country's population.

A survey was commissioned aimed at establishing the status (as-is-situation) of access to agricultural finance by women in Kenya. The findings of the survey are expected to guide in developing effective and coherent strategy in programming of the WAAW initiative; set a reference point for later comparison and measurement of achievements of set interventions; devising an appropriate M&E tool; galvanize and catalyze discussions on means of addressing identified challenges and build on success stories; and provide information that can be used to assess broader agricultural financial access issues. The baseline study was undertaken under the leadership of the Kenya Institute for Public Policy Research and Analysis (KIPPRA) and the Kenya National Bureau of Statistics (KNBS). The study was supported by UN-Women, Food and Agricultural Organization of the United Nations (FAO) and the European Union (EU).

The survey was nationwide and focused on different activities within the agricultural value chains. Among the sources of data included the 2019 FinAccess Household Survey and AFC lending over the past five years. Primary data was collected in 25 counties across different livelihood zones in Kenya, including: 1) 50 focus group discussions (FGDs) which covered 500 women participants in both urban and rural areas; 2) 50 women engaged in agri-business (two per county); and 3) 6 case studies conducted in Kisumu, Nakuru and Meru counties. All participants were aged 18 years and above. The data was disaggregated by gender and age and further divided into rural and urban clusters to enrich the analysis.

**Key findings of the Baseline survey were as follows.**

**a) *Status of access to agricultural finance***

Access to agricultural finance is very low (below 15%) and even lower for females. In all, 14.7 per cent of the agricultural population had access to agri-finance (formal and informal sources). 13.9 per cent had access to formal agri-finance, with 9.6 per cent accessing finance through formal prudential sources. 84.8 per cent of the agricultural population do not use any form of agricultural finance while 0.53 per cent obtain Agri-finance from “excluded sources”. While access to agri-finance is generally low for both women and men across the country, the levels are much lower for women especially those above 65 years and residing in urban areas (6.8%). The lowest access levels among men is observed for those between 16 and 34 years residing in rural areas (11.5%).

Women have higher access to formal non-prudential sources of credit in rural areas, and formal prudential sources in urban areas. Men tend to favour formal prudential sources of credit in both rural and urban areas. At the national level, 53.4, 33.1, 6.5 and 6.3 per cent of the population has access to formal prudential, formal non-prudential, excluded sources, and informal sources of loans/credit, respectively. Women source agricultural loans from a mix of sources. Women of ages 16-34 years (46.4%) and those above 65 years (48.3%) residing in rural areas favour formal non-prudential sources of loans while those of ages 35-64 mainly access loans from formal prudential sources (55.8%). In urban areas, loans from formal prudential sources are most favoured, but lowest among women of ages 65 years and above at 23.1 per cent.

Both women and men primarily save through formal prudential sources. However, women use formal non-prudential and informal sources of finance to save than men do. Nationally, 92.4 per cent of the agricultural population save through formal sources of finance. Men primarily save through formal prudential sources, with the highest being among men of 35-64 years in urban areas (88.9%). Women use a mix of both formal and formal non-prudential sources to save. Women also use informal sources of finance to save than men do, with the highest proportion being among women of ages 16-34 years in rural areas (12.5%).

The uptake of insurance is generally low for both women and men at less than 1 per cent of the total agricultural population. Despite the low numbers, the uptake of agri-insurance is higher among men (N=33,057) compared to women (N=23,343). Uptake of livestock insurance is highest among men of ages 35-64 in rural areas (1.09%) followed by women of the same age group (0.6%). Interestingly, though marginal, crop insurance uptake is higher among men of above 65 in urban areas

(0.41%). Among women, the highest uptake of crop insurance is among women of ages 16-34 years residing in rural areas at 0.11 per cent.

Spatial analysis to map out distribution and location: AFC branch network shows that the AFC branch network coincides with regions that have a high population density. Spatial analysis further reveals the location distribution of AFC branches in regions with high and above average agro-potential. The AFC branch network is also concentrated in areas where other financial providers are located. With the government's focus on irrigation and livestock farming, there is need to re-look the mechanisms for AFC's presence in arid and semi-arid regions. There is need for AFC to distribute its financial services from core regions to enhance development of less developed areas.

***b) Needs, constraints, priorities and the level of satisfaction in agri-financing***

In general, savings towards agricultural operations are low and the purpose for savings vary across all groups. 6.4 per cent of women of ages 16-34 years in urban areas saved for purposes of buying agricultural land. Women of ages 65 years and above residing in rural areas have the highest savings rates for purpose of buying livestock (2.4%). 6.7 per cent of women of ages 65 and above in rural areas save towards purchasing of agricultural inputs. In terms of savings towards agricultural improvements, women of ages 35-64 in rural areas save the highest towards this need (2.2%). About 2 per cent of women residing in rural areas (65 years and above) save towards farm labour. Regarding transport of farm produce to markets, youth women (16-34 years) residing in urban areas save the most towards this need.

Women across various ages groups borrow agricultural loans to satisfy various needs, including for working capital and investment financing. An assessment of credit needs for buying agricultural assets/machinery shows 19.1% of women of ages 16-34 years residing in rural areas sought credit needs for this purpose. Credit needs for expansion of farm/land stood at 23.1% for women of ages 65 and above years residing in urban areas. Looking at diversification of agricultural activities, about 24.6 per cent of women of ages 16-34 years residing in urban areas sought credit for this need. Further, about 65 per cent of women of ages 65 and above in both rural and urban areas seek credit for purposes of day to day running of the farm. The need for credit for purposes of buying inputs is highest among women of ages 35-64 years residing in urban areas at 36.9 per cent.

Women are mainly denied credit from financial institutions due to low savings, existing debts, lack of collateral, and bad credit history. Denial of credit is among

the key challenges faced in agriculture. The results of this analysis reveal that 9.7 per cent of the agricultural population that sought agricultural credit were denied at the national level. Among women, majority of those denied are those between ages 35-64 years; 16.6 per cent in rural areas and 7.6 per cent in urban areas. Women in rural areas are mainly denied credit because they have low savings (40.8% for ages 16-34 years), have existing debts (25.5% for ages 16-34 years), have bad credit history (19.5% for ages 16-34 years) and lack collateral (17.4% for ages 35-64 years). In urban areas, women are denied credit mainly because they have bad credit history (31.7% for ages 35-64 years), lack collateral (24% for ages 35-64 years) and due to existing debts (20.3% for ages 35-64 years).

Financial decision making among the agricultural population in Kenya is not a major constraint to women's access to agri-finance, with majority of women (more than 50%) in both urban and rural areas making their own financial decisions. Decision making and agency constraints among women in Kenya decreases with age. The proportion of women making their own financial decision is 52 per cent for ages 16-34 years, 65.8 per cent for ages 35-64 and 80.2 per cent for ages 65 years and above. On the other hand, the proportion of men making their own financial decision is 62.7 per cent of the youth (16-34 years), 67.5 per cent for ages 35-64 and 71.7 per cent for ages 65 years and above. The results imply that women in general have agency with regard to financial decision making. However, there are more males who make decisions for their females (8.9%-ages 16-34 years; 2.4% for ages 35-64 and 1.6% for ages 65 years and above) than females do for males (12.6% for men of ages 16-34)

**c) *Level of awareness/usage of different agri-finance channels in Kenya***

Mobile money is the most popular channel of accessing agri-finance, with 5.1 per cent usage at the national level. Among women, mobile money usage, however, declines with age with 5 per cent, 4.8 per cent and 4.5 per cent usage among women of ages 16-34, 35-64 and 65 and above, respectively. Usage of *chama*/groups is also popular among women of ages 16-34 (3.6%) and 35-64 (4.3%) years. Usage of mobile money is slightly higher for men compared to women at 4.9, 5.7 and 4.7 per cent for ages 16-34, 35-64 and 65 and above, respectively. *Chamas*/groups are, however, not very popular with men. On the other hand, a higher share of men of ages 65 years and above use SACCOs (4.5%) and banks (3.8%) compared to the other categories.

Majority of women and men seek financial services from branches. 39, 57 and 88 per cent of women of ages 16-34, 35-64 and 65 years and above, respectively,

mainly visit the bank branch to access banking services. In urban areas, 40 per cent and 39 per cent of women of ages 16-34 years seek services from bank branches and ATMs, respectively. 36 per cent of women of ages 35-64 years visit bank branches and bank agents while 100 per cent of those of ages 65 years and above and go to bank branches. Similarly, for SACCOs, more than 80 per cent of women and men in rural and urban areas visit the SACCO branches for financial services. For MFIs also, more than 60 per cent of the population in urban and rural areas seeks services at the branch. There is a higher number of men of ages 35-64 years in urban areas (31%) who visit micro-finance agents for services. Women of ages 35-64 years in urban areas record the highest use of mobile phone applications to access micro-finance services at 30 per cent.

More than 90 per cent of women and men in rural areas make group contributions by cash. In urban areas, 100 per cent of men and women of ages 65 years and above make their contributions in cash. Similarly, 99 per cent of women of ages 35-64 also make their contributions in cash. While the youth in urban areas predominantly also use cash, 47 per cent and 21 per cent of youth men and women, respectively, utilize mobile money. Men of ages 35-64 years record the highest bank deposits at 13 per cent.

Overall, use of technology solutions, such as mobile money, is identified as an important alternative delivery channel for financial products and services.

***d) Status of financial literacy and access to agri-finance information***

Overall, women in rural and urban areas have lower ability to compute simple interest rates. About 41 per cent of women and 48 per cent of youth (ages 16-34) in rural and urban areas, respectively, were able to compute simple interest correctly. About 45 per cent and 49 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Fewer women of ages 65 years and above (24% and 12% in rural and urban areas, respectively) were able to compute the question on interest rates correctly. Men in rural and urban areas exhibited a higher ability to compute interest rates than women. About 50 per cent and 82 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly. Also, 63 per cent and 82 per cent of men between ages 35 to 64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Fewer men of ages 65 years and above (26% and 39% in rural and urban areas, respectively) were able to compute the question on interest rates correctly.

Women knowledge on transaction costs decreases with age. 63.6 per cent and 70.2 per cent of the youth (ages 16-34) in rural and urban areas, respectively, were able to identify the costs correctly. 52.7 per cent and 60 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able to identify the costs correctly. Fewer women of ages 65 years and above (29.3% rural areas) were able to identify the costs correctly. Generally, men in rural and urban areas exhibited a higher ability to identify transaction costs correctly compared to women. 72.7 per cent and 89.1 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly. 78 per cent and 86.7 per cent of men between ages 35-64 years in rural and urban areas, respectively, were able to answer the question correctly. For the 65 years and above, 43.6 per cent of men in rural areas and 71.9 per cent in urban areas identified the transaction costs correctly.

Only a few women have accessed the Credit Reference Bureau (CRB) reports to learn their credit worthiness. Only 17.7 per cent and 3.6 per cent of women of ages 16-34 years in rural and urban areas, respectively, have attempted to access the CRB report while 32.3 per cent and 31.3 per cent of women of ages 35-64 years have tried to access the CRB report. Among men, the attempts are higher in urban areas compared to those in rural areas. 17.1 per cent and 21.9 per cent of men of ages 16-34 years in rural and urban areas, respectively, tried to access the report. Of the men between 35 and 64 years, 21.9 per cent in rural and 35.2 per cent in urban areas have tried accessing the CRB report while 6.5 per cent and 74.4 per cent of men above years have tried to access the report.

The analysis shows that beyond enhancing access to financial products, there is need to support the development of women's skills and knowledge in finance, beyond the traditional information availed when accessing.

**e) *Various forms of collateral available to access agri-finance in Kenya***

Salary and guarantors are the most popular forms of collateral used when accessing bank and SACCOs loans nationally. Salary as a form of collateral is more common among males than females in all age cohorts. Guarantors, on the other hand, are a more predominant form of collateral among women. About 65 per cent and 32 per cent of women youth (16-34 years) and women of ages 35-64 years, respectively, who accessed agri-finance from banks used guarantors as collateral. Salary/income is predominantly used among men with 44, 33 and 43 per cent of men of ages 16-34, 35-64 and 65 years and above, respectively. Similarly, guarantors are also the most popular form of collateral for both men

and women when accessing loans from SACCOs. About 40, 30 and 38 per cent of women of ages 16-34, 35-64 and 65 years and above, respectively, accessing credit from SACCOs used guarantors as security. This is in comparison to 15, 32 and 67 per cent of men of ages 16-34, 35-64 and 65 years and above, respectively.

Land /title deed as collateral for borrowing in banks is more common among men of ages 35-64 years (26%). A small proportion (6%) of women of ages 35-64 years indicated having used land/title deed as collateral in the banks. Only 2 per cent of youth male used land title deeds to access agri-financing compared to 0 per cent of female youths.

A mix of collateral is used when accessing credit from MFIs. Women aged 35-64 years with 26 per cent and 25 per cent use household assets and salary/income, respectively. Among men, 100 per cent and 55 per cent of men of ages 16-34 years and 65 years and above used group collateral. Movable assets were used in equal proportions (50-50%) among men of ages 35-64 year. In *chamas*, approximately 45 per cent of the people who accessed agri-finance reported not having needed any collateral.

The above highlights the need for financial institutions to recognize the possibility of multiple alternatives of collateral and the lack of some types of collateral across gender and age groups.

#### ***f) Key production activities, value chains, markets and the source of financing***

Majority of agricultural population are involved in agri-production. 56 per cent of the people only engage in production or participate in both production and selling of their agricultural produce. The rest (44%) are mainly involved in other value chain activities, such as participating solely in agri-trade. Among the agri-producers, it is observed that production of food crops is the main agri-production activity as it is practiced by about 55 per cent of the people. Other important agri-production activities are production of livestock, livestock outputs, cash crops and aquaculture (fish farming) at 16, 16, 12 and 1 per cent, respectively. Across the different age cohorts, women largely participate in production of food crops such as beans, maize, cassava, sweet potatoes, mangoes and oranges. Women aged 35-64 years were the majority in food crop production (28%) while in cash crop production the majority were male of 34-64 years at 34 per cent.

Only 20.4 per cent of those involved in agri-production access agri-finance. Narrowing down to the various agri-production activities, about 80 per cent of the food crop producers are totally excluded from access to agri-finance. Out of the 20 per cent who had access to agri-finance, majority (11%) accessed from

formal prudential institutions followed by 7 per cent who accessed from formal non-prudential institutions. About 66 per cent of the agri-cash crop producers had no access to agri-finance. Formal prudential institutions were the preferred sources of agri-finance, accessed by 28 per cent of cash crop producers. About 96.3 per cent of fish farmers had no access to agri-finance. Of those who accessed, 2.3 per cent and 1.4 per cent was from formal registered and formal non-prudential sources, respectively. About 71 per cent of producers of livestock output (like milk, beef, eggs, manure, livestock) from own livestock had no access to agri-credit. Majority of those who had access to agri-finance accessed it from formal prudential institutions (22%) and formal non-prudential institutions (5%). Similarly, majority of livestock producers (79%) had no access to agri-finance. Majority of those who accessed got financial services from formal prudential and formal non-prudential institutions at 15 per cent and 5 per cent, respectively.

Out of the about 15 million agricultural population, only about 5 per cent (0.7 million people) were involved in the sector as purely/solely agri-traders. Narrowing the agri-trade population, only about 8 per cent of the agri-traders had access. This is lower than the proportion of non-agri traders that had access to agri-finance. The few traders that accessed agri-finance rely on formal prudential (6%) and formal non-prudential (2%) financial institutions. From the above, it is crucial for financial providers to have knowledge of the agricultural activities of various players. Understanding the gender elements in agriculture, for instance, and the role and contributions of women within agricultural households is crucial for product design.

Both women and men across all age cohorts primarily sell their produce at the nearest market centres (32%) or to brokers (21%). Other primary market access avenues include selling to neighbours, companies/manufacturers/factory, through farmers cooperatives, motorists/transporters. It is, however, important to note that less than 1 per cent of the respondents are involved in sourcing export markets and digital platform markets such as Twiga Foods/ Facebook for their products. Among those who accessed agri-finance, their primary market was brokers (23%) and nearest market centres (21%). Notable variation is among men aged above 65 years who mostly sell to companies/manufacturers/factory (33%). 15 per cent and 12 per cent of men of ages 16-43 and 35-64 years, respectively, sell their produce to companies/manufacturers/factory. Among women, 9 per cent, 17 per cent and 12 per cent of ages 16-34, 35-64, and 65 years and above, respectively, sell their produce to companies/manufacturers/factory. 7 per cent, 18 per cent and 11 per cent of men of ages 16-34, 35-64, and 65 years and above, respectively, sell their produce through farmers' cooperatives. This is in comparison to 7, 13 and 11 per cent of women of ages 16-34, 35-64, and 65 years and above, respectively.

The markets analysis highlights limited capacity of both men and women to better market agricultural products that could result in lower prices.

***g) The status of relevant indicators of the country's "Big 4" agenda and SDGs***

Relevant indicators for the "Big Four" agenda regarding food and nutrition security and manufacturing are contained in section 5.8 while those of the SDGs are contained in section 5.9 of this report.

***h) Determinants of access to agri-finance among the agricultural population***

The analysis indicates that females have a lower probability of accessing agricultural finance compared to men. Other factors that significantly determine access to agricultural finance include: education level, wealth quantile, monthly income and savings. Similar factors are observed to influence access to various sources of agricultural finance. Access to finance from formal financial institutions is found to be determined by monthly income; wealth quantile; education level; land ownership; and ownership of a formal financial account. The assessment of factors influencing formal-financial sources of finance reveal that average cost to nearest financial provider is an additional factor influencing access to agri-finance. Land ownership is shown to be less important in accessing informal financial sources. However, age and ownership of a mobile phone play a crucial role in access to informal agri-finance. The regression analysis highlights the need to promote economic, human, social and cultural rights of the agricultural population, and particularly that of women to enhance their ability to access agricultural finance.

## ABBREVIATIONS AND ACRONYMS

AFC	Agricultural Finance Corporation
ASTGS	Agricultural Sector Transformation and Growth Strategy
CBK	Central Bank of Kenya
CMA	Capital Markets Authority
DFI	Development Finance Institutions
EU	European Union
FAO	Food and Agricultural Organization (of the United Nations)
FSD	Financial Sector Deepening
FSR	Financial Sector Report
GDP	Gross Domestic Product
IRA	Insurance Regulatory Authority
KALRO	Kenya Agricultural and Livestock Research Organization
Ksh	Kenya Shilling
KIPPRA	Kenya Institute for Public Policy Research and Analysis
KNBS	Kenya National Bureau of Statistics
MFIs	Micro-finance Institutions
MoALF&I	Ministry of Agriculture, Livestock, Fisheries and Irrigation
MTP	Medium Term Plan of Kenya Vision 2030
M&E	Monitoring and Evaluation
NGAAF	National Government Affirmative Action Fund
SACCO	Savings and Credit Cooperative Society
SASRA	SACCO Societies Regulatory Authority
SDGs	Sustainable Development Goals
US\$	United States Dollar
VSLA	Village Savings and Loans Associations
WAAW	Women Affirmative Access Window
WEF	Women Enterprise Fund
YEDF	Youth Enterprise Development Fund

## SELECTED GLOSSARY OF TERMS

**Agricultural finance:** Provision of multiple types of services dedicated to supporting both on- and off-farm agricultural activities and businesses including input provision, production, and distribution, wholesale, processing and marketing.

**Agri-business:** An industry engaged in production operations of a farm, the manufacture and distribution of farm equipment and supplies, and the processing, storage, and distribution of farm commodities. It includes crop/livestock production (farming and contract farming) agro-chemicals, breeding, distribution, farm machinery, processing, seed supply, and marketing and retail sales.

**Agro-dealers:** Locally based entrepreneurs who trade in agricultural inputs (which may include improved seeds, fertilizers, pesticides animal feeds, veterinary drugs and simple farm tools and, also serve as providers of basic extension services to smallholder producers: also referred to as “stockists” and “agro-vets”.

**Agro-processors:** These are value chain actors/operators engaged in techno-economic activities carried out for conservation and handling of agricultural produce and to make it usable as food, feed, fibre, fuel or industrial raw material.

**Agro-transporters:** Value chain actors/operators involved in transportation function of a particular commodity/enterprise.

**Baseline survey:** Analysis of current situation to identify the starting point for a project or programme. It is a collection of primary and secondary data which describes the situation at a particular time and conducted within a framework of a proposed intervention, in this case the WAAW programme.

**Chama:** An informal group, registered or unregistered, used to pool investment and savings resources together.

**Farmer:** A person who owns, works on or operates an agricultural enterprise that cultivates land or crops, or raises animals including livestock and fish.

**Financial access:** Is the ability to get financial services such as savings accounts, credit, insurance, and loans.

**Food secure/security:** A situation that exists when at all people, at all times,

have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

**Gender:** Gender is a social construct built through cultural, political and social practices that define the roles of women, girls, men and boys, and the social definitions of what it means to be masculine and feminine<sup>1</sup>.

**Household:** A collection of persons who depend on a common store. The persons may not necessarily be members of the same family. They often make common production, marketing and consumption decisions.

**Merry-go-round:** A group in which members contribute a fixed amount for a fixed duration, and each member is paid the entirety of the collected money on a rotating schedule.

**Mobile phone banking/m-banking:** Mobile phone-based banking services and products offered by commercial banks such as KCB mobi loan, Timiza, HF Whizz, M-Coop Cash, M-Shwari, Eazzy loan, and T-Kash.

**Mobile money:** Mobile phone financial services offered by a Mobile Network Operator.

**Small/Medium Enterprise (SME):** An SME comprise both formal and informal businesses concentrated in urban, peri-urban and urban areas. The Kenya Institute for Public Policy Research and Analysis (2014), defines a Kenyan SME as a business with 10-100 employees, and an annual turnover of between Ksh 500,000 to Ksh 5 million per year.

**Vulnerable population:** With respect to access to finance, this population is defined as a group of people who, because of laws or practices before, were or are disadvantaged by discrimination on one or more of the grounds as contained in Article 27 (4) of the Constitution of Kenya.

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1 IASC Gender definition

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# CHAPTER ONE

## 1. Introduction

### 1.1 Background

Agriculture plays a critical role in the Kenyan economy. The sector contributes approximately 34.2 per cent of the country's Gross Domestic Product (KNBS, 2019a) and employs over 60 per cent of the population (KALRO, 2018) of which 70 per cent are living in rural areas. The sector is also one of the key drivers of the 10 per cent annual economic growth envisaged in the Kenya Vision 2030. The blueprint envisions an innovative, commercially-oriented and modern agricultural sector.

As at 2018, the agricultural sector was valued at Ksh 3.05 trillion (KNBS, 2019a) and has strong linkages to other sectors of the broader economy, such as manufacturing, distribution and services. A 1 percentage growth in agriculture is estimated to drive approximately 1.6 per cent overall growth in GDP (ASTGS, 2019-2029). The sector therefore has immense potential in driving employment creation, poverty reduction, and food and nutrition security. According to World Bank (2019), a unit growth in the agriculture sector is two to four times more effective in raising incomes among the poorest compared to other sectors<sup>1</sup>.

Limited access to affordable agricultural finance has been identified as one of the major challenges leading to low agricultural productivity in the country (MTP III). Other constraints include limited access to appropriate and affordable technology, limited access to markets, lack of access to quality inputs, climate change, and poor infrastructure. Poor access to agricultural finance is often attributable to lack of collateral, inadequate savings culture, and the practice of agriculture for subsistence purposes as opposed to agri-business. The situation is aggravated by reliance on 'traditional' forms of collateral such as title deeds, and lack of appropriate credit packages for base of the pyramid agriculture actors such as smallholder farmers and traders.

The situation is worse for women despite the significant role they play in agriculture. According to the International Labour Organization, ILOSTAT database (2019), women account for approximately 75 per cent of the agricultural labour force in

<sup>1</sup> <https://www.worldbank.org/en/topic/agriculture/overview>

Kenya as compared to 51 per cent for Kenyan men<sup>2</sup>. In addition, women manage approximately 40 per cent of the small scale farms and therefore play a major role in storage and preparation of food (ActionAid, 2015).

Land title deed is the most common form of collateral required for agricultural credit by financial institutions in Kenya. Statistics indicate that only 1 per cent of land titles are owned by women and 5 per cent of titles are under joint ownership between men and women (FIDA, 2019). This lower level of ownership not only limits access to credit by women for start-up or expansion, but also limits access to other agricultural aspects including market and market contracts and affordable and quality inputs. Consequently, most women have resorted to seeking alternative sources of credit both from formal and informal sources such as village savings and loan associations, 'merry-go-rounds' and digital and mobile money. However, the amount of credit from these sources is usually too little to have a desired impact in agri-business. As a result of these constraints, the yield gaps between male and female-managed agricultural enterprises is approximately 20-30 per cent in favour of men. These constraints are more acutely experienced by women in rural communities<sup>3</sup>.

## **1.2 Background to AFC**

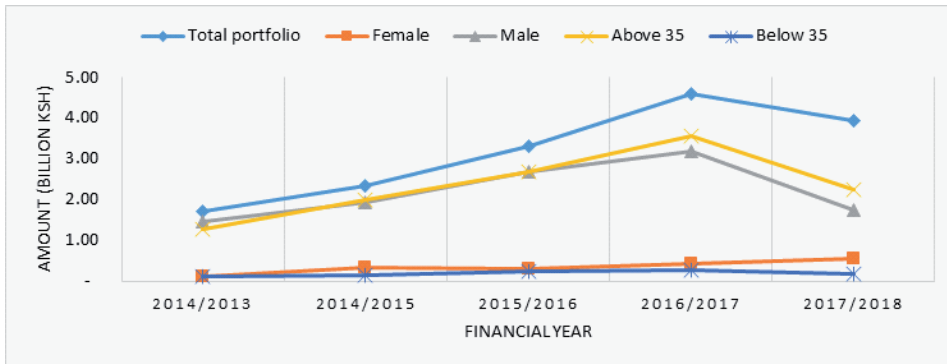
To drive the desired growth in agriculture and ensure affordable source of agricultural credit, the Government of Kenya established the Agricultural Finance Corporation (AFC) in 1969 under AFC Act (Cap 363) of the Laws of Kenya. The Corporation is a development finance institution (DFI) mandated to assist in the development of agriculture and agricultural industries by providing loans to farmers, cooperative societies, incorporated groups representatives, private companies, public bodies, local authorities and other persons engaged in agriculture and agricultural industries. AFC has a network of 47 branches in 37 counties categorized into six regions, namely: Coast, Eastern, Mt Kenya, Central Rift, North Rift and Nyanza/Western regions. Specifically, AFC provides credit and technical assistance to farmers and individuals engaged in and along all levels of agricultural value chains.

In the past, the corporation has made deliberate effort towards financial inclusion through initiatives and models that prioritize lending to marginalized groups, including women and youth. Despite these interventions, the AFC loan portfolio to women and youth is still low and has averaged around 10 per cent in the last four years as shown in Figure 1.

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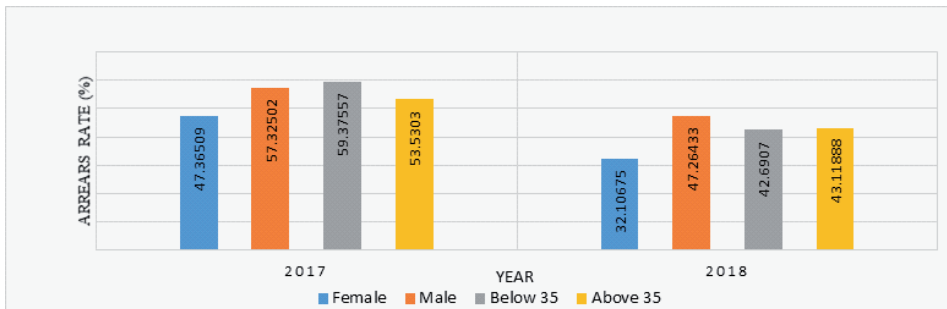
<sup>2</sup> Employment in agriculture, female (% of female employment) (modeled ILO estimate) <https://data.worldbank.org/indicator/SL.AGR.EMPL.FE.ZS?contextual=ag-employment-by-gender&locations=KE&view=chart>.

<sup>3</sup> Agricultural Sector Transformation and Growth Strategy 2019-2029.

**Figure 1: AFC loans portfolio in the last five financial years**

Data Source: AFC Database

In addition, analysis of AFC data indicates that borrowing by women is inclined to specific products/enterprises and access to credit in all loan products is lower for women compared to men. For example, livestock and fisheries development loans have been the most popular loan products for the last five years, and women account for less than 5 per cent while men account for over 40 per cent across the five years, with 35.8 per cent for 2018 (Annex 1). Despite their low access, loan repayment data analysis from AFC indicates that repayment by women is better compared to men (Figure 2).

**Figure 2: Arrears rate by age and gender**

Data Source: AFC Database

### 1.3 Rationale

The Sustainable Development Goals (SDGs) provide a universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity. SDG5 target 5.A sets a commitment to undertake reforms to give women equal rights to economic resources, and access to ownership and control over land and

other forms of property, financial services, inheritance and natural resources, in accordance with national laws.

The Constitution of Kenya requires the Government to put in place measures to strengthen inclusivity and redress past disadvantages among vulnerable segments of the country's population. Additionally, the Kenya Vision 2030 notes the plight of marginalized and vulnerable groups and proposes redress mechanisms, including providing financial support to women to raise their incomes and reduce the gap in incomes between men and women. One of the proposed solutions is to increase funding and training available to women entrepreneurs in Kenya. The Medium Term Plan (MTP) III identifies limited access to affordable credit as one of the key challenges affecting agriculture.

In addressing the gaps in financial inclusivity among vulnerable groups, the government has set up various initiatives such as the Women Enterprise Fund (WEF), Youth Enterprise Development Fund (YEDF), Uwezo Fund and Biashara Kenya Fund. These are aimed at economic empowerment of the vulnerable groups by providing accessible and affordable finance to these groups. Whereas there is recognition of the important role played by women in the agricultural sector in Kenya, none of these initiatives directly addresses the needs of women engaged in the sector.

It is against this backdrop that the Agricultural Finance Corporation (AFC) is undertaking affirmative financing targeting women through an initiative called Women Affirmative Access Window (WAAW). The initiative is intended to enhance financing of women across the entire agricultural value chain, including production, mechanization, post-harvest management, processing, value addition and access to local and export markets.

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A baseline survey was designed to seek a deeper understanding of access to agricultural finance by women engaged in agribusiness in Kenya. The survey was commissioned by AFC under the guidance of the Kenya Institute for Public Policy Research and Analysis (KIPPRA) and the Kenya National Bureau of Statistics (KSBS). It was supported by UN-Women, Food and Agriculture Organization (FAO) of the United Nations, and the European Union (EU). The baseline information will serve to: guide

in developing an effective and coherent strategy in programming of interventions by AFC, national and county governments and other partners; set a reference point for later comparison and measurement of achievements of set interventions; devising appropriate M&E tool; galvanizing and catalyzing discussion on means of addressing the challenges and build on the identified success stories; and providing information that can be used to assess broader agricultural financial access issues.

#### 1.4 Study Objectives

The broad objective of the study was to undertake a national baseline survey to understand the status of access to agricultural finance by women in Kenya. This was guided by the following specific objectives:

- a) To establish the status of access to agricultural finance by women in Kenya.
- b) To evaluate the needs, constraints, priorities and the level of satisfaction in agri-financing among women in Kenya.
- b) To assess the level of awareness of different agri-finance channels among women in Kenya.
- c) To assess the status of financial literacy and access to agri-finance information by women in Kenya.
- d) To assess various forms of collateral available for women accessing agri-financing in Kenya.
- e) To evaluate the key production activities, value chains, the markets for women in agribusiness and the source of financing.
- f) To determine the status of relevant indicators that will assist in tracking progress of the country's "Big 4" agenda (food and nutrition security) focusing on women.
- g) To determine the status of relevant indicators that will assist in tracking progress of the SDGs focusing on women.

This report presents the results of the baseline survey on access to agricultural finance by women engaged in agri-business in the country. The report layout is as follows: Chapter two highlights the policy, regulatory and institutional framework; Chapter three gives the literature review on women and youth in agriculture. Chapter four highlights the study methodology; Chapter five gives detailed survey findings while Chapter six looks at conclusions and recommendations.

## CHAPTER TWO

### 2. Policy Implications and Recommendations

#### 2.1 Policies

The Economic Pillar of Kenya's long-term development blueprint, the Vision 2030, recognizes agriculture as a key sector in achieving a 10 per cent economic growth from 2010 to 2030. In an effort to achieve equity, the Social Pillar of the Vision 2030 recommends 'devolved funds' targeting women, youth, persons with disability (PWDs), needy children, elderly persons in the country and all vulnerable groups and communities with high incidence of poverty, particularly those living in arid and semi-arid areas of the country. The Agricultural Sector Growth and Transformation Programme (ASTGS) 2019-2029 is key in supporting the agricultural sector as stipulated in the country's development blueprint. Under its flagships, ASTGS seeks to increase small scale farmer incomes, increase agricultural output and value addition, and boost household food resilience (particularly for women, youth, and PWDs). To achieve this, up to 80 per cent of costs could be financed through public private partnerships (PPPs) in the agro-processing and arable land flagships. The Government of Kenya (GoK) and its development partners would need to finance the remaining 20 per cent, including through subsidies, extension and the enablers. Under flagship No. 1, ASTGS will ensure minimum participation of 33 per cent women and 30 per cent youth out of 1,000 farmer-facing Small and Medium Enterprises (SMEs) benefitting from this programme. The strategy also seeks to increase award of contracts through gazetted procurement processes, standard contracts and competitive tender to women, youth and minorities under its flagship No. 4.

The Kenya Youth Agribusiness Strategy 2017-2021 has identified challenges that constrain the youth's participation in the agriculture sector, namely negative perception to agricultural activities; inadequate skills, knowledge and information; limited participation of youth in agricultural innovation, research, technology development and utilization; limited access to land for agri-business; limited financial services; limited access to market information and inadequate market infrastructure and entrepreneurial skills; inadequate policies to support youth in agri-prenuership; negative impact of climate change and weak environmental governance; and low levels of value addition.

The Strategy recognizes the existence of disparities in accessing agri-finance, which inhibits gender equality in agriculture. Moreover, formal financial service providers perceive lending money to the youth as risky due to their weak financial capacity, lack of collateral, poor savings culture, minimal financial track record, and lack of financial literacy. This calls for devising mechanisms for enhancing access to finances especially for youth and women. This includes leveraging with existing affirmative funds such as the Youth Fund, Women Enterprise Development Fund and Uwezo Fund, and other key institutions such as the Agricultural Finance Corporation (AFC) and various individual county governments to support agri-preneurship.. However, there is need to assess why disparities remain especially among women and youth in access to agricultural finance despite the existence of the highlighted initiatives.

The enactment of the Movable Property Security Rights Act 2017 is important in enhancing women's access to agri-finance, given that collateral is identified as a key barrier in securing finance from formal financial institutions. The Act enables persons who do not own real (immovable) property to secure credit by facilitating borrowing against their various types of movable assets, whether tangible or intangible, including future assets.

## **2.2 Regulatory Framework**

There are four key financial sector regulators relevant to women's access to agri-finance. These are: Central Bank of Kenya (CBK), SACCOs Societies Regulatory Authority (SASRA), Insurance Regulatory Authority (IRA), and Kenya Deposit Insurance Corporation (KDIC). The Central Bank of Kenya (CBK) is the main regulator of the banking industry, fiscal and monetary policy, promoter of price stability, and issues currency as stipulated in the Constitution of Kenya. The CBK formulates the monetary policy, controls financial markets and monitors money lending institutions. According to the Financial Stability Report (FSR) 2015, the CBK is also mandated to address gaps in financial inclusion by region, gender, age and education. However, the report points out that there still exists a number of gaps in attaining full financial inclusion, such as gender gap, rural-urban gap, age, income level, and education level. The SACCOs Societies Regulatory Authority (SASRA) regulates, supervises, governs the licensing, and promotes SACCO societies. The Insurance Regulatory Authority (IRA) is mandated to regulate, supervise and develop the insurance industry, promote consumer education and protection, and offer quality customer service. The Kenya Deposit Insurance Corporation (KDIC) has powers to guarantee deposits of insured institutions, carry out supervision of institutions, partake in problem/failing banks resolution process, and liquidate failed/closed financial institutions. The roles of the KDIC

are to administer a deposit insurance system, provide incentives for sound risk management in financial institutions, provide insurance against the less or part or all of deposits of a member institution, and promote and contribute to the stability of the Kenya financial system.

### **2.3 Institutions**

Kenya's financial sector comprises: 1) deposits-taking institutions (commercial banks, mortgage finance companies, deposit-taking savings and credit cooperatives (SACCOs) and micro-finance institutions (MFIs)); 2) non-deposit taking institutions (insurance industry, pensions industry, capital markets industry, and development finance institutions (DFIs) such as the Agricultural Finance Corporation (AFC)); and 3) financial markets infrastructure providers<sup>4</sup>. These institutions offer diverse financial products including agri-finance. However, the performance of agri-finance providers such as farmer-based deposit taking SACCOs whose memberships are predominantly reliant on agriculture and agri-business production are usually affected by changing weather patterns, and changes in commodity prices particularly tea, coffee and dairy.

To ensure inclusivity in financial access and to widen access to agri-finance, the Government of Kenya has put in place several formal initiatives to access finance for vulnerable groups and communities. The initiatives include: Women Enterprise Fund (WEF), Youth Enterprise Development Fund (YEDF), Uwezo Fund, and National Government Affirmative Action Fund (NGAAF). The WEF pursues women economic empowerment by providing collateral free loans at subsidized rates. The other functions include capacity building and market access for women entrepreneurs. The YEDF, which falls under the Ministry of Public Service, Youth and Gender Affairs seeks to create employment opportunities for young people through entrepreneurship, and encourages them to be job creators and not job seekers. The Fund does this by providing affordable financial and business development support services to organized groups of Kenyan youth, including youth who are women and are keen on starting or expanding businesses.

Specific to the agricultural sector, the Agricultural Finance Corporation (AFC) established under the Agricultural Finance Act assists in the development of agriculture and agricultural industries by offering loans and providing technical advice to farmers, cooperative societies, incorporated group representatives, private companies, public bodies, local authorities and other persons engaging in agriculture or agricultural industries. The AFC acknowledges that despite the

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<sup>4</sup> Source: Kenya Financial Stability Report 2017

crucial role women play in the agricultural sector, they have unequal access to agricultural assets and capital to run their agri-businesses. To enable women who do not have assets such as land title deeds to access loans from banking institutions and acquire technology in advancing their farming, the AFC launched a one billion Kenyan shillings innovative lending programme for women, dubbed Women Affirmative Action Window (WAAW). The WAAW programme will enable women to own and control productive assets, and promote women entrepreneurship in agriculture.

Given formality and collateral requirements from formal institutions, women also tend to prefer seeking financing from informal institutions. These include community-based savings groups, village savings and loan associations (VSLA), merry-go-rounds, and *chamas*. These groups operate mainly on the principle of reciprocity and trust. Digital money is also used to bridge the credit access gap among women. The Loan Apps in Kenya provide relatively instant unsecured loans by allowing one to access mobile credit and get paid through mobile service providers. However, despite informal institutions and digital money platforms providing relatively instant unsecured loans, they are mostly in small amounts, mostly ranging from Ksh 500 to Ksh 50,000, which may be insufficient for substantial investments in agriculture.

## CHAPTER THREE

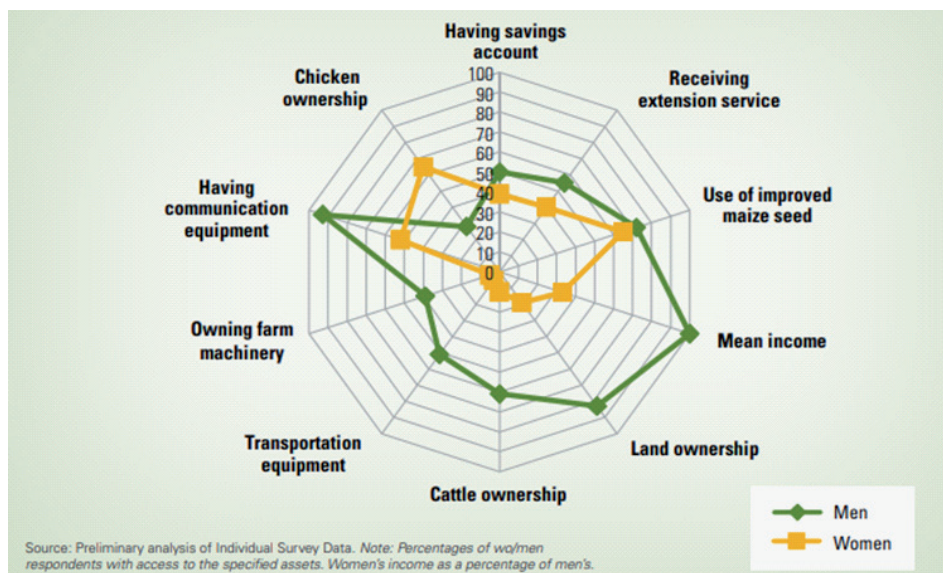
### 3. Women and Youth in Agriculture

#### 3.1 Women, Youth and Access to Agricultural Finance

Despite the significant improvement in access to finance over the period 2006-2019, financial inclusion gaps persist as measured by sex, age, education, residence, income, livelihoods and wealth quintiles. However, these financial inclusion gaps are narrowing. While the financial access gap between male and female is closing, disparities still remain. Access to finance by males is higher than that for females in the population. Access to finance is highest for the 26-35 year old segment of the population. Majority of respondents aged 18-25 years and those over 55 years are more financially excluded (CBK et al., 2019).

Research done by the World Bank in 2012 in the country (Figure 3) shows that the mean income for men was three times higher than for women. A higher percentage of men was engaged in off-farm activities compared to women, and they earned twice as much income as women earned from these activities.

**Figure 3: Access to resources by rural women and men in Kenya**



Source: World Bank (2012), <http://documents.worldbank.org/curated/en/484001468041385394/pdf/695320BRIoARD000Box370017BooPUBLICo.pdf>

Over half of the men had a savings account, whereas a smaller proportion of women had an account. About a third of men and a fourth of women had applied for credit, with a high success rate for both. Men's credit volumes were however larger.

Increasing opportunities to finance and other resources such as land, technology, labour and water will help in advancing food security. In sub-Saharan Africa, it has been calculated that agricultural productivity could increase by up to 20 to 30 per cent if women's access to agricultural resources was equal to men's (FAO, 2011).

According to FAO, the main challenges faced by youth seeking greater participation in the agricultural sector and identified by the youths themselves are access to knowledge, information and education, access to land, access to financial services, access to green jobs, access to markets, engagement in policy dialogue (FAO and IFAD, 2014). Youth lack access to resources such as land, access to financial services such as savings and loans to start agriculture activity.

### **3.2 Financial Discrimination of Women, Youth Access to Credit**

The extent to which institutions reach out to women and the conditions under which they do vary significantly. Compared to men, women have less: a) control over resources accepted as collateral; b) access to information; c) tend to be more risk averse; and d) face social and cultural barriers in accessing credit while loans to women are typically smaller than those granted to men for similar activities (Fletschner, 2008; World Bank, 2008b; Ospina, 1998, and Baydas et al., 1994) which are similar to youth challenges of access to knowledge, information and education, access to land, access to financial services, access to green jobs, access to markets, engagement in policy dialogue (FAO and IFAD, 2014).

### **3.3 Women, Youth and Agricultural Livelihoods**

Women and men, depending on cultural and social backgrounds, perform different roles and have varying responsibilities in agriculture; for example in crop production and management. A better understanding of these differences will help address the prevailing gender issues. For instance, in making decisions about livelihoods, men and women have different perceptions of what is important. Evidence shows that significantly more is spent on food when a higher percentage of income accrues to women compared to men (World Bank et al., 2009). Therefore, improving women's access to financial services can significantly improve productivity in agriculture, increase food availability for families, and raise income levels, which in turn would further enhance food and nutritional security.

Kenya has about 13.7 million youth, who account for 35.4 per cent of the total population and constitute 60 per cent of the total labour force, and of which 10 per cent are directly participating in the agricultural sector (World Bank, 2014). It is estimated that 64 per cent of the unemployed Kenyans are youth, with majority moving away from the agricultural sector to fast growing non-agricultural sectors in urban areas (MoALF, 2017).

The global youth population growth does not seem to be commensurate with the available employment and entrepreneurial opportunities for youth, particularly those living in developing countries. The employment opportunities remain limited, poorly remunerated and of poor quality (FAO, CTA and IFAD, 2014). The Youth Division of the Africa Union Commission indicates that about 65 per cent of the total population of Africa is below the age of 35. About 10 million youth enter the labour market annually. Youth unemployment rate in Sub-Saharan Africa was 11.8 per cent in 2012 and was projected to drop to 11.7 per cent in the years to come. While agriculture plays a vital role in Africa's economic growth and social improvement, contributing the highest percentage of the workforce population (about 65%, and about 30% of GDP in most African countries), the current trend of youth participation in the sector is on the decline (Africa Agriculture Status Report, 2015).

### **3.4 Gendered Participation in Value Chains**

According to Chan and Barriento (2010), in studies funded by the Bill & Melinda Gates Foundation, fewer women are members of company contract farming schemes than men. Women are therefore less likely to benefit from companies' smallholder sourcing and support programmes than men. For instance, a study in Kenya on fresh fruit and vegetable sector established that 10 per cent of smallholder contracts were with women farmers. In Senegal, a separate case study on French bean contract farming established that there were no female-headed households involved at all.

Related cases in the study point to women comprising only 29 per cent of membership and 9 per cent of management in agricultural cooperatives in Kenya. Similarly, only two (2) per cent of women (as opposed to 13 per cent of men) are members of agricultural cooperatives, and men are five times more likely than women to hold a leadership position within a cooperative (Chan and Barriento, 2010). This implies that women are underrepresented in both membership and governance of agricultural cooperatives, yet many established companies' source from established groups.

### **3.5 Opportunities in Promoting Women's and Youth Access to Agricultural Finance**

Women's low participation in national and regional policy making, invisibility in national statistics and low participation in extension services in Kenya have meant that those issues of most concern to women have been neglected in the design and implementation of many development policies and programmes (World Bank, 2007).

Putting gender equality at the heart of agriculture is to empower women, as well as men, giving the same rights to agricultural assets, right to earn a living and participate in decision-making. Additionally, there is evidence that increasing women's agricultural productivity and access to markets can result in economic benefits at local and national levels, and immediate benefits in the household and the community (World Bank, 2007). In Malawi, bridging the gender gap in agricultural productivity will potentially lift 238,000 people out of poverty (UN Women, UNDP, UNEP, World Bank, 2015).

The government, through the Ministry of Agriculture, Livestock and Fisheries launched the Kenya Youth Agribusiness Strategy 2017-2021 which identifies strategic issues, objectives and interventions that target to integrate youth into the agriculture sector. Youth account for 35.4 per cent of Kenya's population, with 1 million youth entering the labour market. They offer a dynamic work force that is innovative, and has high uptake of technological know-how and the ability to take on significant levels of risk. The agricultural sector presents a huge opportunity for the creation of employment to absorb the youth and ensure achievement of food security for future generations (MoALF, 2017).

## CHAPTER FOUR

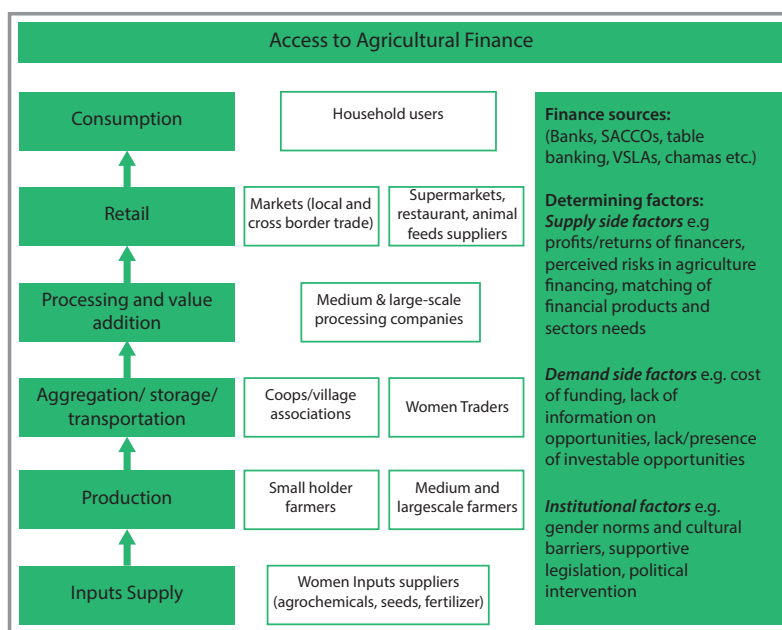
### 4. Methodology

This section outlines the overview of the process adopted in addressing the objectives of the survey. It begins with approach and coverage, data collection approach employed, and the survey methodology.

#### 4.1 Approach and Coverage

This study is a national baseline survey on women's access to agri-finance in Kenya and focused on different activities within the agricultural value chains. As shown in Figure 4 below, women are involved in various activities within the agriculture value chain, including providing labour; sale of farming inputs such as agrochemicals, seeds and fertilizer; aggregation; agro-transportation; trade; and agro-processing though mostly restricted to cottage industries and activities in the local market.

**Figure 4: Women activities within agricultural value chains**



Source: Adapted from Peace and Collaborative Development Network - PCDN (2018) with authors modifications

In the study, comparisons on women's access are also made with other actors, mainly the youth and men, to establish any gaps.

## **4.2 Data Collection**

To gather data to address the objectives of the survey, two data collection approaches were adopted: primary data collection and secondary data collection.

### **4.2.1 Secondary data**

A comprehensive analysis of the 2019 FinAccess Household Survey was conducted to assess women's access to agricultural finance. The 2019 FinAccess Household Survey is the fifth in a series of surveys that measure the financial inclusion landscape (access, usage, quality and impact) in Kenya (CBK et al., 2019). The four previous surveys were conducted in 2006, 2009, 2013 and 2016. The 2019 FinAccess data collection was carried out between October 2018 and December 2018 for a period of 75 continuous working days. The survey was conducted by various stakeholders including the Central Bank of Kenya (CBK), Kenya National Bureau of Statistics (KNBS) and Financial Sector Deepening (FSD) Kenya.

Additional secondary data from AFC over the past five years was analyzed to assess the status of women's access to agricultural finance. Data was obtained from AFC's banking system and analysed to get insight on women access to agricultural finance. The data was analysed to obtain insight in terms of age, sex, loan amount, the enterprises, repayment status, and combination of various variables per age and gender.

### **4.2.2 Primary data**

To gain an indepth understanding, support and expand on findings from the secondary data sources, primary data was collected. This was collected using women's focus group discussions (FGDs) and key informant interviews (KII) for women in agri-business in major markets to further assess opportunities and challenges in accessing agricultural finance. In addition, case studies were conducted to show case models of access to agricultural finance by women.

## **4.3 Sampling Procedures**

### **4.3.1 Secondary data**

The 2019 Fin Access Household Survey sample was designed to achieve a statistically valid, nationally representative sample. It was drawn based on the KNBS National Household Master Sample Frame, the National Sample Surveys

and Evaluation Programme (NASSEP V). NASSEP V uses counties as the first level stratification. The counties are then further stratified into rural and urban strata apart from Nairobi and Mombasa counties which are classified as urban areas only (CBK et al., 2019). The 2019 FinAccess Household Survey targeted household individuals aged 16 years and above. The selection of eligible individuals at the household level (one per household) was done using an inbuilt Computer Aided Personal Interview (CAPI) KISH grid. The number of households interviewed were 8,669. The analysis on access to agricultural finance focuses on agricultural households, which are 3,041 in number.

Data from AFC for the last five years was obtained from the corporation's banking system and analysed to get insight on women access to agricultural finance. The entire loan data set was used. To ensure data validity, the data was cleaned to remove borrowers captured as corporates or unclassified in terms of gender. Further, outliers in terms of age were removed before data analysis.

#### **4.3.2 Primary data**

The FDGs sample survey covered 25 counties across different livelihood zones in Kenya (Annex 2). The initial phase of selecting the sample counties was mapping of the livelihood zones/agro-ecological zones within the country. The objective of the mapping process was to provide unequivocal information on the main agricultural activities and their distribution in the country. The mapping process identified eight regions: Coast, Nyanza, Western, Rift Valley (North, Central and Lower), Central, Eastern (Upper), Eastern (Lower) and North Eastern regions from which 25 counties were selected. Various stakeholders, including the Kenya National Bureau of Statistics, collaborated in providing expertise and information on selection of the counties to be sampled.

Within the counties, stratification into sub-counties was carried out guided by the profile of women in the different geographical regions. The stratification was according to similarities in women's key geographic, demographic and economic indicators. These include: agricultural livelihood activities (i.e. crop farming, pastoralism, agroforestry, aquaculture, etc); size of agricultural enterprises; ethnicity; and residence (rural and urban areas). The sampling frame of the target audience was developed with the help of AFC field offices and KNBS county statistical officers in respective counties. A sample of 20 women in each county was purposively<sup>5</sup> developed. The sampling frame was drawn to ensure focus groups represent the relevant variations in: financial inclusion access over the years, age, level of participation in agricultural value chain, and religion. Overall, the survey conducted 50 FGDs with 500 women participants (Annex 3). Other

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5 The maximum number of strata in a county was two, hence 10 women per strata.

than the FGDs, data was collected from 50 women (two per county) engaged in agri-business in major markets. Participants were women of the age 18 years and above participating in different agricultural value chains and at different levels. Lastly, 6 case studies were carried out in Kisumu, Nakuru and Meru counties.

## 4.4 Data Analysis

### 4.4.1 Primary data

The study used a comprehensive multi-step descriptive process in the analysis, which included: 1) mapping of FGDs and KII participants; 2) assessment of status of access to agri-finance; 3) assessment of needs, constraints, priorities and the level of satisfaction in agri-financing; 4) assessment of known agri-finance channels, financial literacy and collateral available for women accessing agri-financing in Kenya; and 5) assessment of key production activities, value chains, markets and the source of financing.

The Grounded Analysis approach was used in the analysis of qualitative data whereby data/information gathered from discussions and conversations was allowed to “speak for itself”.

### 4.4.2 Secondary data

To achieve the study objectives, both descriptive and regression analysis approaches were used to analyse the secondary data. Two regressions were estimated as described below:

#### a) Logit model: Determinants of access to agricultural finance

The binary logit model is used to estimate models in which the dependent variable is a binary variable that measures whether a certain characteristic of interest is present or not. Thus, the dependent variable in a binary logit model simply measures the probability of “success” and the probability of “failure”. In this study, we estimate the probability of an individual accessing agricultural finance. Thus,  $Pr(Y=1/x)$  represents the probability that one accessed agricultural finance conditional on a set of explanatory variables ( $x$ ) while  $Pr(Y=0/x)$  is the probability of those who did not access agricultural finance. These two probabilities are expressed as follows using the logistic model:

$$Pr(Y=1/x) = \frac{e^{f(z)}}{1 + e^{f(z)}} \quad (1)$$

$$Pr (Y=0/x) = 1 = e^{f(Z)}/1 + e^{f(Z)} = 1/ 1 + e^{f(Z)} \quad (2)$$

$$\text{Where } f(Z) = \beta_o + \beta_1 x_1 + \dots + \beta_k x_k + u \quad (3)$$

Derivation of the logit model is based on the odds ratio,  $\theta$ . The odds ratio is the ratio of  $Pr (Y = 1/x)$  to  $Pr (Y = 0/x)$ . That is:

$$\text{Odds ratio } (\theta) = [(Pr (Y = 1 \text{ given } x)) / [Pr (Y = 0 \text{ given } x)]] \dots\dots\dots (4)$$

Substituting equations (1), (2) and (3) into equation (4), and simplifying leads to the odds ratio given as:

$$\theta (x) = e^{(\beta_o + \beta_1 x_1 + \dots + \beta_k x_k + u)} \quad (5)$$

The term “logit” refers to the natural logarithm of the odds ratio (log-odds), simply put;  $\text{logit} = \log \theta (x)$  (Elias et al., 2015). Thus, obtaining the natural logarithm of the odds ratio in equation (5) leads to the logit model:

$$\text{Log } \theta (x) = \beta_o + \beta_1 x_1 + \dots + \beta_k x_k + u \quad (6)$$

The coefficients are the parameters to be estimated, and they measure the change in log-odds of  $Y$  for every unit change in the associated  $x$ -variable. However, of more interest to interpret in the logit model are the marginal effects that measure the change in probability that an individual has access to finance given the explanatory variable concerned, holding other factors constant (Elias et al., 2015). The estimation technique for the logit model is the maximum likelihood estimator (MLE). MLE aims to find the maximum log-likelihood value that maximizes the probability of observing an outcome of interest conditional on the explanatory variables.

*b) Multinomial logit model: Determinants of access to agri-finance from formal prudential, formal non-prudential, excluded and informal financial institutions among the agricultural population*

Whereas the binary logit model assumes that the dependent variable has only two possible outcomes, “success” and “failure”, the multinomial logit model on the other hand assumes more than two outcomes for the dependent variable. The outcomes are also not ordered or lack a natural ordering (Brooks, 2008; Chinwuba et al., 2016). One of the cases is thus taken as the base or reference category against which the others are compared with. The study applies the

multinomial logit model because it is the standard way for estimating unordered, multiple response category dependent variables (Martey et al., 2012). The model also assumes independence across the choices (Woolridge, 2016).

The dependent variable can be assumed to take one of the  $j$  categories or alternatives such that  $j = 1, 2, \dots, k$ . the probability of observing outcome  $M$  given  $X$  in a probability model for  $Y$  is given as:

$$Pr(Y=M/X) = [e^{f(Z)}] / \Sigma (1 + e^{f(Z)}) \quad (9)$$

Having estimated the multinomial logit, the marginal effects are then computed and interpreted as change in probability for observing outcome  $i$  for the explanatory variable concerned, with reference to the outcome that is used as the base category.

## CHAPTER FIVE

### 5. Findings

This chapter presents the survey findings on financial access as indicated by respondents on outcome indicators.

#### 5.1 General Demographics

The FinAccess dataset is designed to achieve a statistically valid and reliable nationally representative sample of individuals aged 16 years and above (CBK et al., 2019). The total agricultural population comprises of 7,362,289 (48.5%) males and 7,808,804 (51.5%) females (15,171,093 people). Overall, 75.4 per cent of the respondents reside in rural areas while 24.6 per cent reside in urban areas. The survey demographics are further broken down as shown in Table 1.

**Table 1: Survey demographics by age and residence**

	Male 16-34 (%)	Male 35-64 (%)	Male >65 (%)	Female 16-34 (%)	Female 35-64 (%)	Female >65 (%)	Total (%)	N
<b>Rural</b>	66.2	75.2	87.2	73.3	77.7	85.9	75.4	11,445,966
<b>Urban</b>	33.8	24.8	12.8	26.7	22.3	14.1	24.6	3,725,127
<b>Total</b>	100	100	100	100	100	100	100	<b>15,171,093</b>

*Data Source: 2019 FinAccess Household Survey*

The distribution of the population is done by gender, area of residence and among principal age groups (16-34 years; 35-64 years; 65 years and above). This is motivated by the desire to specifically observe situations in which immediate action on access to agricultural finance is needed most.

#### 5.2 Objective 1: Status of Access to Agricultural Finance

The survey classified access to agricultural finance on the basis of registration and regulation (formality and informality), and the excluded (Table 2). Expounding on the excluded classification, an individual is classified in the “excluded sources” category if he/she reported to have gained finance for agricultural purposes from family, friends, neighbours or keep in secret places. Individuals who reported not

using any form of agricultural financial service and product are classified as being “totally excluded”.

In all, 14.66 per cent of the agricultural population has access to agri-finance (formal and informal sources). 13.85 per cent have access to formal agri-finance while 9.61 per cent of the agricultural population accesses agri-finance through formal prudential sources. 84.81 per cent of the agricultural population do not use any form of agricultural finance while 0.53 per cent obtain agri-finance from “excluded sources”.

**Table 2: Level of access to agri-finance (loans, savings and insurance for agriculture related activities) - index**

Classification	Definition	Institution type	Proportion (N=15,171,093)
Formal (prudential)	Agricultural financial services offered through prudentially regulated service providers and are supervised by independent statutory agencies (CBK, CMA, IRA, RBA and SASRA)	<ul style="list-style-type: none"> <li>Commercial banks (includes mobile bank accounts such as KCB M-Pesa, MCo-op Cash and M-Shwari)</li> <li>Microfinance banks</li> <li>Capital market intermediaries</li> <li>Insurance service providers</li> <li>Deposit taking SACCOs (DTSS)</li> </ul>	9.61
Formal (non-prudential)	Agricultural financial services offered through service providers that are subject to non-prudential oversight by government departments/ministries with focused legislations or statutory agencies	<ul style="list-style-type: none"> <li>Mobile financial services (MFSs)</li> <li>Postbank</li> <li>NSSF</li> <li>NHIF</li> </ul>	4.20
Formal (registered)	Agricultural financial services offered through providers that are legally registered and/or operate through direct government interventions	<ul style="list-style-type: none"> <li>Credit only microfinance institutions (MFIs)</li> <li>Non-deposit taking SACCOs</li> <li>Hire purchase companies</li> <li>Development financial institutions (DFIs) e.g. AFC, HELB, ICDC and JLB</li> </ul>	0.04

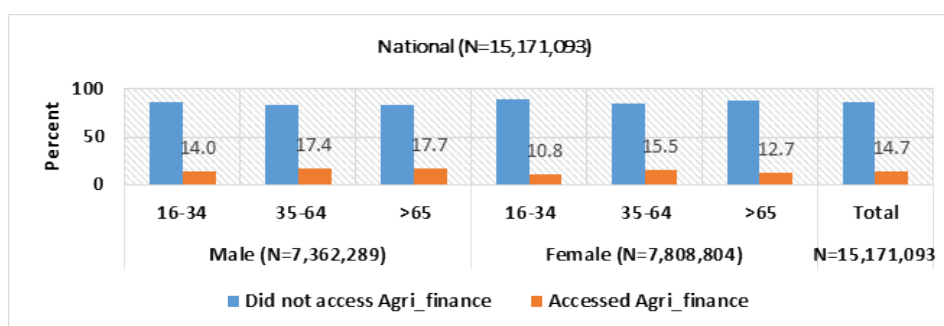
Informal	Agricultural financial services offered through forms not subject to regulation but have a relatively well-defined organizational structure	<ul style="list-style-type: none"> <li>• Groups e.g. ASCAs, chamas &amp; ROSCAs</li> <li>• Shopkeepers/supply chain credit</li> <li>• Employers</li> <li>• Moneylenders/shylocks</li> </ul>	0.81
Excluded sources	Individuals who report using agricultural financial services only through family, friends, neighbours or keep in secret places	Social networks and individual arrangements (e.g. secret hiding place)	0.53
Totally Excluded	Individuals who report not using any agricultural financial services	None	84.81

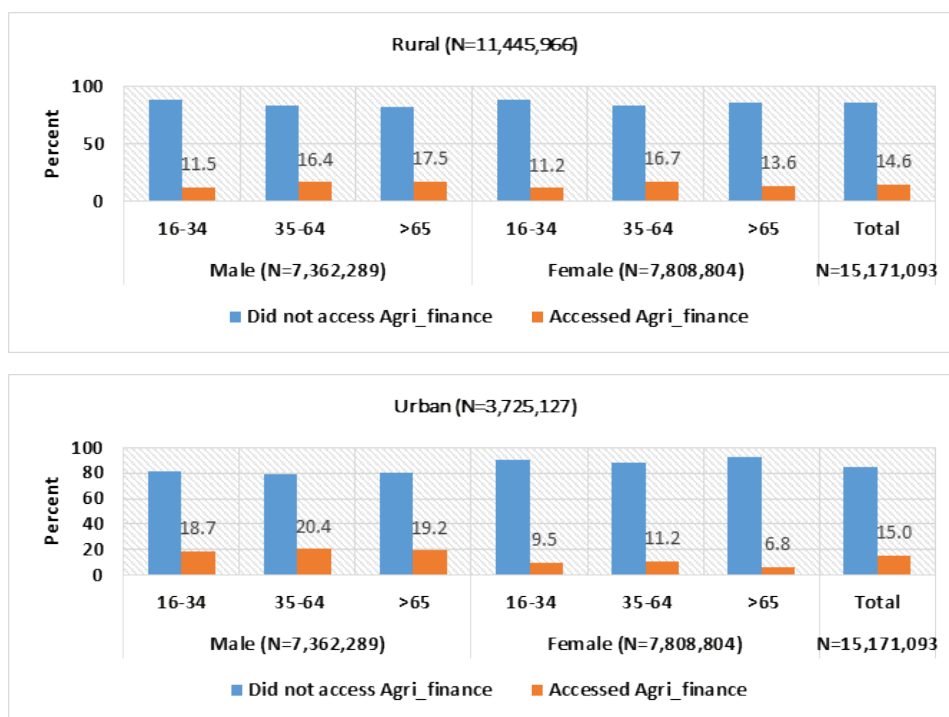
Source: 2019 FinAccess Household Survey with authors modifications

Assessing access to agri-finance by gender across various age groups indicates that it is generally low for both women and men across the country. The levels of access are, however, lower for women with access being lowest for women above 65 years residing in urban areas (6.8%, Figure 5). The lowest access levels among men is observed for those between 16 and 34 years residing in rural areas (11.5%).

Women in rural areas are observed to have higher access to agri-finance than their counterparts in urban areas. Confirming the FinAccess findings, observations from the FGDs showed that other than formal prudential sources, women in rural areas were more active in accessing agri-finance from groups such as table-banking groups and *chamas* than those in urban areas. Other financial sources that rural women access include: County Trade Loans; Uwezo Fund; SACCOs; Women's Enterprise Fund; and NGOs particularly One Acre Fund. On the other hand, women in urban areas were observed to rely more on financial services from banking institutions.

**Figure 5: Proportion of people who have access to agri-finance by gender-age cohorts**





Data Source: 2019 FinAccess Household Survey

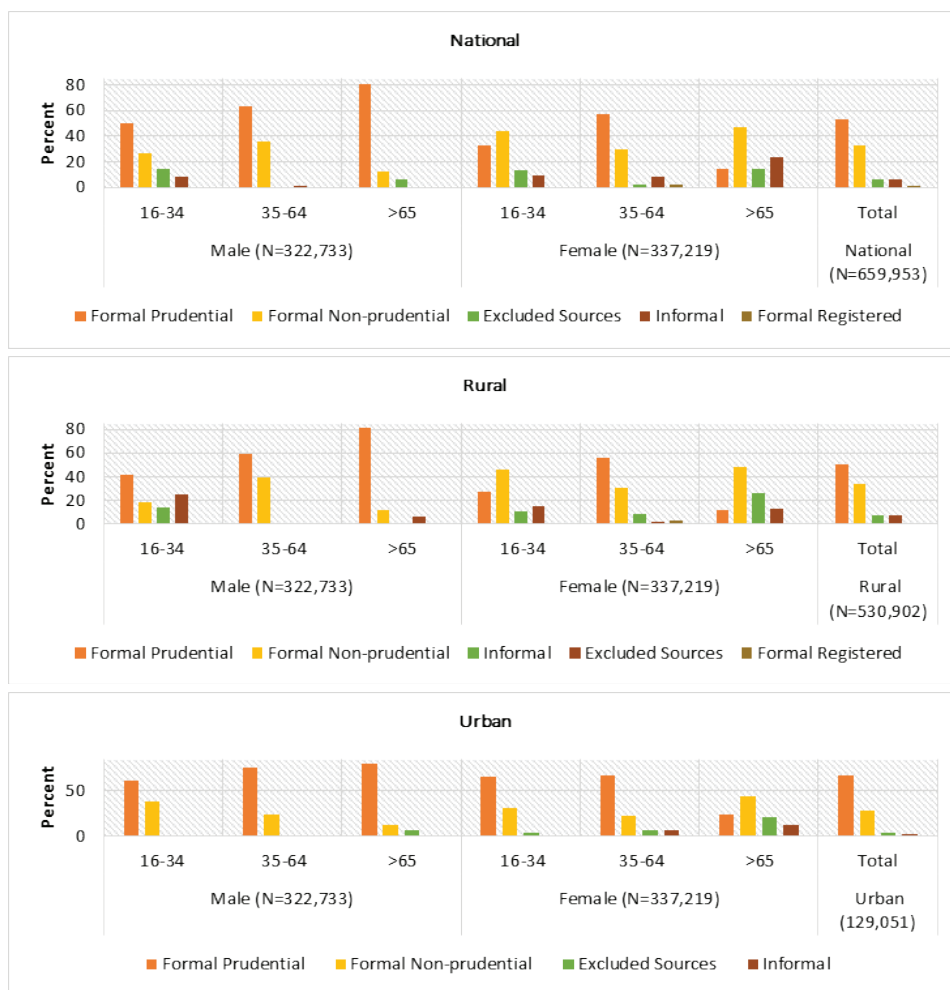
### 5.2.1 Access to Savings, Credit and Insurance

Access to finance is further narrowed down to assess access to agricultural loans, savings and insurance. Comparing access to the different aspects of agri-finance yields interesting results.

Access to agri-loans is recognized as a key element of access to agricultural finance. At the national level, men have higher access to formal prudential sources of loans with men of ages 65 and above having the highest access (81%). Similar trends are observed in both urban and rural areas with men's access to formal prudential agricultural loans being higher in urban areas (Figure 6).

Women source agricultural loans from a mix of sources. Women residing in rural areas favour formal non-prudential sources of loans, with the highest being among women above 65 years (48.3%). A favourable share of women of ages 35-64 residing in rural areas also access loans from formal prudential sources (55.8%).

**Figure 6: Proportion of people who have access to agri-loans by gender-age cohorts**



Data Source: 2019 FinAccess Household Survey

There are also more women accessing loans from informal sources in rural areas compared to women in urban areas and to men in general. In urban areas, as earlier highlighted, more women tend to obtain loans from formal prudential sources, with the highest being those between ages 35-64 years (66.5%).

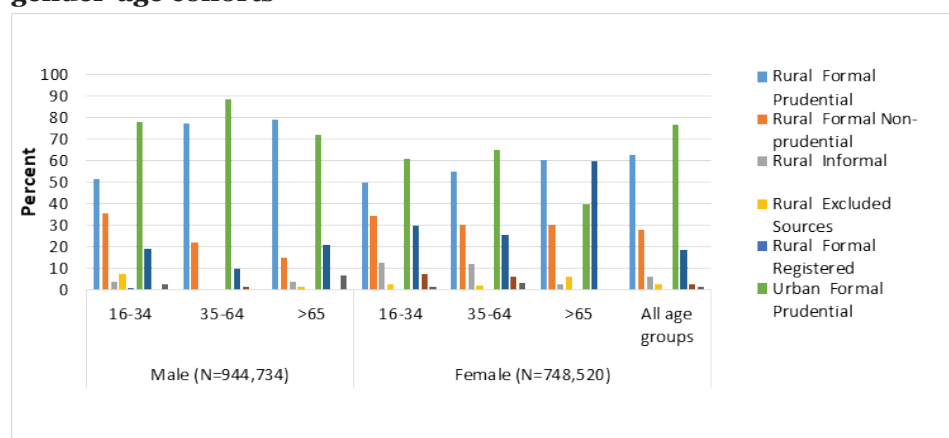
Box 5.1 presents a case study which illustrates the pooling of finance from multiple sources.

**Box 5.1: Case study: access to multiple sources of finance by women**

This case study is of a woman who runs Moses Farm, a *smart farm* producing tomatoes, carrots and kales through irrigation. She markets her produce through *farm-gate* sales. The 30 acres of land that her husband inherited from his parents in 2008 became the linchpin of Moses Farm as a production-oriented agri-business. The sources of finance for the farm activities include her personal savings, joint savings with the husband, Ksh 10,000 from *chama* and Ksh 20,000 from Meru County Microfinance. To acquire a loan from the Meru County Microfinance, one had to pay a one-off Ksh 200 legal fee, Ksh 1,000 for loan processing, household assets and provide two guarantors. The microfinance funds are repayable over a period of one year at the rate of 12% interest per annum. Although she was fortunate to have productive land for farming, spousal support and diverse sources of financing, she struggled with variable weather, which affected water supply to her farm. The lack of technical training, varying market prices, crop pests and diseases also adversely impacted her. She has noted that most women in her locality are not exposed and are financially illiterate. Moreover, some of them are not allowed by their spouses to take loans, some fear auction by the lenders in case they fail to repay the loans, while others are unable to meet the requirements set by lenders. She also noted that most women are given less money than they apply for. She recommends sensitization on financial literacy, waiving of loan guarantee deposits and reduction of loan charges.

Access to savings is another key element of agricultural finance. Nationally, 92.4 per cent of the agricultural population save through formal sources of finance (Figure 7). The analysis in Figure 7 further shows that men primarily save through formal prudential sources, with the highest being among men of 35-64 years in urban areas (88.9%). Women use a mix of both formal and formal non-prudential sources to save. Women are also use informal sources of finance to save than men do, with the highest proportion being among women of ages 16-34 years in rural areas (12.5%). These observations are confirmed by findings from the FGDs where mobile money platforms (formal non-prudential) and *chamas* (informal) were popular savings avenues among women.

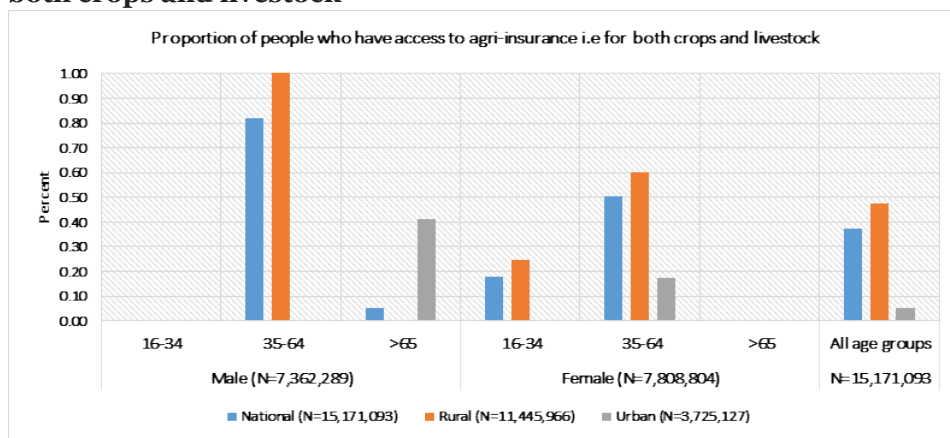
**Figure 7: Proportion of people who have access to agri-savings by gender-age cohorts**



Data Source: 2019 FinAccess Household Survey

Access to insurance is a vital element of finance through its guarantee of financial protection. Likewise, access to agri-insurance is vital to the success of farmers and financial service providers. The uptake of insurance is generally low for both women and men at less than 1 per cent of the total agricultural population (Figure 8). Despite the low numbers, the uptake of agri-insurance is higher among men (N=33,057) compared to women (N=23,343). Across age groups, the uptake is higher among the population of ages 35-64 among both men and women.

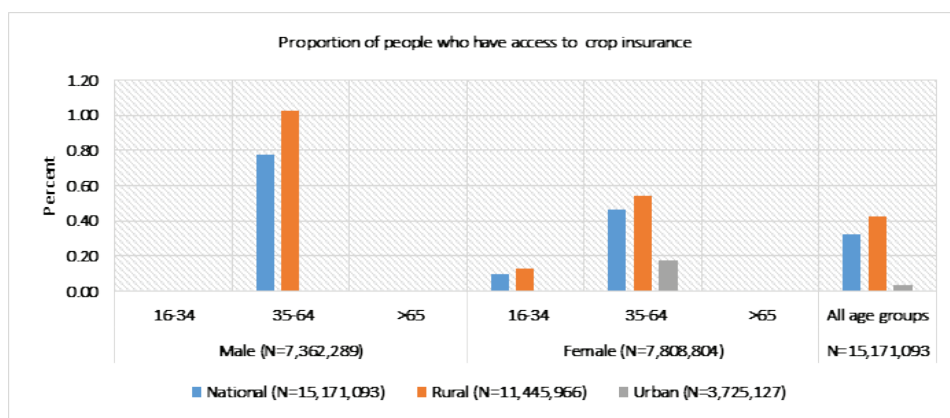
**Figure 8: Proportion of people who have access to agri-insurance for both crops and livestock**



Data Source: 2019 FinAccess Household Survey

Further analysis of insurance uptake among the agri-insurance alternatives is presented in Figures 9 and 10.

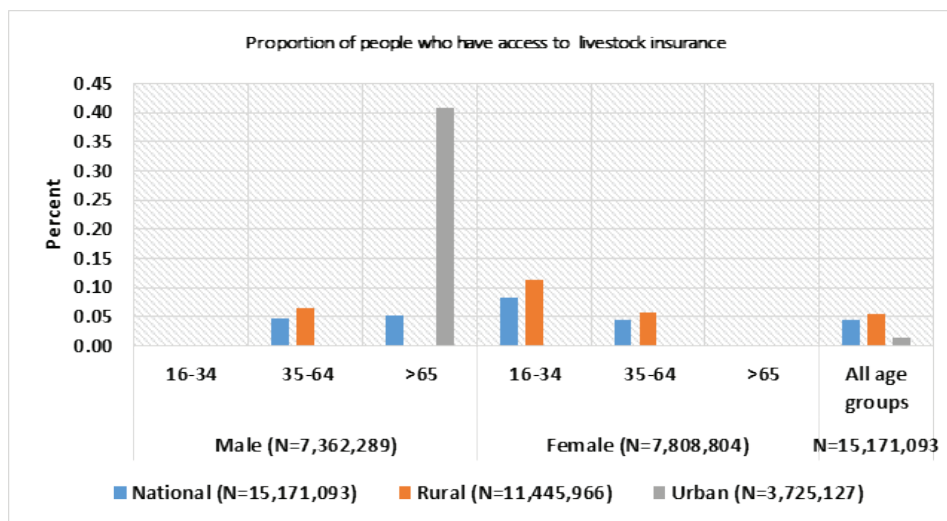
**Figure 9: Proportion of people who have access to livestock insurance**



Data Source: 2019 FinAccess Household Survey

Uptake of livestock insurance among the agricultural population as a coping mechanism is highest among men of ages 35-64 in rural areas (1.09%) followed by women of the same age group (0.6%). Interestingly, though marginal, crop insurance uptake is higher among men of above 65 years in urban areas (0.41%). Among women, the highest uptake of crop insurance is among women of ages 16-34 residing in rural areas at 0.11.

**Figure 10: Proportion of people who have access to crop insurance**



*Data Source: 2019 FinAccess Household Survey*

The importance of agricultural insurance cannot be over-emphasized. Agri-insurance reduces the risk for farmers in their production and marketing activities and, thereby, reduces the default risks for financial service providers. Agri-insurance can be a catalyst for investment in development of sustainable instruments by providers to serve agriculture. Privately provided credit-linked insurance has been shown to serve mutual interest of farmers, financial service providers and insurers. Access to agri-finance has the ultimate result of unlocking credit to farmers for improved productivity (Meyer et al., 2017).

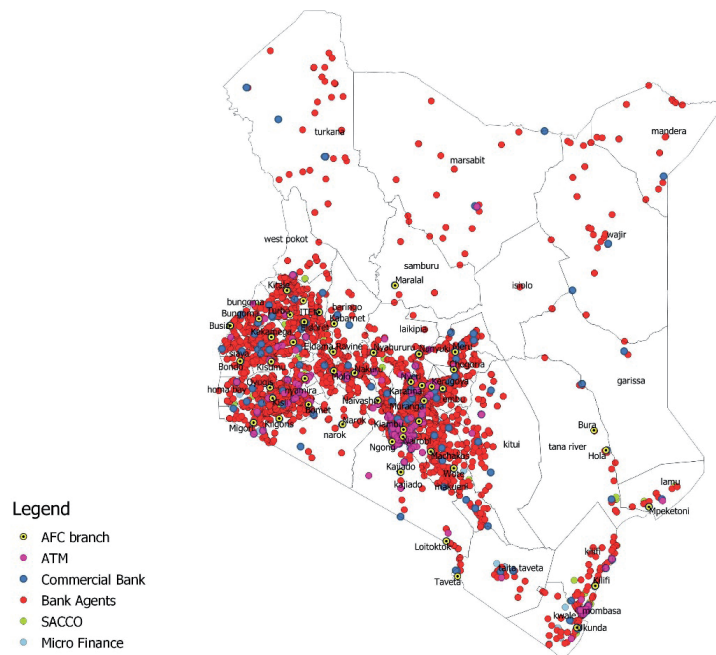
Box 5.2 presents a case study on how access to insurance has helped a woman in agriculture cope with shocks.

**Box 5.2: Cushioning women agribusiness**

A mother of three children and two adopted orphans faced numerous challenges from her husband's family and community's norms when she lost her spouse in a road accident. The adversities in the rural home made her relocate to Kisumu town where she approached a cereal trader who accepted to advance a *debe* of maize, millet, sorghum and rice on daily basis. She would sell and repay at the end of every day. In 2003, she got a compensation of Ksh 43,000 by an insurance firm for the car accident that caused the death of her husband. She used the money to join merry-go-round, save and take loans to invest in her business. The support and goodwill she got from traders and well-wishers enabled her to form her business model. She established retail and wholesale cereals business and could sell her products on credit payable every three days. The profits she made in her business enabled her to purchase a plot and build a family home. Through these assets, she was able to apply for AFC loans, initially getting Ksh 200,000 and lately getting Ksh 600,000 in 2019. While she appreciates the loan package from the AFC, she contends that many women are excluded from AFC loans due to the requirements. She recommends that women should be trained in financial literacy, bookkeeping and business management.

### 5.2.2 Spatial effects in access to finance

Research has shown that there is a spatial effect on access to finance (Zhao and Evans, 2016) and there is geographical variation in access to finance. Agarwal and Hauswald (2010) find that the proximity of borrowers to lenders facilitates access to local information, which has an effect on availability and pricing of credit. It has been found that functional distance between financial institutions and borrowers worsens financing constraints, while smaller operational distance does not always enhance credit availability (Alessandrini et al., 2008). The advent of agent banking and information technology changed the geographical diffusion of banking structures and reduced the operational distance between financial institutions and their clients/borrowers (Alessandrini et al., 2008). There is a wide distribution of financial institutions in Kenya as shown in Figure 11. However, the distribution is sparse in northern and coastal regions of Kenya. The data shows the immense role that agent banking has played in enhancing coverage of financial service touch points.

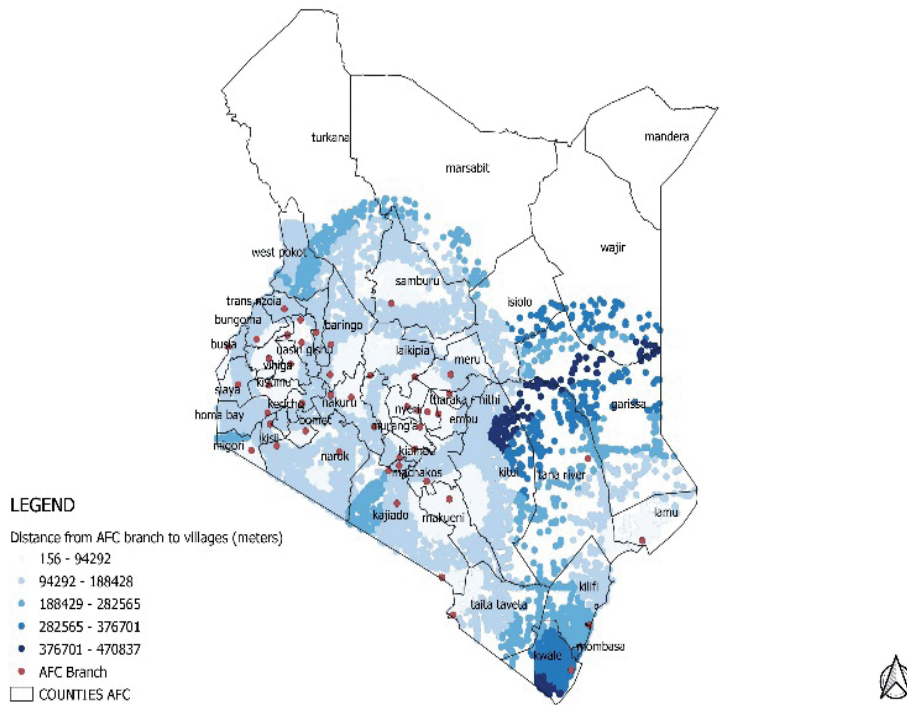
**Figure 11: Distribution of financial institutions and facilities in Kenya**

*Source: Authors compilation using data from 2019 FinAccess Household Survey*

Based on this background, the study team undertook spatial analysis to map out distribution and location of AFC branches against population distribution (Figure 12). The figure shows that the AFC branch network coincides with regions that have a high population density. Spatial analysis further reveals the location distribution of AFC branches in regions with high and above average agro-potential (Annex 4). Given AFC's mandate in the agricultural sector, this outcome in distribution of the branch network would be perceived as logical. However, when irrigation and livestock farming is taken into account, there is need to relook at mechanisms for AFC's presence in arid and semi-arid regions. Alvarado et al. (2017) support this line of thought, noting the need for distribution of financial services from core regions to enhance the development potential of less developed areas.



**Figure 13: Distance to villages from AFC branches**

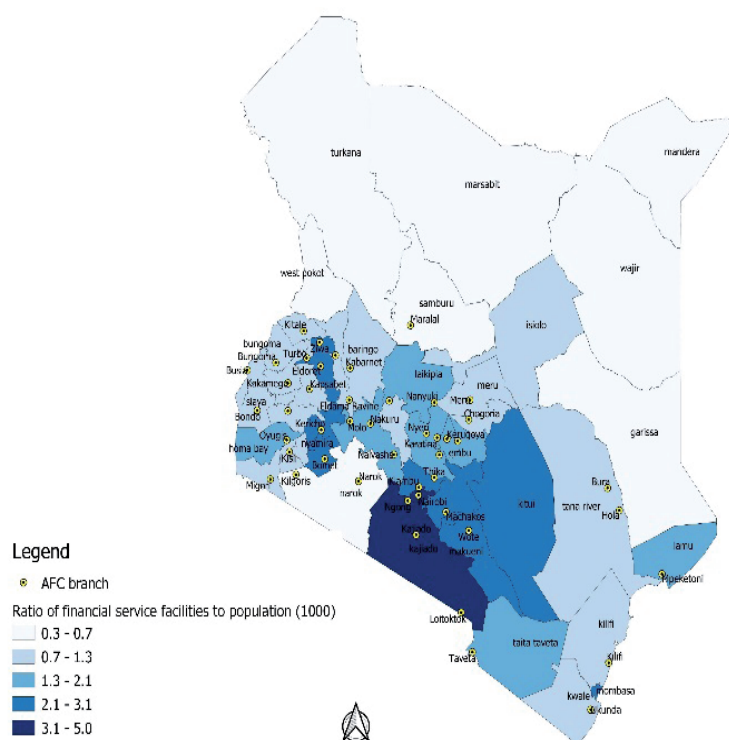


Source: Authors compilation using data from AFC branch network and <https://africaopendata.org/dataset/kenya-population-density-2015/resource/a57fce6f-b00c-428f-b1f9-86855c64b9df>

Figure 14 provides analysis of FinAccess as the ratio of number of financial service institutions<sup>6</sup> to a population of 1,000 people. It shows that the population in Nairobi and Kajiado counties are best served with a ratio of 5 per 1000 people.

<sup>6</sup> Commercial banks, bank agents, ATMs, SACCOs, micro finance institutions and mobile money agents.

**Figure 14: Map: ratio of financial service facilities to 1,000 population**

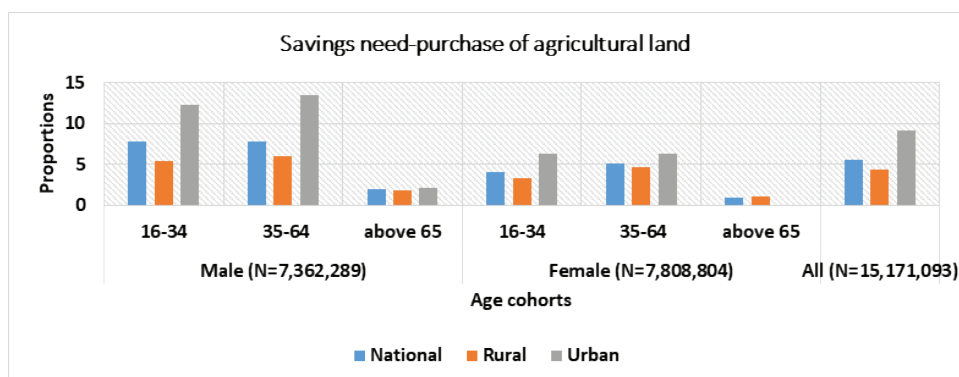


Source: Authors compilation using data from AFC branch network and <https://africaopendata.org/dataset/kenya-population-density-2015/resource/a57fce6f-b00c-428f-b1f9-86855c64b9df>

### 5.3 Objective 2: Needs, Constraints, Priorities and the Level of Satisfaction in Agri-financing in Kenya

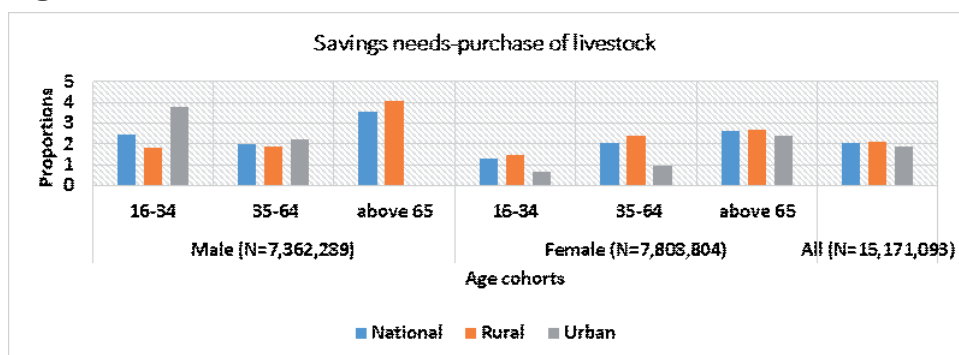
#### 5.3.1 Savings needs

Individuals save for different agricultural needs. At the national level, 5.5 per cent of the agricultural population save for purposes of buying agricultural land (Figure 15). The analysis shows that more men than women save to purchase agricultural land, with the highest savings rates being among men of ages 35-65 in urban areas (13.5%). This highest 6.4 per cent of women of ages 16-34 years in the urban areas.

**Figure 15: To purchase agricultural land**

Data Source: 2019 FinAccess Household Survey

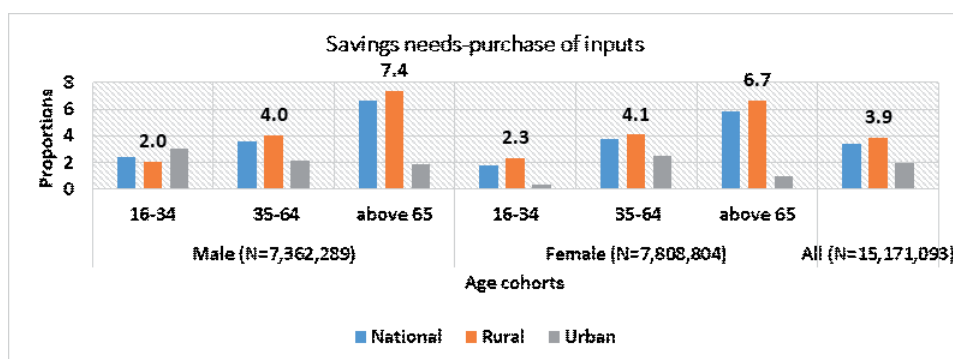
Savings for purposes of buying livestock seem to increase with age for both men and women (Figure 16). The rates are, however, more for men with the highest being among rural men of above 65 years (4.1%). Similarly, women of ages 65 years and above residing in rural areas have the highest savings rates for purpose of buying livestock (2.4%).

**Figure 16: Purchase livestock**

Data Source: 2019 FinAccess Household Survey

Similar to livestock needs, the distribution of savings needs to purchase agricultural inputs increase with age for both women and men (Figure 17). The highest score (7.4%) is observed among rural men of ages 65 and above. This is in comparison to 6.7 per cent of women in the same age group.

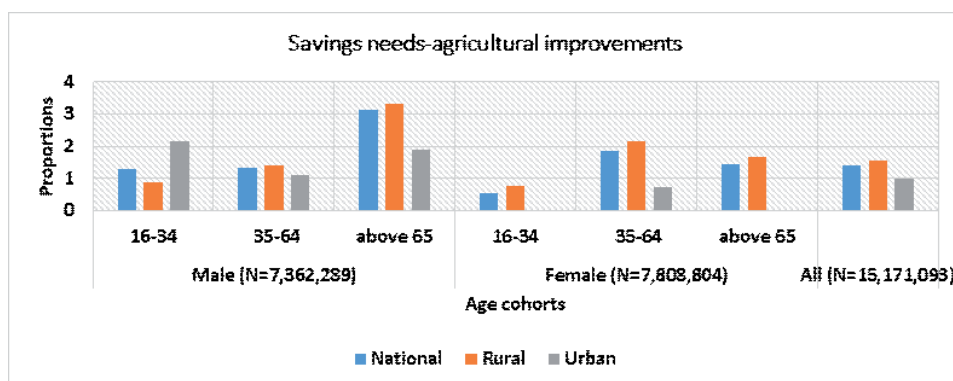
**Figure 17: Purchase inputs**



Data Source: 2019 FinAccess Household Survey

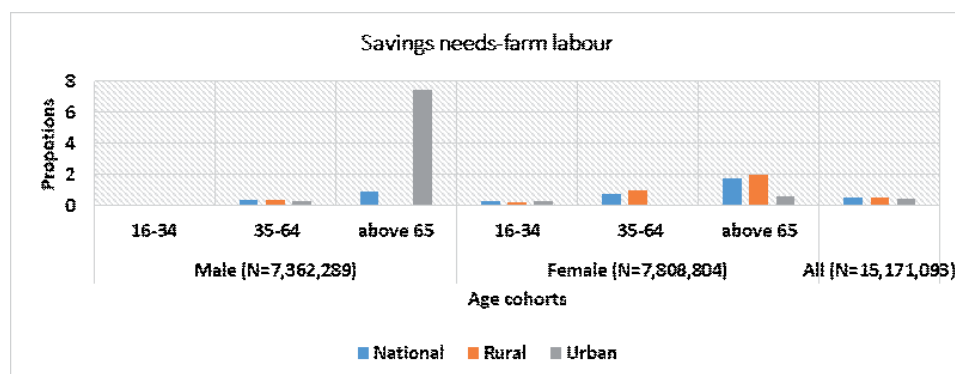
In terms of savings towards agricultural improvements, we have more men of ages 65 and above in rural areas saving more towards this need (3.3%). Women of ages 35-64 in rural save the highest towards this need (2.2%) Figure 18).

**Figure 18: Agricultural improvement**



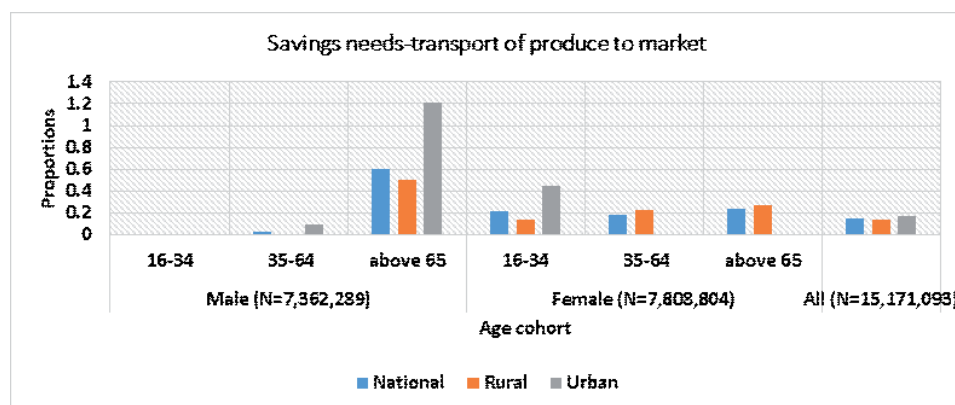
Data Source: 2019 FinAccess Household Survey

Savings towards farm labour are negligible, with 0.5 per cent of the population savings towards this need at the national level (Figure 19). About 2 per cent of women residing in rural areas (65 years and above) save towards this purpose. This is in comparison to 7.4% of men of ages 65 years and above saving for the same course.

**Figure 19: Farm labour**

Data Source: 2019 FinAccess Household Survey

Though very low, savings towards transport of farm produce to markets are highest among men of ages 65 years and above residing in urban areas (1.2%). Youth women (16-34 years) residing in urban areas save the most towards this need among women (Figure 20).

**Figure 20: Transport farm produce to market**

Data Source: 2019 FinAccess Household Survey

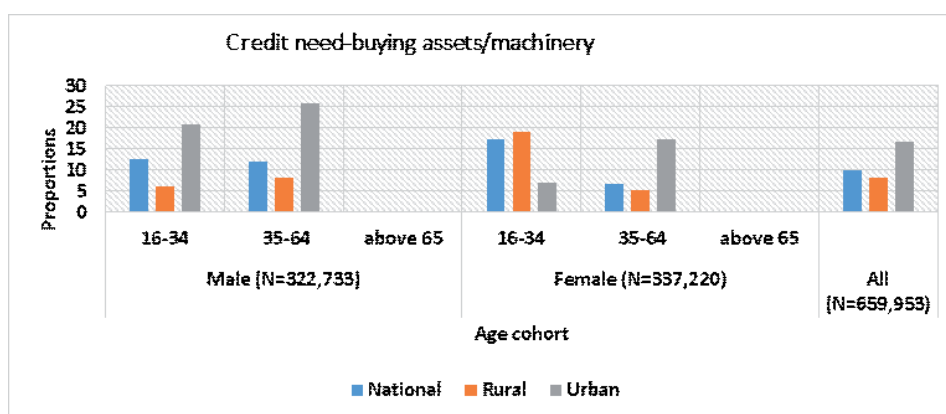
In general, savings towards agricultural operations are low across all groups. This indicates that finances towards the same are likely to be from intermediary financial institutions, and not savings, thus the need to enhance access to agri-finance.

### 5.3.2 Credit needs

Narrowing down to reasons for seeking agricultural credit, we assess credit needs among the agricultural population that obtained agricultural credit (N=659,953).

An assessment credit needs for purposes of buying agricultural assets/machinery reveals that more men compared to women seek credit for this purpose (Figure 21). This need is highest among men of ages 35-54 years residing in urban areas (25.9%) followed by those of ages 16-35 years (21%). Among women, the need is greatest for women of ages 16-34 years residing in rural areas (19.1%) followed by those 35-64 years residing in urban areas (17.3%).

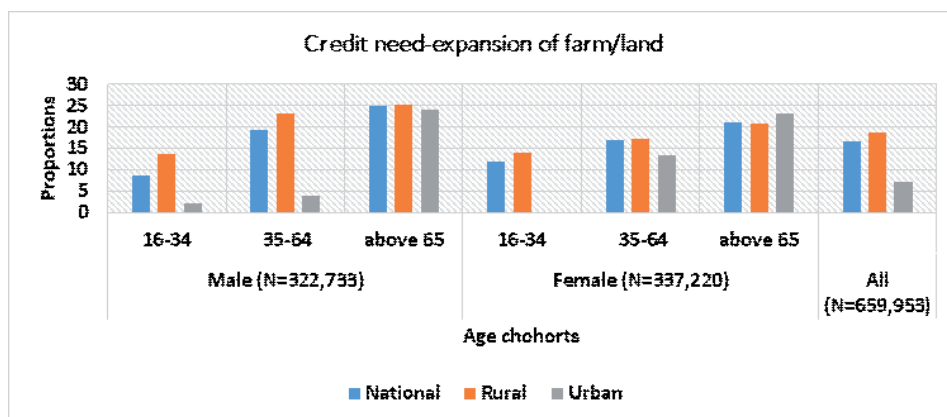
**Figure 21: Buying assets/machinery**



Data Source: 2019 FinAccess household Survey

The distribution of credit needs for the expansion of farm/land indicates that 16.6% per cent of the people seeking agri-credit sought it for this purpose (Figure 22). The needs are shown to increase with age and are highest among men of ages 65 and above residing in rural areas (25.2%). Among women, 23.1 per cent of women of ages 65 and above years in urban areas seek credit for this purpose followed closely by 20.8 per cent of women of the same age group residing in rural areas.

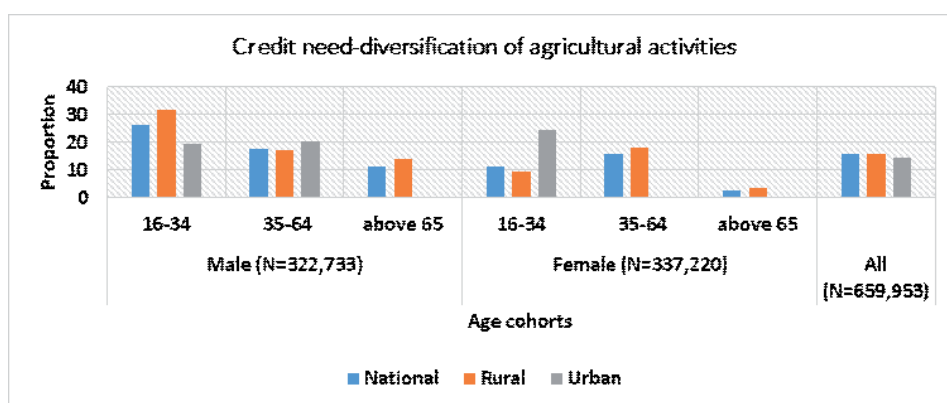
**Figure 22: Expansion of farm/land**



Data Source: 2019 FinAccess Household Survey

About 15.6 per cent of the population seeking credit seek for purposes of diversifying agricultural activities (Figure 23). The needs are higher among men of ages 16-34 years residing in rural areas (31.7%). Among women, the needs are similarly high among the youth (ages 16-34 years) residing in urban areas (24.6%) followed by women of ages 34-64 years residing in rural areas (18.1%).

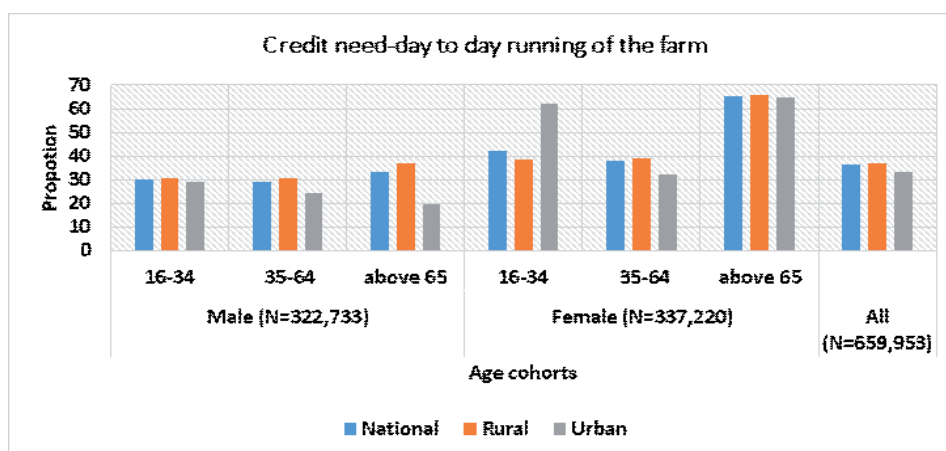
**Figure 23: Diversification of agricultural activities**



Data Source: 2019 FinAccess Household Survey

More women seek credit for purposes of day to day running of the farm compared to men (Figure 24). The needs are greatest among women of ages 65 and above (about 65%) in both rural and urban areas. Among men, the need is highest among men of the same age group in rural areas at 36.7 per cent.

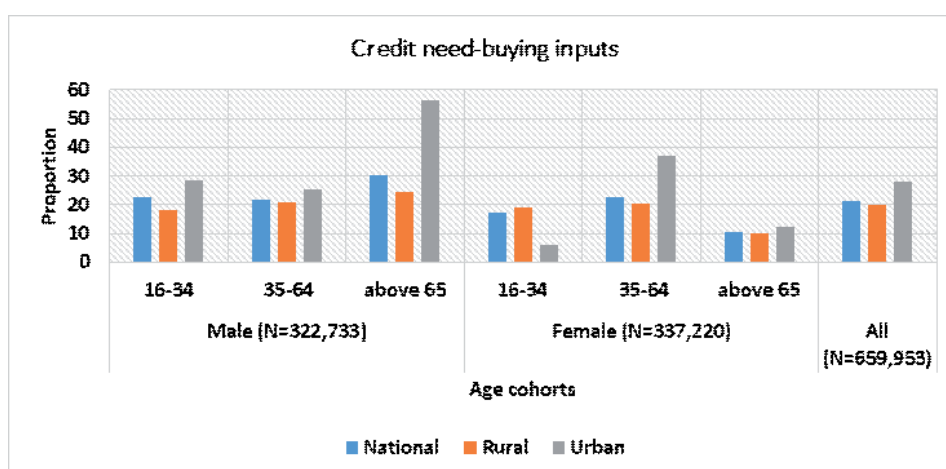
**Figure 24: Day to day running of the farm**



Data Source: 2019 FinAccess Household Survey

Nationally, about 21.6 per cent of the population seeking agricultural credit seek for purposes of buying inputs (Figure 25). The need is highest among men of ages 65 and above residing in urban areas (56.6%). Among women, the need is high among women of ages 35-64 years residing in urban areas (36.9%).

**Figure 25: Buy inputs**

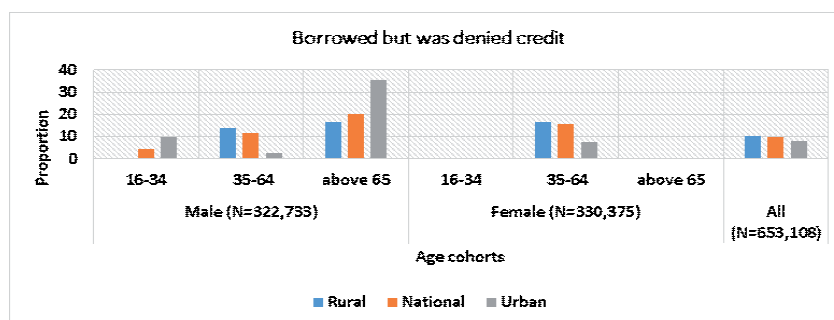


Data Source: 2019 FinAccess Household Survey

### 5.3.3 Constraints

Denial of credit is among the key challenges faced in agriculture. The results of this analysis reveal that 9.7 per cent of the agricultural population that sought agricultural credit were denied at the national level (Figure 26). Among women, majority of those denied are those between ages 35-64 years; 16.6 per cent in rural areas and 7.6 per cent in urban areas. Men of ages 65 and above were most affected by credit denial; 16.7 per cent in rural areas and 35.5 per cent in urban areas.

**Figure 26: Credit denial**

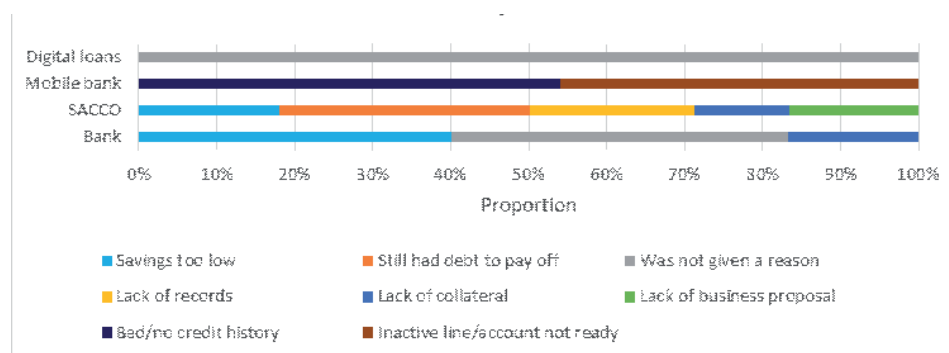


Data Source: 2019 FinAccess Household Survey

### Reasons for credit denial

In rural areas, among the main reasons for denial of credit from banks (formal prudential source) include savings being too low (40%) and lack of collateral (16.7%). Existing debts is a key reason given by SACCOs (32%) while for mobile banks, bad credit history (54%) and inactive lines(46%) are presented as reasons for denial of credit (Figure 27).

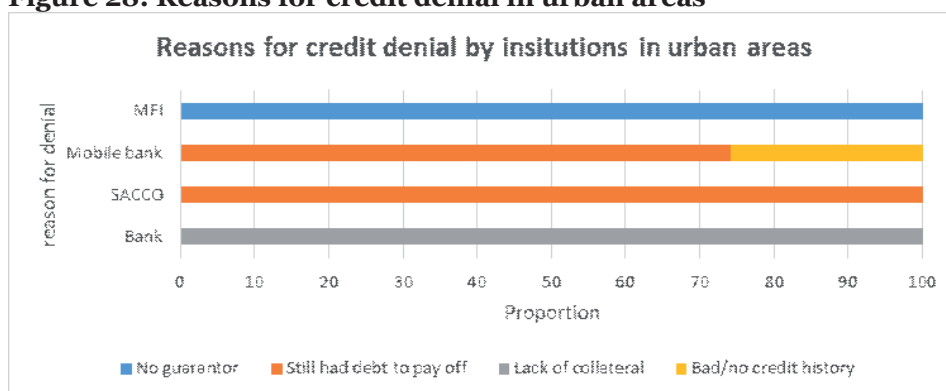
**Figure 27: Reasons for credit denial in rural areas**



Data Source: 2019 FinAccess Household Survey

In urban areas, all individuals denied credit by banks was due to lack of collateral whereas for SACCOs it was mainly because the individuals still had a debt to pay (Figure 28). Those denied by MFIs was mainly for lack of guarantors. For those denied by mobile banks, 74.1 per cent was due to existing debts while 25.9 per cent was due to bad credit history.

**Figure 28: Reasons for credit denial in urban areas**



Data Source: 2019 FinAccess Household Survey

Further analysis indicates that women in rural areas are mainly denied credit because they have low savings (40.8% for ages 16-34 years), have existing debts (25.5% for ages 16-34 years), have bad credit history (19.5% for ages 16-34 years) and lack collateral (17.4% for ages 35-64 years) (Table 3). Men in rural areas are denied credit for almost similar reasons, but in addition they lack records (20.6% for ages 64 years and above). The above challenges are more pronounced among the youth, with the female youth being most affected.

**Table 3: Reasons for credit denial in relation to age cohorts: Rural areas**

	Male			Female			All
	16-34	35-64	above 65	16-34	35-64	above 65	
Savings too low	33.2	23.7	0	40.8	17.0	0	23.0
Still had debt to pay off	17.9	20.6	34.1	25.5	15.5	0	21.0
Bad/no credit history	10.3	22.1	0	19.5	12.9	0	15.9
Lack of collateral	0	12.2	45.4	0	17.4	0	13.5
Lack of records	0	4.4	20.6	7.1	5.5	0	6.2
Was not given a reason	0	8.1	0	0	9.8	51.4	6.2

Don't know	17.6	2.2	0	0.0	5.9	0	3.9
Income is low and unable to re-pay	9.8	2.7	0	0.0	4.4	0	3.1
Lack of business proposal	0	4.1	0	0	0	0	1.6
Blacklisted on CRB/defaulted	0	0	0	0	6.6	0	1.5
Inactive line/account not ready	0	0	0	0	5.1	0	1.2
Did not have all requirements	0	0	0	7.1	0	0	1.1
No guarantor	11.2	0	0	0	0	0	1.1
No pay slip	0	0	0	0	0	48.6	0.6

Data Source: 2019 FinAccess household Survey

In urban areas, women are denied credit mainly because they have bad credit history (31.7% for ages 35-64 years), lack collateral (24% for ages 35-64 years) and due to existing debts (20.3% for ages 35-64 years) (Table 4). Men are denied credit mainly because they lack guarantors (77.54% for ages 65 and above years), savings too low (28.4% for ages 16-34 years) and due to bad credit history (25.2% for ages 16-34 years).

**Table 4: Reasons for credit denial in relation to age cohorts: Urban areas**

	Male			Female			All
	16-34	35-64	above 65	16-34	35-64	above 65	
Bad/no credit history	25.22	27.33	0	6.87	31.69	0	22.24
Savings too low	28.35	0	22.46	17.58	16.77	0	14.76
Was not given a reason	4.72	20.41	0	14.45	0	0	10.71
Still had debt to pay	6.88	12.68	0	0	20.27	100	9.96
No guarantor	0	20.16	77.54	0	3.17	0	9.69
Lack of collateral	10.07	7.42	0	0	23.99	0	9.12
Lack of records	0	4.95	0	16.05	4.10	0	5.52
Don't know	0	0	0	20.77	0	0	4.20

Inactive line/ account not ready	0	0	0	18.53	0	0	3.75
No pay slip	12.81	0	0	0	0	0	3.43
Income is low and unable to re-pay	5.08	1.39	0	5.75	0	0	2.97
Long process/ tedious	6.89	0	0	0	0	0	1.84
Project is too risky	0	3.13	0	0	0	0	1.00
Blacklisted on CRB/defaulted	0	2.52	0	0	0	0	0.81

Data Source: 2019 FinAccess Household Survey

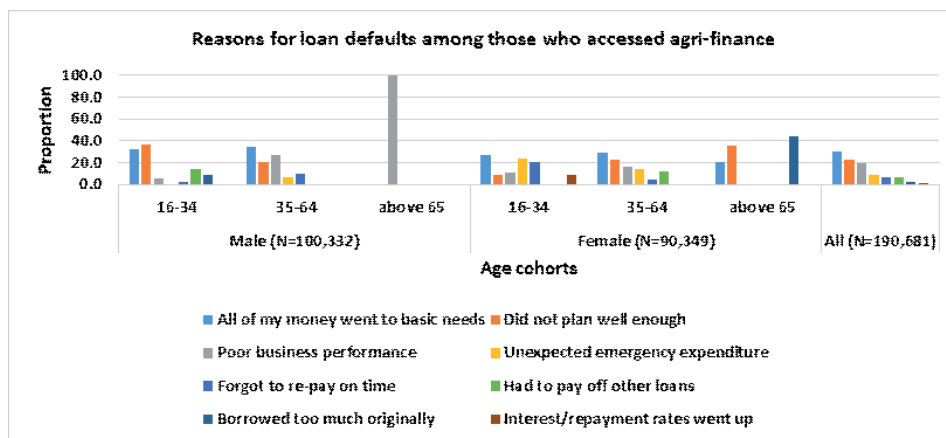
Box 5.3 presents a case study that illustrates the importance of family assets in financing women in agriculture.

**Box 5.3: Case study: role of family assets, financing and mentorship for women in agriculture**

The case study farmer has run an agribusiness of 27 years in fishery products is a case of resilience in doing business. She received financial support from her parents and mentoring from her sister. Other sources of capital for her business originated from personal savings, loans from women's group and micro finance institutions (MFIs). The key requirements for obtaining loans from her women's group include group membership, personal savings and good history of loan repayment. Consideration for MFIs' loans include household items equivalent to loan and a guarantor. The 56-year old resident of Seme in Kisumu County believes that a good financial product for women should consider women's reputation and trusting them for loan repayment. She also contends that financial products for women should embody knowledge of loan and financial management. Through her success in agri-business, she has been able to support her family of eight and provide capital to her husband to start business and build family house.

Defaulting on agricultural loans is a key constraint to sustainable access to agri-finance. Of the individuals that accessed agricultural loans, 190,681 defaulted on the loans due to various reasons (Figure 29). Women of ages 16-34 years mainly default on loans due to basic needs demands (26.6%), similar to those of ages 35-64 years (29.6%), while those of 65 years and above default mainly because they had borrowed too much originally (43.9%). In the case of men, the youth (16-34 years) mainly default on loans due to lack of planning well (37%), those of ages 35-64 years default due to basic needs (35%), while those of 65 years and above default mainly because of poor business performance.

**Figure 29: Reasons for loan defaults among those who accessed agri-finance**

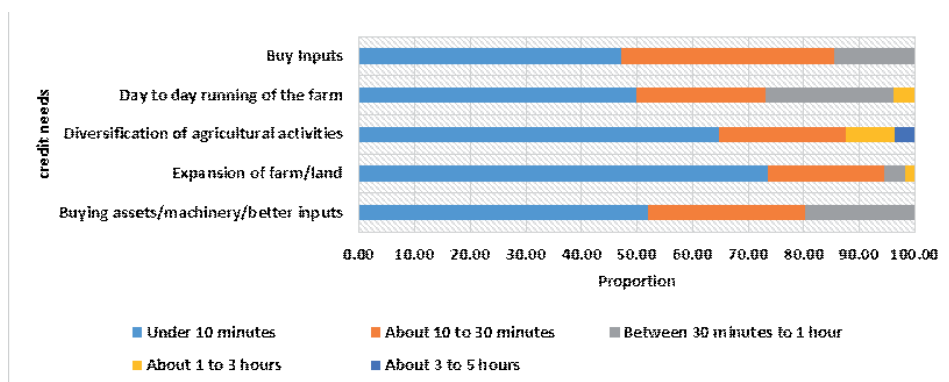


*Data Source: 2019 FinAccess Household Survey*

Analysis of the focused group discussions sheds more light on default on loans due to diversion of the agri-finance resources they accessed. Most women reported to have diverted the funds to other activities or needs contrary to initial plan or agreement. Diversion of agri-finance was towards needs such as school fees payment, medical emergencies, repayment of other outstanding loans and other incidental costs such as funeral arrangements. This raises the challenge of moral hazard in access to agri-finance, where once the borrowers receive the funds, they use them in ways that are inconsistent with the lenders interest. It is noted that alternative plans to accessing agri-financing such as through NGOs are also attractive to women and youth and limit diversion of funds. An example is the case of One Acre Fund in Western Kenya where not only do the farmers access inputs in kind, but there are other benefits including farmer support throughout the production process in terms of extension services, trainings and post-harvest handling mechanisms and market linkages. This structure of operation ensures minimal diversion of finance meant for agriculture to other needs and favourable repayment terms as farmers had ready market for sale of their produce.

Constraints to access to finance could also be in the form of proximity to financial providers. Walking time to the nearest financial service provider remains a constraint to some individuals seeking agricultural finance in rural areas (Figure 30). 26.8 per cent of individuals take 30 minutes and more to reach the nearest financial service provider for day to day running of the farm.

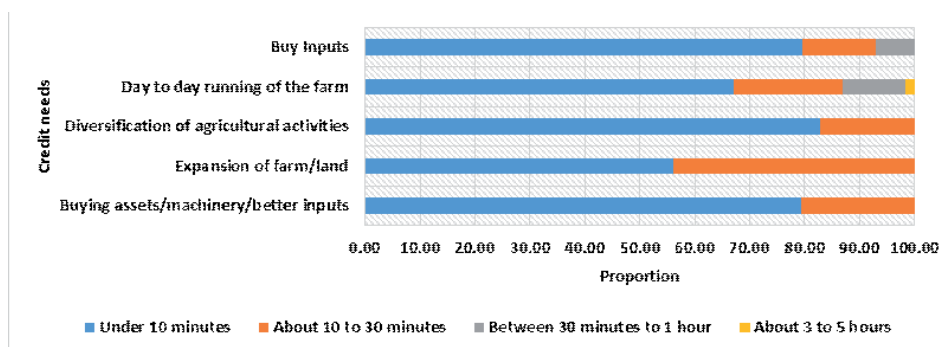
**Figure 30: Average walking time to a financial provider in relation to the need for agricultural loan in rural areas**



Data Source: 2019 FinAccess Household Survey

Walking time to the nearest financial service provider, however, is not a major constraint for individuals seeking agricultural finance in urban areas (Figure 31). Only 13.2 per cent of individuals take 30 minutes and more to reach the nearest financial service provider for day to day running of the farm, with a lesser proportion (7.1%) taking 30 minutes and more to buy inputs.

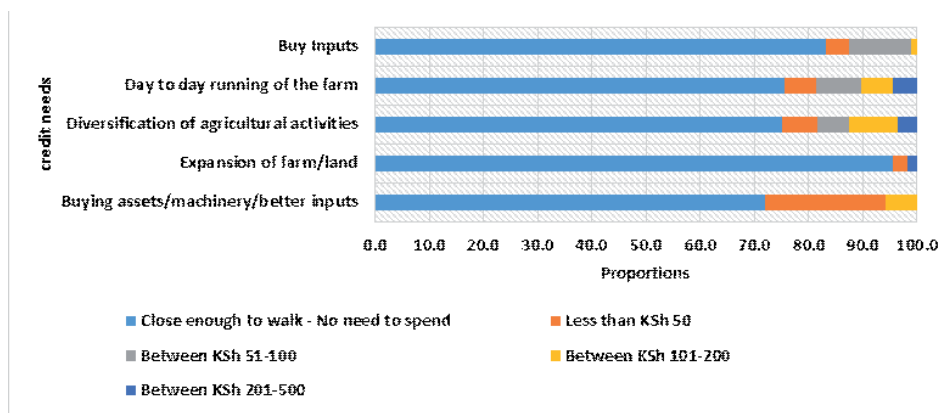
**Figure 31: Average walking time to a financial provider in relation to the need for agricultural loan in urban areas**



Data Source: 2019 FinAccess Household Survey

The cost of reaching the nearest financial service provider is not a major constraint in accessing financial providers in rural areas (Figure 32). In all instances, more than 80 per cent of the individuals spend less than Ksh 50, on average, to the nearest to financial provider. However, there is need for caution in interpreting these findings because there might be regional disparities, with some regions reporting higher costs. The findings are similar for men, and youth in rural areas.

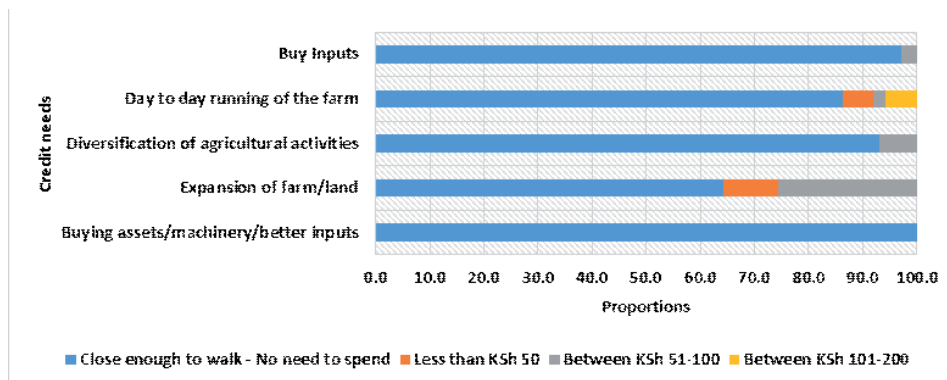
**Figure 32: Average cost to nearest financial provider in relation to the need for agricultural loan in rural areas**



Data Source: 2019 FinAccess Household Survey

The cost is even lower for urban areas, with most of the individuals reporting they can walk to the nearest financial service provider and therefore do not incur costs (Figure 33).

**Figure 33: Average cost to nearest financial provider in relation to the need for agricultural loan in urban areas**



Data Source: 2019 FinAccess Household Survey

Analysis of the FGD observations identified the following additional constraints: poor climatic conditions and pest infestation, in turn, leading to low yields and heavy losses; lack of collateral in the form of title deeds; low prices of agricultural produce in markets leading to difficulty in repayment; loan requirements; difficulty in getting guarantors; and finally spousal consent, support, and risk of the spouse diverting funds to other uses.

#### **5.3.4 Socio-cultural constraints to women's access to agricultural finance**

Indeed, women face risks associated with access to finance, especially the borrowing, and use and repayment of the same from formal financial institutions. Kassim and Rahman (2008) in a study on handling default risks in Bangladesh found that though Grameen Bank reported only 2 per cent default by women borrowers, there was an element of 'forced-recovery' imposed on borrowers, leading to loss of property including borrowers' homes. In Ghana, borrowers reported that they often make sacrifices they consider "unacceptable" to stay current on their loans (Solli, 2015). In Kenya, majority of the women from the FGDs stated that it was very difficult to get their spouses to borrow on their behalf or even guarantee their loans. The respondents stated that when asked for guarantors they normally would photocopy their husband's IDs and forge their signatures and telephone numbers to avoid alerting their husbands that they had secured loans.

In Migori County, one focus group discussant expressed the '*catch 22*' situation women find themselves in when they are in default of payment and the lender institution comes to repossess all their household goods, including the iron sheets on the roof of the family house. The husband will emerge with kicks and blows and the mother-in-law will wail that you have ruined her son. When you run to your parents, they will send you back to your husband '*where you belong*'. All these parties forget, conveniently so, that in one way or another, they partook of the said loan money. Eventually, one is forced to take refuge at a friend's place until one's family calms down. When queried on the role of the chief<sup>7</sup>, she said that the chief would not intervene; he or she considers this '*a family affair*'. One of the women interviewed had recently separated from her husband; the dispute because of failure to repay her loan had been irreparable. In Moyale, one of the women had tried to commit suicide.

Although suicide and separation are extreme consequences of loan defaults and forced-recovery, most respondents agreed that there is fear of abuse particularly from spouses and in-laws. The risks include insults, intimidation and hostility from spouses, diversion of the loan money to the husbands' projects of interest, including paying fees for children, husbands' refusal to play their role as financial providers, women being pushed to take more loan money than they can use and repay leading to default, lack of trust in the woman's abilities to use the money, theft and grabbing of loan money by spouses who might be drunk, and interference by spouses in the women's business. In some cases, men take the money and betray their wives or marry other wives. The issue of men's feeling of insecurity hence abuse of their wives was succinctly expressed by a woman in Moyale who said:

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<sup>7</sup> Chief is the local administrator

*Most men in our community are insecure when women are empowered. Getting the spousal consent/affidavit is difficult and it risks abuse. The spouses can get to the extent of threatening their spouse's lives and even the banks. Some women are abused physically and remain silent*

In some counties such as Kinangop, harassment by children also emerged as a risk while taking loans for friends, and landed one woman on the Credit Reference Bureau (CRB) list. The woman had taken a loan of Ksh 250,000 for a friend who went on to default. Unlike the rest of the counties, borrowers in Uasin Gishu claimed they suffer no spousal risks since they discuss and reach an agreement with their spouses before they take loans.

In the case of spousal conflict associated with loan taking, there was general concurrence by respondents that parents, chiefs, village elders and the church provide a source of conflict resolution. To forestall these differences, various mitigation and coping mechanisms were cited. They include need for confidentiality in groups. Some groups take an oath of silence and ensure group matters are discussed only within the group. The need to avoid involving the spouses when borrowing loans need to economically empower men to demystify the sense of insecurity, and the need for spouses to discuss and understand how the loan will be used and repaid. The women borrowers also advised others not to trust friends and family blindly, to monitor and supervise their businesses closely, and keep account of money borrowed from them by their husbands and children. Some women indicated that they do not even inform their teenage children about their plans to take loans. Other borrowers indicated that they have diversified their businesses to ensure there is a source of money for loan repayment, and take higher loans than they declare to their families. To tackle the abuse issues, one of the respondents said that:

*Report to the nearby authorities when such incidences occur, engage in community dialogue with local elders to solve the spousal disagreements and seek parents support in repaying back the loan. However, do seek your spouses' approval and consent before taking a loan.*

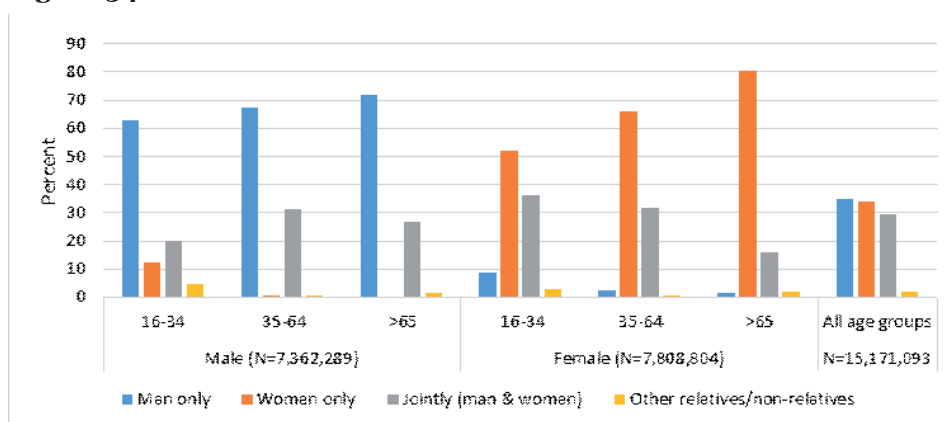
### **5.3.5 Decision making and agency constraints in access to finance**

Decision making and agency constraints among women in Kenya decrease with age (Figure 34). The proportion of women making their own financial decision is 52 per cent for ages 16-34 years, 65.8 per cent for ages 35-64 and 80.2 per cent for ages 65 years and above. On the other hand, the proportion of men making their own financial decision is 62.7 per cent of the youth (16-34 years), 67.5 per cent for ages 35-64 and 71.7 per cent for ages 65 years and above. The results imply that

women in general have agency with regard to financial decision making. However, there are more males who make decisions for their females (8.9%-ages 16-34 years; 2.4% for ages 35-64 and 1.6% for ages 65 years and above) than females do for males (12.6% for men of ages 16-34).

Similar findings were observed in the FGDs where women stated that in some cases, women preferred making major decisions with their spouses for support and consent. In other instances, the men make the major decisions. For instance, in some communities, the man has to give permission for the wife to apply for loan. This is especially so where they require collateral such as title deeds which are mainly under men. Others stated that for some decisions, such as borrowing funds, they preferred doing it in secret. This is because some men would want to control the funds and the money normally ended up being diverted from their intended uses.

**Figure 34: Gender of the finance decision maker**



Data Source: 2019 FinAccess Household Survey

Box 5.4 further illustrates the role of agency and financial decision making in empowering women to succeed in agriculture.

**Box 5.3: Case study depicting role of spousal affirmation and inclusion in decision-making**

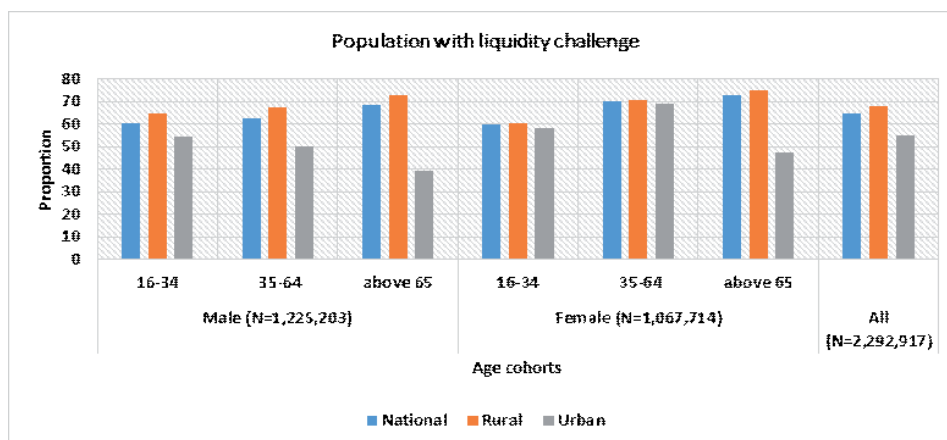
The case study farmer was provided with the start-up capital for her cereals business by her husband who not only gave her freedom to engage in business but also played a critical role in decision-making processes for the advancement of his wife's business venture. The farmer used the assets of the husband to take a loan of Ksh 1 million from Equity Bank to boost her business. She also used her pension money to enhance her business. She commenced her business with a capital of Ksh 30,000 in 2008 and had a turnover of Ksh 200,000 in 2018. Makena's MASTERS STORE in Meru Municipality sells directly to retailers and consumers while buying from producers. Over the years, her agribusiness has faced challenges including fluctuations of prices, increased and intense competition from similar traders, high cost of purchasing stock and balancing parental roles. Even though she has been privileged and supported by her spouse, she opines that there should be alternative collaterals such as house assets for women who plan to get loans from financial institutions. There should also be policies and interventions to protect women from potential abusers when they take loans. It is also important that sensitization of men about economic empowerment of women is undertaken.

As illustrated in Box 5.3, these findings are important in understanding the gender nuances to consider when designing programmes geared towards enhancing women’s access to agri-finance. Empowering women to gain agency and control over financial decisions that affect them is imperative for the WAAW programme. Evidently, the target would be on female youth and the women who have ceded their financial decision-making responsibility to spouses. It is, however, acknowledged that there is need to build on family relationships between spouses for shared decision making and spousal support.

### 5.3.6 Liquidity challenge and priorities/preferences in addressing liquidity challenges

Women and men of similar proportions face liquidity challenges in both urban and rural areas (Figure 35). At the national level, 64.6 per cent of the agricultural population experienced liquidity challenges in their operations.

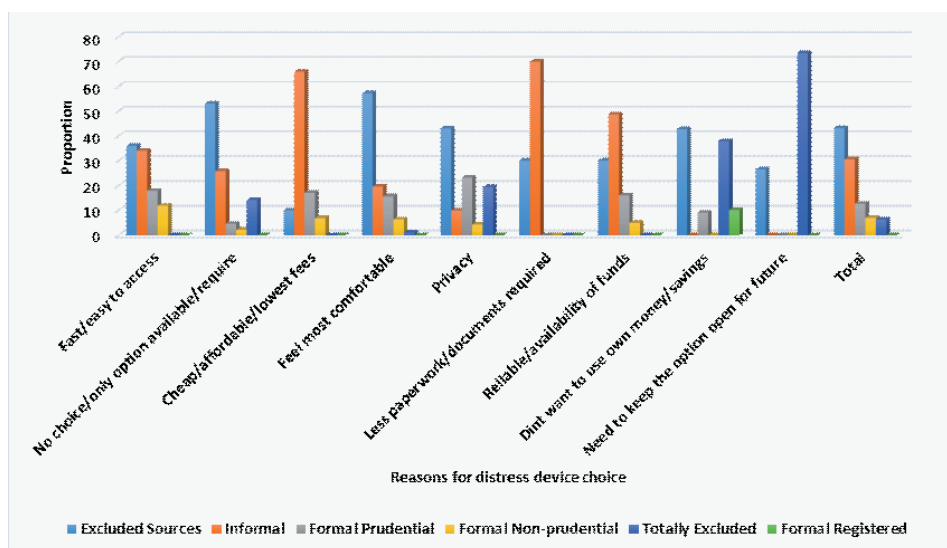
**Figure 35: Population in agriculture with liquidity challenge**



*Data Source: 2019 FinAccess Household Survey*

To address these liquidity challenges, 42 per cent of the individuals went for excluded sources, 30.6 per cent for informal sources, 12.7 per cent for formal prudential sources, 7 per cent for formal non-prudential, 0.1 per cent for formal registered sources while 6.3 per cent did not go for any source of finance (totally excluded) (Figure 36). Excluded sources are prioritized for individuals feeling most comfortable with these sources (57.3%) while informal sources scored the most (69.9%) in having less paper work. Formal prudential sources are most preferred for privacy (23.2%) while formal non-prudential sources are considered most for being fast/easy to access (11.91%).

**Figure 36: Reasons for liquidity distress device choice (grouped)**



Data Source: 2019 FinAccess Household Survey

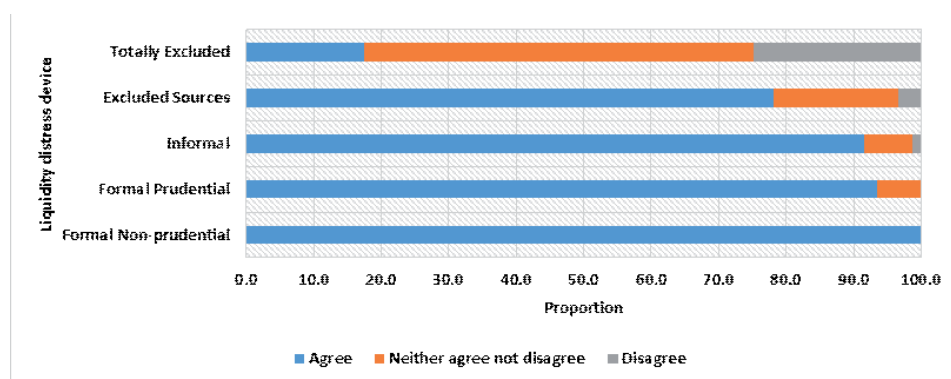
Analysis of the FGD findings portrayed similar findings where timeliness and accessibility/less processes/no bureaucracy emerged as key features of the preferred finance sources among women. Mobile money is attractive because it is fast, convenient and there is no harassment in case of default except text message notifications. Informal sources such as table banking are preferred by women and youth because of their homegrown terms and conditions within the group, including collateral requirements, short turnaround time, flexible repayment methods, dividends from savings and ability to borrow on behalf of other members. In SACCOs, ability to use deposits and savings as collateral, low interest rate, accessibility and minimal procedures made them attractive. Micro-finance institutions are preferred because of the flexible repayment plans and use of alternative collateral such as chattels as opposed to land title deeds. Commercial banks were indicated to be favourable because they are fast in loan processing and once a long-term relationship is established, a client could easily negotiate for unsecured credit.

### 5.3.7 Level of satisfaction

Assessing level of satisfaction, more than 90 per cent of the individuals whose choice of liquidity distress device was from formal and informal sources portrayed satisfaction with the choices made in rural areas (Figure 37). 78.2 per cent of those who went for excluded sources were satisfied with the distress devices while 17.4

per cent of those who did not go for any form of financial distress device expressed satisfaction with the choices made.

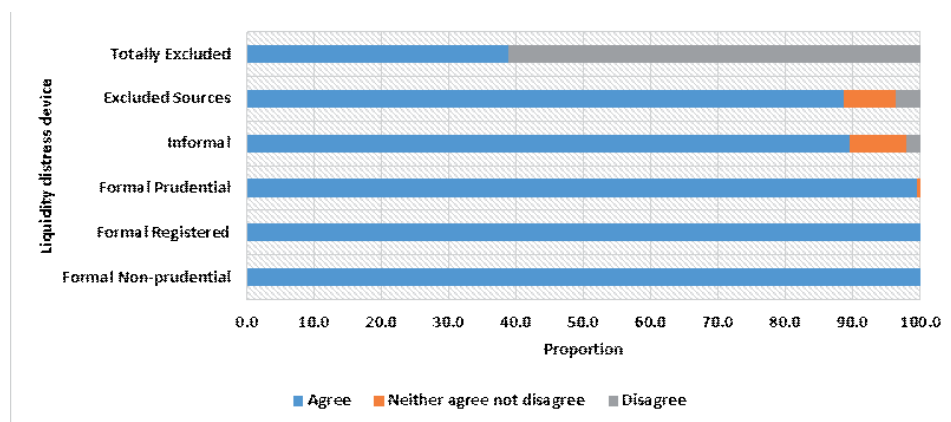
**Figure 37: Effectiveness of the institutional distress device used in case of liquidity challenges among those who accessed agri-finance in rural areas**



Data Source: 2019 FinAccess Household Survey

Similar observations are made in urban areas with more than 90 per cent of the individuals whose choice of liquidity distress device was from sources expressed satisfaction with the choices made (Figure 38). Over 80.0 per cent of those who went for informal and excluded sources were satisfied with the distress devices while 38.8 per cent of those who did not go for any form of financial distress device expressed satisfaction with the choices made.

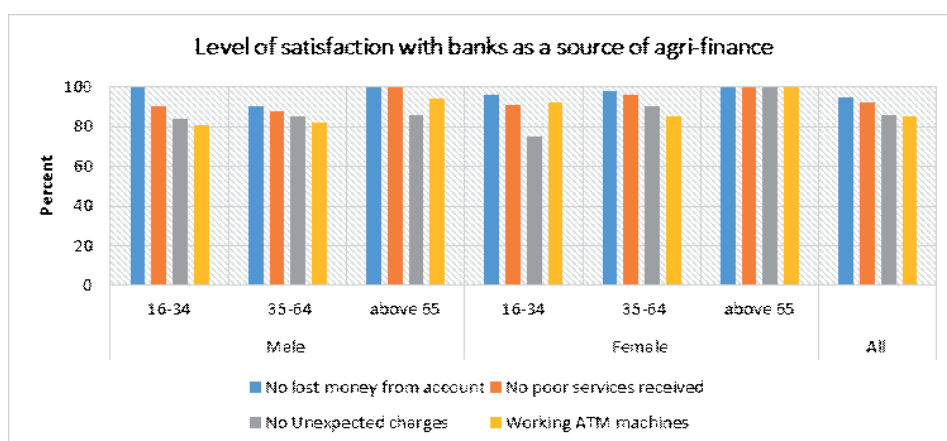
**Figure 38: Effectiveness of the institutional distress device used in case of liquidity challenges among those who accessed agri-finance in urban areas**



Data Source: 2019 FinAccess Household Survey

Narrowing down to various financial providers, while the levels of satisfaction on most of the bank's indicators are high, 25 per cent of women of ages 16-34 years report to have experienced unexpected charges from banks. 19 per cent of men of the same age category report to have experienced issues with ATM machines (Figure 39).

**Figure 39: Level of satisfaction with banks as a source of agri-finance (%)**



Data Source: 2019 FinAccess Household Survey

Similarly, the levels of satisfaction on all the SACCOs indicators were above 80 per cent for both men and women (Table 5).

**Table 5: Level of satisfaction with SACCO as a source of agri-finance (%)**

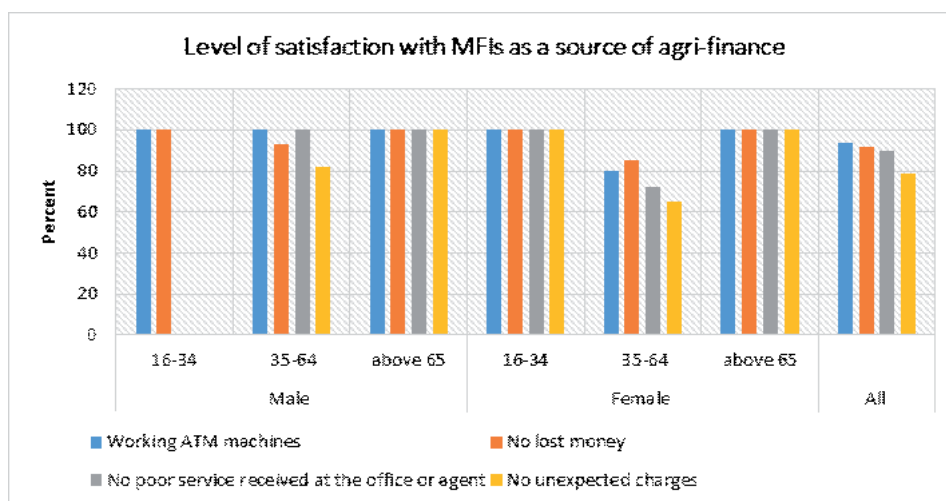
Satisfaction indicators (scores made in the affirmative)	Male			Female			All
	16-34	35-64	above 65	16-34	35-64	above 65	
No close down / collapse	100	98	100	100	98	100	99
No abusive collection techniques	100	96	100	100	94	96	97
No lost money	100	92	100	100	92	96	95
No poor service received at the office or agent	91	92	100	98	91	96	94
No Unexpected charges based on loan	100	88	95	96	94	96	93

No unexpected charges based on account	93	86	100	100	86	96	91
No delays in disbursement of money	100	84	93	92	86	100	89
Transparency on financial products and services	100	85	100	80	88	92	89
No loan delays due to liquidity challenges	100	86	87	85	88	100	89

Data Source: 2019 FinAccess Household Survey

MFI's, however, ranked low among men of the age 16-34 years on service received at the office or agent and on unexpected charges. Similarly, 35 per cent of women of ages 35-64 years indicated to have experienced unexpected charges while 28 per cent experienced poor services at the MFIs offices or agents.

**Figure 40: Level of satisfaction with MFIs as a source of agri-finance (%)**



Data Source: 2019 FinAccess Household Survey

Overall, the level of satisfaction with mobile money is high among both men and women across all ages (Table 6). Lower levels of satisfaction are, however, observed on the “no service system down time” indicator. Among women, 33 per cent of the youth (ages 16-34) were the most dissatisfied on this indicator while 38% of men of ages 35-64 years expressed dissatisfaction on the same.

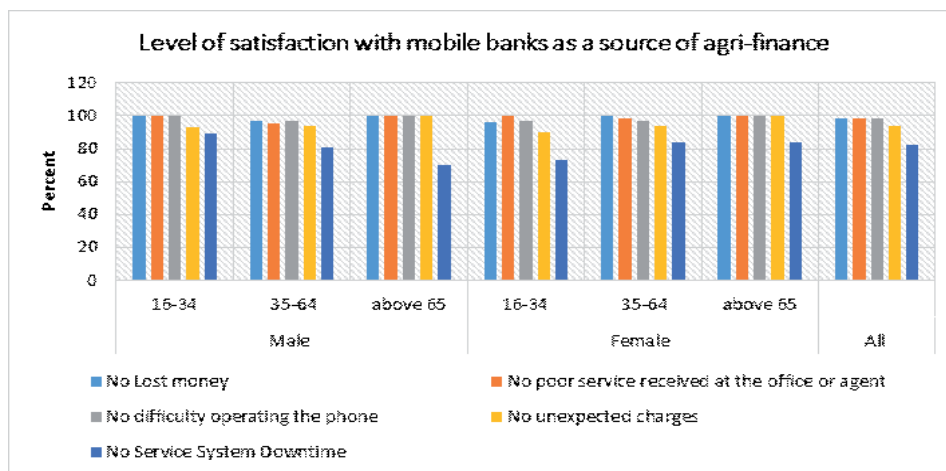
**Table 6: Level of satisfaction with mobile money as a source of agri-finance (%)**

Satisfaction indicators (scores made in the affirmative)	Male			Female			All
	16-34	35-64	above 65	16-34	35-64	above 65	
No blocked line	100	100	100	100	100	100	100
Correctly keyed in agent number	100	100	100	99	99	100	99
No poor service received at the office or agent	100	99	98	99	100	100	99
No difficulty operating the phone	100	99	96	98	98	95	98
Not contacted by third parties	96	98	100	99	98	100	98
No unclear transaction charges/fees	95	98	100	97	96	100	97
No unexpected charges	95	93	94	97	95	100	95
Ability to get to an agent	94	93	88	94	93	88	93
No lost money	85	82	80	86	86	91	85
Available agent float	80	80	75	74	83	90	80
No fraud/attempted fraud	83	74	68	84	75	77	77
No service system down time	65	62	72	67	75	75	68

Data Source: 2019 FinAccess Household Survey

Similarly, the mobile bank service indicator that scored lowest was on the “no service system down time” with 27 per cent of women of ages 16-34 years and 30 per cent men of ages 65 and above indicating some level of dissatisfaction.

**Figure 41: Level of satisfaction with mobile banks as a source of agri-finance**



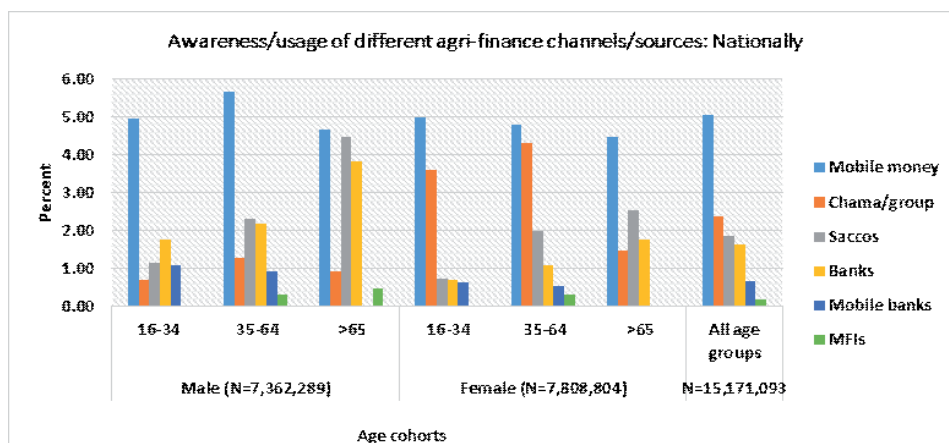
Data Source: 2019 FinAccess Household Survey

#### 5.4 Objective 3: Level of Awareness/Usage of Different Agri-finance Channels in Kenya

This section provides an analysis of usage of agri-finance channels as a proxy of awareness of agri-finance channels due to data limitations.

At the national level, mobile money is the most popular channel of accessing agri-finance with 5.1 per cent usage (Figure 38). Among women, mobile money usage, however, declines with age with 5.0, 4.8 and 4.5 per cent usage among women of ages 16-34, 35-64 and 65 and above, respectively. Usage of *chama*/groups is also popular among women of ages 16-34 (3.6%) and 35-64 (4.3%) years. Usage of mobile money is slightly higher for men compared to women at 4.9, 5.7 and 4.7 per cent for ages 16-34, 35-64 and 65 and above, respectively. *Chamas*/groups are, however, not very popular with men. On the other hand, a higher share of men of ages 65 years and above use SACCOs (4.5%) and banks (3.8%) compared to other categories.

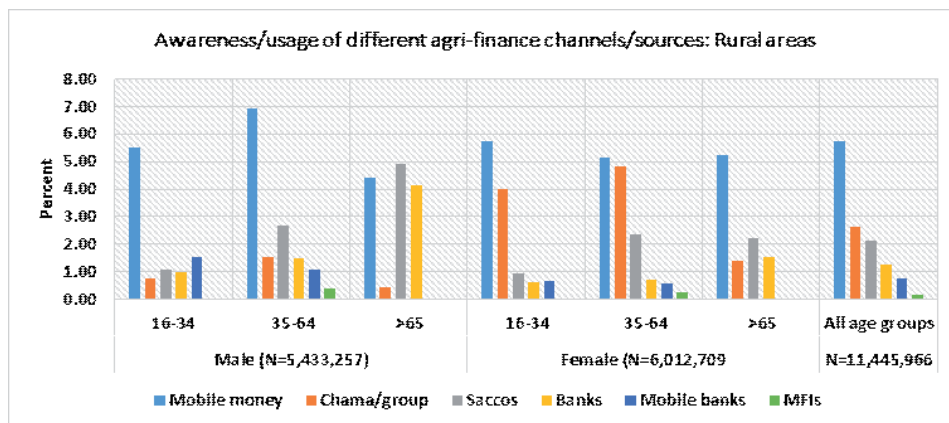
**Figure 42: Awareness/usage of different agri-finance channels/sources: Nationally**



Data Source: 2019 FinAccess Household Survey

At the rural level, mobile money remains the most popular channel of accessing agri-finance with 5.8 per cent usage (Figure 39). Among women, higher levels of usage are seen compared to the national level with 5.7, 5.1 and 5.2 per cent usage among women of ages 16-34, 35-64 and 65 and above, respectively. Usage of *chamas*/groups is also slightly higher among women of ages 16-34 (4%) and 35-64 (4.8%) years. Among men, usage of mobile money ranks highest compared to other channels at 5.5, 6.9 and 4.4 per cent for ages 16-34, 35-64 and 65 and above, respectively. As observed at the national level, a higher share of men of ages 65 years and above use SACCOs (4.9%) and banks (4.2%) compared to other categories.

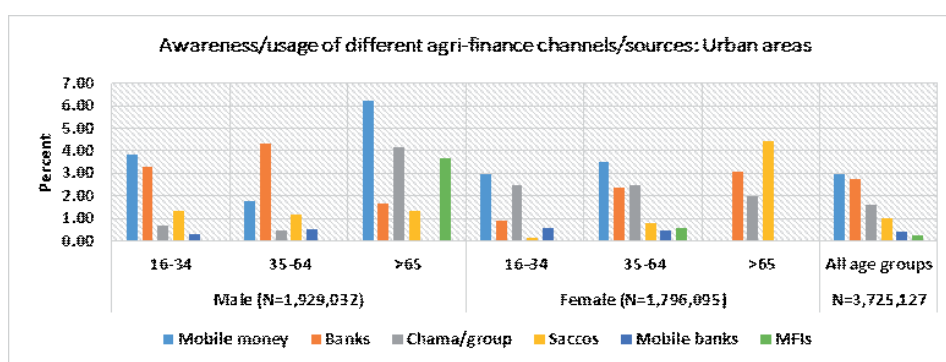
**Figure 43: Awareness/usage of different agri-finance channels/sources: Rural areas**



Data Source: 2019 FinAccess Household Survey

The distribution of channels in urban areas reveals a fair mix in usage among the various categories (Figure 44). Majority of women of ages 16-34 (3%), and 35-64 (3.5%) use mobile money while those of age 65 and above use SACCOs more (4.4%). Use of banks is also popular among women of ages 35-64 and 65 and above years at 2.4 per cent and 3.1 per cent, respectively. Among men, while majority of the youth (3.8%) and men of age 65 and above (6.2%) use mobile money, those of age 35-64 years mainly use banks (4.3%). Banks are, however, also popular with men of ages 16-34 years (3.3%).

**Figure 44: Awareness/usage of different agri-finance channels/sources: Urban areas**



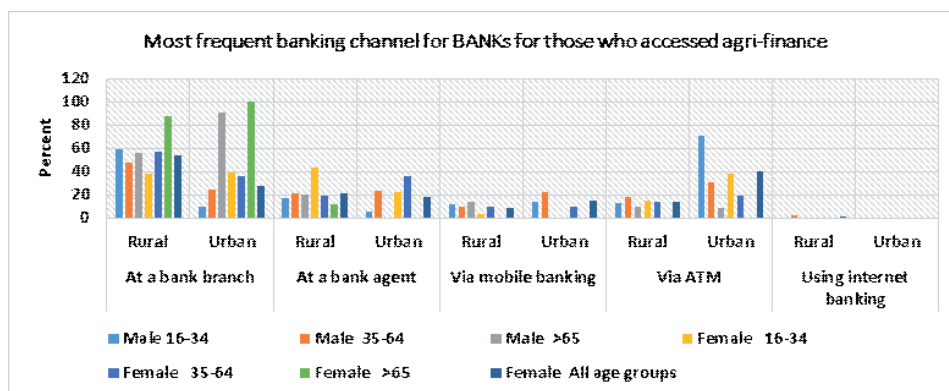
*Data Source: 2019 FinAccess Household Survey*

Analysis of the banking channels indicates that majority of women and men seek banking services from the branch in rural areas. 39, 57 and 88 per cent of women of ages 16-34, 35-64 and 65 years and above, respectively, mainly visit the bank branch to access banking services (Figure 45). On the other hand, 59, 48 and 56 per cent of men of ages 16-34, 35-64 and 65 years and above, respectively, mainly visit bank branches for services.

In urban areas, 71 per cent and 31 per cent of men of ages 16-34 and 35-64 seek bank services through ATMs while 91 per cent of those of ages 65 years and above go to respective bank branches. Among women, 40 per cent and 39 per cent of women of ages 16-34 years seek services from bank branches and ATMs, respectively. 36 per cent of women of ages 35-64 years visit bank branches and bank agents while 100 per cent of those of ages 65 years and above go to the bank branch.

Availability of bank branches among those living in rural areas is an indicator of improved banking coverage across the country. This means that formal financial services are brought close to the people, making access easy. Use of internet and online banking has not been widely adopted

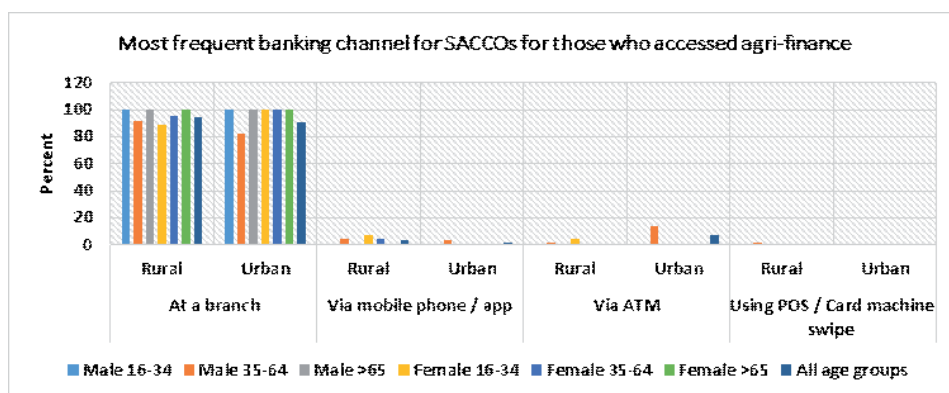
**Figure 45: Most frequent banking channel for banks for those who accessed agri-finance**



Data Source: 2019 FinAccess Household Survey

Regarding SACCOs, women and men in rural and urban areas predominantly visit the SACCO branches for financial services (Figure 46).

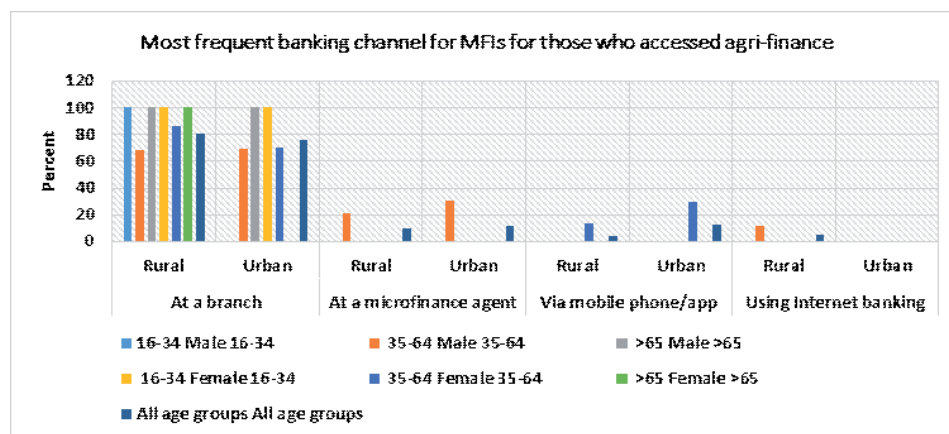
**Figure 46: Most frequent banking channel for SACCOs for those who accessed agri-finance**



Data Source: 2019 FinAccess Household Survey

A similar trend is observed for MFIs where more than 60 per cent of the population in urban and rural areas seek services at the branch (Figure 47). There is a higher number of men of ages 35-64 years in urban areas (31%) who use microfinance agents bank. Women of ages 35-64 years in urban areas record the highest use of mobile phone applications to access microfinance services at 30 per cent.

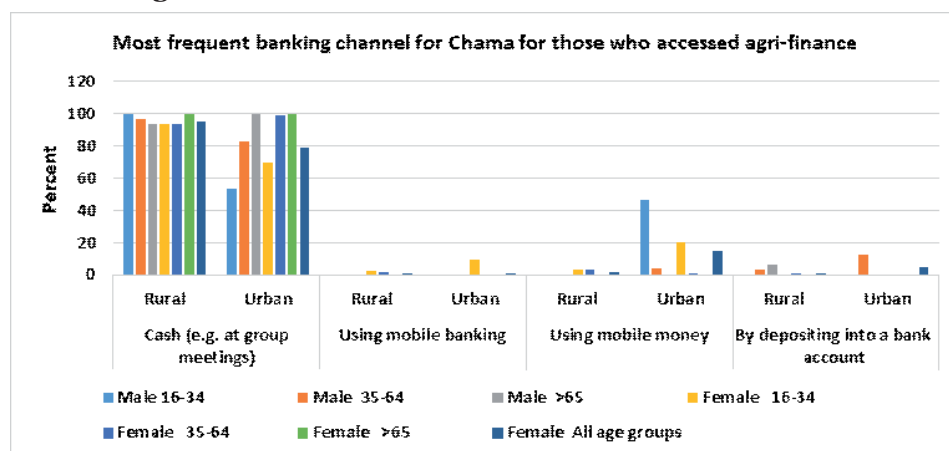
**Figure 47: Most frequent banking channel for MFIs for those who accessed agri-finance**



Data Source: 2019 FinAccess Household Survey

Analysis of group contribution channels shows more than 90 per cent of women and men in rural areas making group contributions by cash. In urban areas, 100 per cent of men and women of ages 65 years and above make their contributions in cash. Similarly, 99 per cent of women of ages 35-64 also make their contributions in cash. While youth in urban areas predominantly also use cash, 47 per cent and 21 per cent of youth men and women, respectively, use mobile money. Men of ages 35-64 years record the highest use of bank deposits at 13 per cent (Figure 48).

**Figure 48: Most frequent banking channel for chama for those who accessed agri-finance**



Data Source: 2019 FinAccess Household Survey

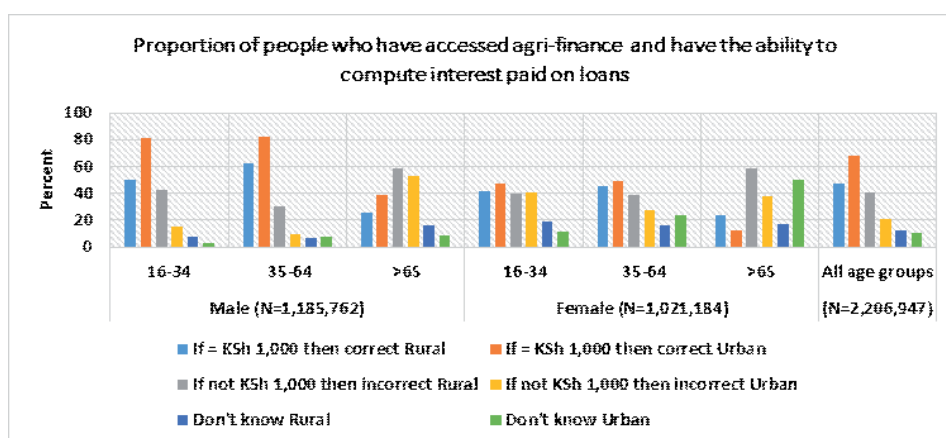
## 5.5 Objective 4: To Assess the Status of Financial Literacy and Access to Agri-finance Information in Kenya

Financial literacy refers to the skills that allow people to manage their money wisely. Several indicators are used to assess financial literacy among women and youth in Kenya. In assessing the ability to compute simple interest rate, participants were requested to solve a query where if one borrowed Ksh 10,000 with an interest rate of 10 per cent per year, how much more money would one have to pay at the end of the year?

Overall, 47 per cent of the rural population and 68 per cent of the urban population were able to compute the question on interest rates correctly. Among women, 41 per cent and 48 per cent of the youth (ages 16-34) in rural and urban areas, respectively, were able to answer the question correctly (Figure 49). 45 per cent and 49 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Fewer women of ages 65 years and above (24% and 12% in rural and urban areas, respectively) were able to compute the question on interest rates correctly.

Men in rural and urban areas exhibited a higher ability to compute interest rates than women; 50 per cent and 82 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly (Figure 49). 63 per cent and 82 per cent of men between ages 35-64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Similarly to women, fewer men of ages 65 years and above (26% and 39% in rural and urban areas, respectively) were able to compute the question on interest rates correctly.

**Figure 49: Proportion of people who have accessed agri-finance and have the ability to compute interest paid on loans**



Data Source: 2019 FinAccess Household Survey

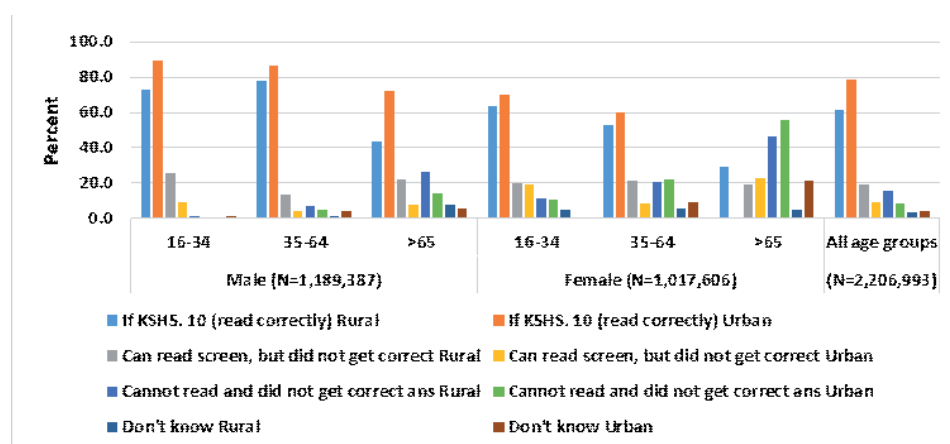
On knowledge about transaction costs, participants were requested to read out loudly a message on the screen as it appears in mobile money transaction and identify the transaction cost from the message.

Overall, 61.5 per cent of the rural population and 78.5 per cent of the urban population were able to identify transaction costs correctly. Among women, knowledge on transaction costs decreases with age. 63.6 per cent and 70.2 per cent of the youth (ages 16-34) in rural and urban areas, respectively, were able to identify the costs correctly (Figure 50). 52.7 per cent and 60.0 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able to identify the costs correctly. Fewer women of ages 65 years and above (29.3% rural areas) were able to identify the costs correctly.

Generally, men in rural and urban areas exhibited a higher ability to identify transaction costs correctly compared to women (Figure 50). 72.7 per cent and 89.1 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly (Figure 50). 78% per cent and 86.7 per cent of men between ages 35-64 years in rural and urban areas, respectively, were able to answer the question correctly. For the 65 years and above, 43.6 per cent of men in rural areas and 71.9 per cent in urban areas identified the transaction costs correctly.

From the FGDs, participants showed awareness of the terms and conditions of the various sources of finance but could not unbundle the applicable conditions especially on types of fees charged.

**Figure 50: Proportion of population who have accessed agri-finance and have ability to assess transaction costs on finances**



Data Source: 2019 FinAccess Household Survey

The distribution of access to agri-finance information reveals that at the national level, majority of the population (41.5%) rely on their own personal experience for agri-finance information (Table 7). 33.6, 52.6 and 58.4 per cent of individuals with access to formal prudential, informal, and excluded sources, respectively, rely on friends/family for agri-finance information. On the other hand, 42, 100 and 42.7 per cent of individuals with access to formal non-prudential, formal registered, and the totally excluded individuals, respectively, rely on their own personal experience.

**Table 7: Most dependable source of financial information nationally**

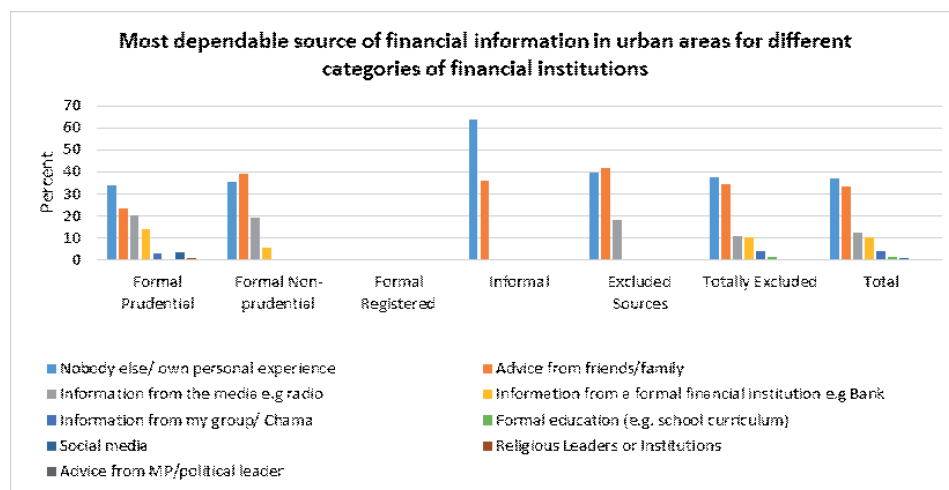
	Formal Prudential	Formal Non-prudential	Formal Registered	Informal	Excluded Sources	Totally Excluded	Total
Own personal experience	30.8	42.0	100.0	37.7	31.2	42.7	41.5
Advice from friends/family	33.6	37.8	0.0	52.6	58.4	33.1	33.6
Information from the media/ advertisement	13.3	9.2	0.0	5.5	10.5	11.0	11.1
Information from a formal financial institution	14.5	5.8	0.0	0.0	0.0	5.5	6.3
Information from ones <i>chama</i>	4.4	2.9	0.0	2.6	0.0	4.2	4.1
Formal education	0.3	0.4	0.0	0.0	0.0	1.6	1.4
Advice from MP/ political leader	1.2	0.5	0.0	0.0	0.0	0.9	0.9
Social media	1.3	1.2	0.0	1.7	0.0	0.6	0.7
Religious Leaders or Institutions	0.5	0.1	0.0	0.0	0.0	0.4	0.4

*Data Source: 2019 FinAccess Household Survey*

The above finding tallies with what was reported in focused group discussions where self-reliance, friends, relatives and neighbours and print media were the most dominant sources of financial information. Contrary to expectation, access to agri-finance information from social media especially among the youth was low.

Similar trends are observed in rural and urban areas (Figures 51 and 52). In rural areas, 37.7, 54.7 and 61.1 per cent of individuals with access to formal prudential, informal, and excluded sources, respectively, rely on friends/family for agri-finance information (Figure 51). 43.5, 100 and 44.4 per cent of individuals with access to formal non-prudential, formal registered, and the totally excluded individuals, respectively, rely on their own personal experience. Religious institutions play a very limited role.

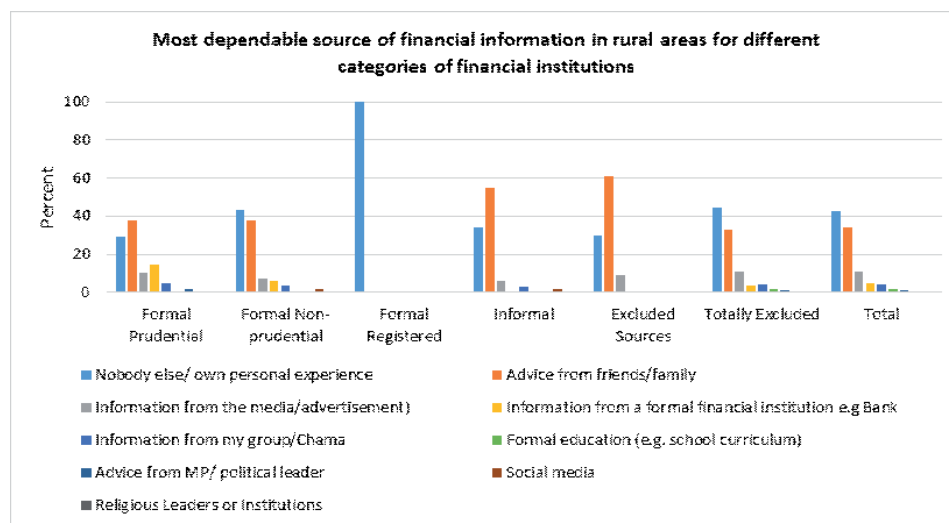
**Figure 51: Most dependable source of financial information in rural areas for different categories of financial institutions**



Data Source: 2019 FinAccess Household Survey

In urban areas, 34.1, 63.9 and 37.5 per cent of individuals with access to formal prudential, informal, and those that are totally excluded, respectively, rely on their own experience for agri-finance information (Figure 52). On the other hand, 39.3 per cent and 41.9 per cent of individuals with access to formal non-prudential and excluded sources, respectively, rely on friends/family for agri-finance information.

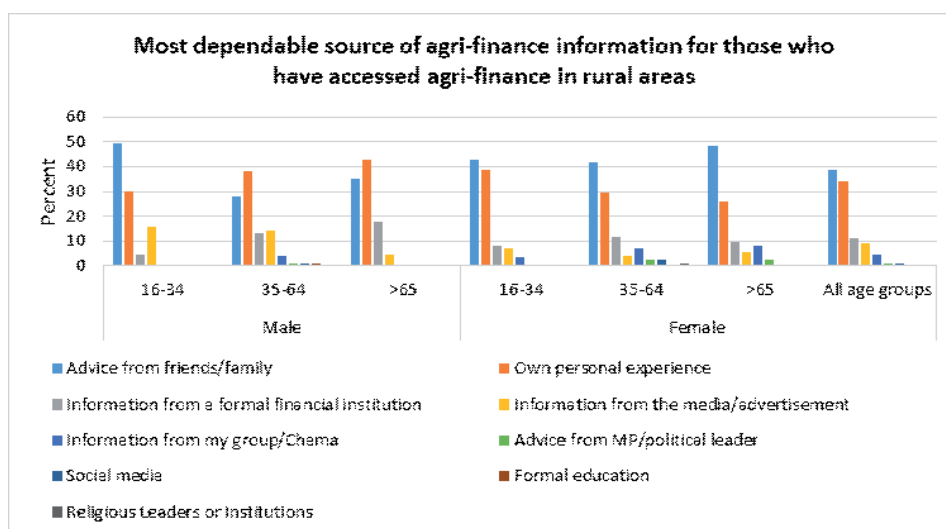
**Figure 52: Most dependable source of financial information in urban areas for different categories of financial institutions**



Data Source: 2019 FinAccess Household Survey

An analysis across gender and population age groups reveals that women in rural areas mainly seek information from friends and family (42.7%, 41.5% and 48.4% for women of ages 16-34, 35-64, and 65 and above years, respectively). On the other hand, 7.9, 11.5 and 9.7 per cent of women ages 16-34, 35-64, and 65 and above years, respectively, rely on information from a formal financial institution. Among men, 49.6 per cent and 15.5 per cent of men of ages 16-34 years seek information from friends/family and media/advertisement, respectively. 38 per cent and 13.1 per cent of men of ages 35-64 years and 42.5 per cent and 17.7 per cent of ages 65 and above years rely on their own personal experience and formal financial institutions, respectively, for financial information.

**Figure 53: Most dependable source of agri-finance information for those who have accessed agri-finance (agri-loans, savings or insurance) in rural areas**

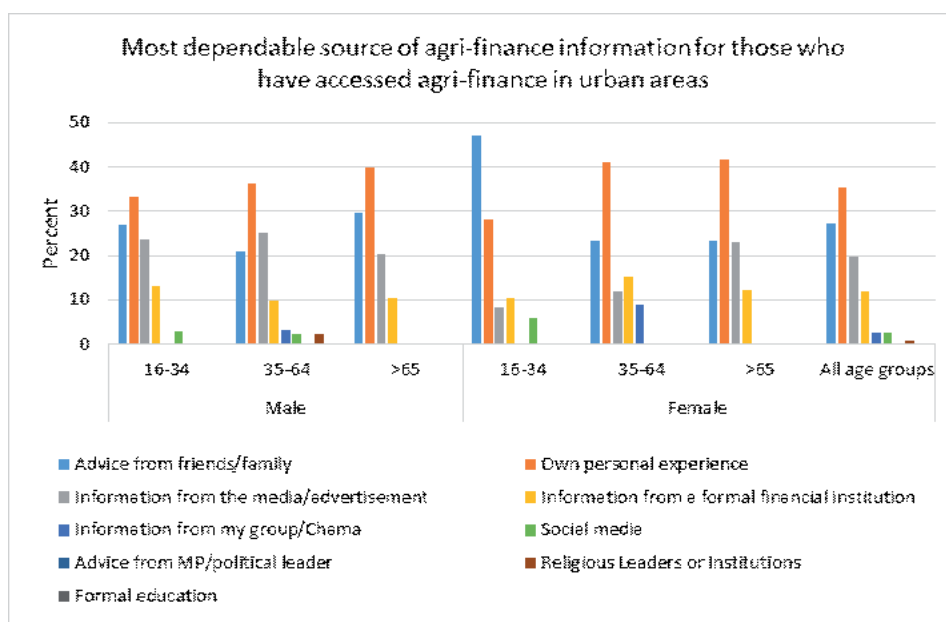


Data Source: 2019 FinAccess Household Survey

In urban areas, 47.1 per cent and 28.1 per cent of women of ages 16-34 years seek information from friends/family and their own personal experience, respectively, (Figure 54). 23.2 per cent and 41 per cent of women of ages 35-64 years and 23.4 per cent and 41.7 per cent of ages 65 and above years rely on family/friends and their own personal experiences, respectively, for financial information. Similarly, among men, 26.9 per cent and 33.2 per cent of men of ages 16-34 years seek information from friends/family and their own personal experience, respectively. 21.0 per cent and 36.2 per cent of men of ages 35-64 years and 29.5 per cent and 39.9 per cent of ages 65 and above years rely on family/friends and their own personal experiences, respectively, for financial information.

Interestingly, a higher proportion of women in urban areas is observed to seek information from formal financial institutions compared to men, with the highest being among women of ages 35-64 years at 15.1 per cent.

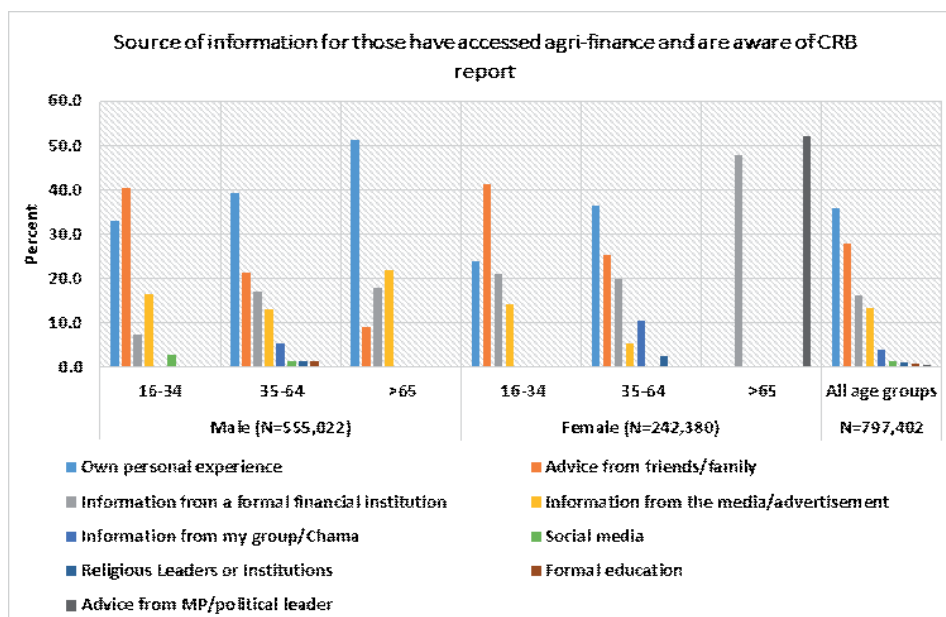
**Figure 54: Most dependable source of agri-finance information for those who have accessed agri-finance (agri-loans, savings or insurance) in urban areas**



*Data Source: 2019 FinAccess Household Survey*

Next, we assess how awareness of the Credit Reference Bureau (CRB) relates to source of information (Figure 55). Majority of women of ages 16-34 (41.2%) and 35-64 (36.4%) years who are aware of the CRB report obtain agri-finance information from friends/family and own personal experience, respectively. However, for women of ages 65 and above, 52.1 per cent and 47.9 per cent of those who are aware of the CRB report obtain agri-finance information from MP/political leaders and formal financial institutions, respectively. Among men, majority of men of ages 16-34 (40.4%) and 35-64 (39.2%) years who are aware of the CRB report obtain agri-finance information from friends/family and own personal experience, respectively. 51.3 per cent and 22.0 per cent of men of ages 65 and above who are aware of the CRB report obtain agri-finance information from own personal experience and media and advertisement, respectively.

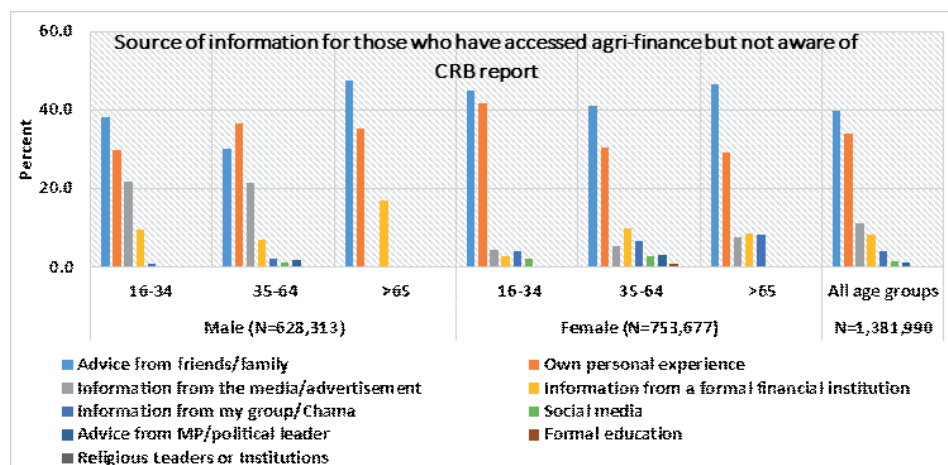
**Figure 55: Source of information for those who have accessed agri-finance and are aware of CRB report**



Data Source: 2019 FinAccess Household Survey

As anticipated, majority of the population who are not aware of CRB source agri-finance information from family/friends or rely on their own personal experiences (Figure 56). 44.9, 40.9 and 46.7 per cent of women of ages 16-34, 35-64 and 65 years and above, respectively, who are not aware of CRB source information from family/friends. 38.2 per cent and 47.7 per cent of men of ages 16-34 and 65 years and above, respectively, who are not aware of the CRB report obtain agri-finance information from friends/family. On the other hand, 36.4 per cent of men of ages 35-64 years who are not aware of the CRB report rely on their own personal experiences.

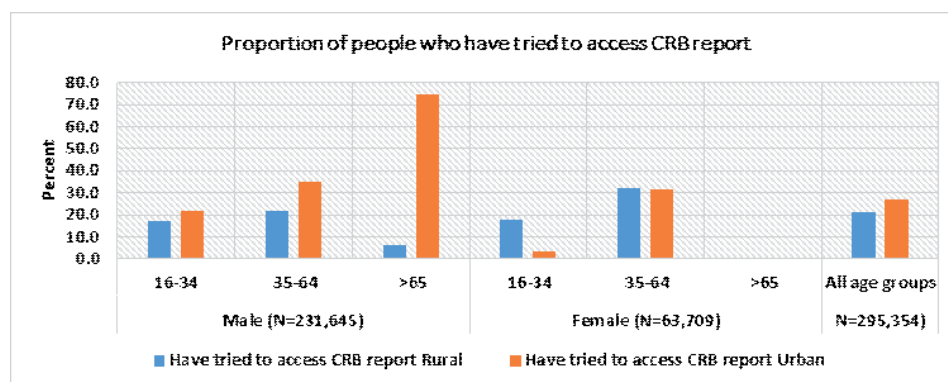
**Figure 56: Source of information for those who have accessed agri-finance but not aware of CRB report**



Data Source: 2019 FinAccess Household Survey

In terms of accessing the CRB report for those who were aware of it, only 17.7 per cent and 3.6 per cent of women of ages 16-34 years in rural and urban areas, respectively, have attempted to access the CRB report to learn their credit worthiness (Figure 57). 32.3 per cent and 31.3 per cent of women of ages 35-64 years have tried to access the CRB report. Among men, the attempts are higher in urban areas compared to those in rural areas. 17.1 per cent and 21.9 per cent of men of ages 16-34 years in rural and urban areas, respectively, tried to access the report. Of the men between 35-64 years, 21.9 per cent in rural and 35.2 per cent in urban areas have tried accessing the CRB report while 6.5 per cent and 74.4 per cent of men above years have made an attempt to access the report.

**Figure 57: Proportion of people who have tried to access CRB report**

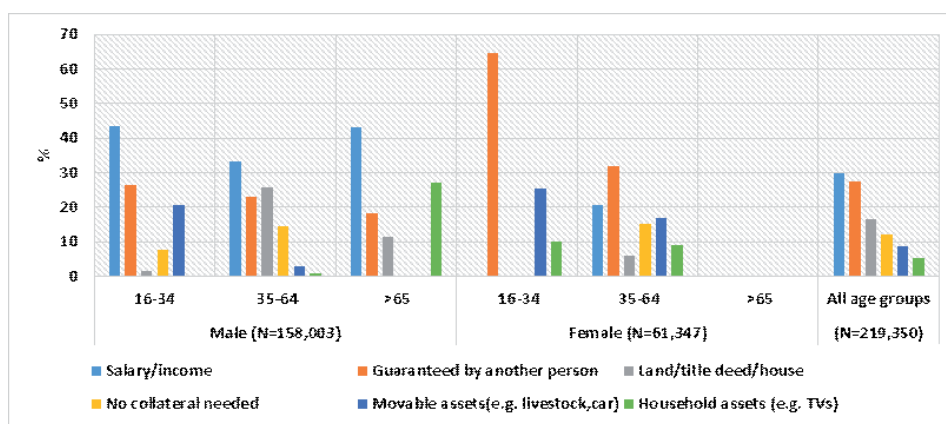


Data Source: 2019 FinAccess Household Survey

## 5.6 Objective 5: To Assess Various Forms of Collateral Available for Women Accessing Agri-financing in Kenya

Salary and guarantors are the most popular forms of collateral used when accessing bank loans nationally (Figure 58). Salary as a form of collateral is more common among males than females in all age cohorts. Guarantors, on the other hand are a more predominant form of collateral among women. About 65 per cent of women youth who accessed agri-finance from banks used guarantors. Women above 65 years did not indicate having used any form of collateral to access loans from banks. This could indicate lack of access following banks' lending policies or lack of preference for loans from banks for this category of people. Land/title deed as collateral for borrowing in banks is more common among men above 35 years of age. A small proportion (6%) of women indicated having used land/title deed as collateral in the banks. This serves as an indicator of lack of access to land/title deeds as collateral by women in all age cohorts. Only 2 per cent of youth male used land title deeds to access agri-financing. This is possibly because land is ancestral and in the parents' names, hence minimal use by youth males.

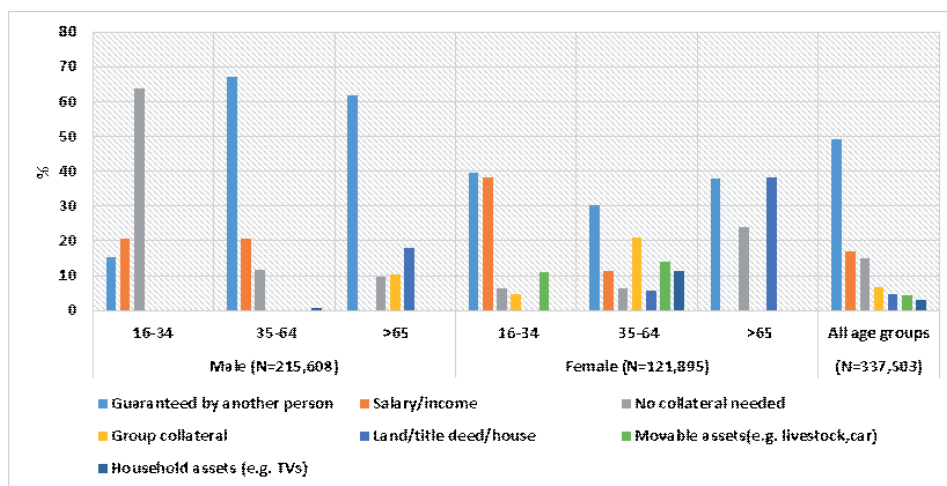
**Figure 58: Various forms of collateral available for people accessing agri-finance from banks in Kenya**



Data Source: 2019 FinAccess Household Survey

In SACCOs (Figure 59), guarantors are predominantly used as a form of collateral in all age cohorts. This is possibly because the principle operations of SACCOs in Kenya is through guarantors, shares or savings. Group collateral and movable assets such as livestock and motor vehicle are only used by women in all age cohorts. Of interest to note is that around 64 per cent of male youth indicated they did not require collateral to access loans from SACCOs. This is possibly because they had larger shares which could cover the loans required.

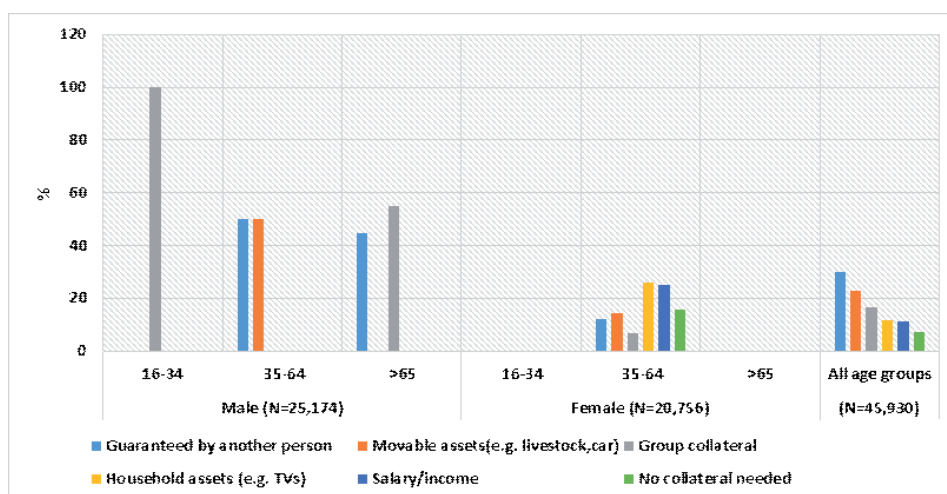
**Figure 59: Various forms of collateral available for people accessing agri-finance from SACCOs in Kenya**



Data Source: 2019 FinAccess Household Survey

From Figure 60, women of age 35-64 years' category access credit from MFIs based on the various forms of collateral available to them compared to the rest of the age cohorts. Across all age groups, guarantors (30%) and movable assets (23%) are collateral used in MFIs

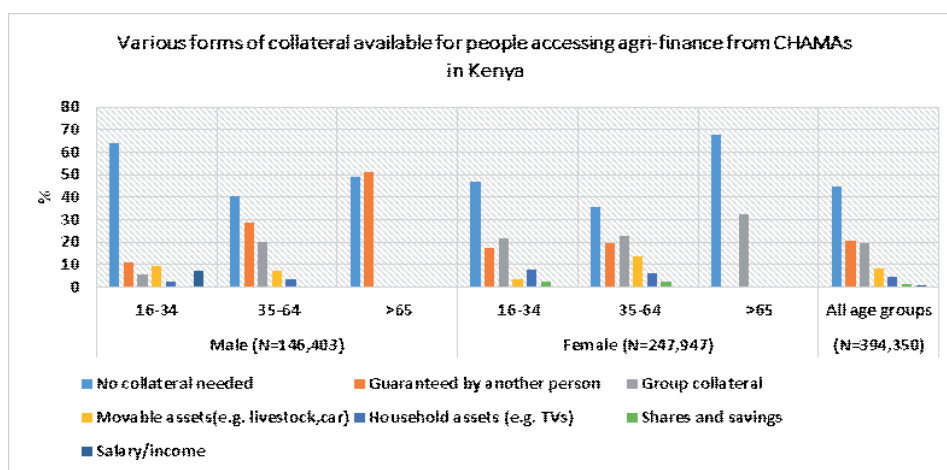
**Figure 60: Various forms of collateral available for people accessing agri-finance from MFIs in Kenya**



Data Source: 2019 FinAccess Household Survey

In *chamas*, approximately 45 per cent of the people who accessed agri-finance reported not having needed any collateral (Figure 61). Here, social capital in the group is very high, with trust built over time as the basis of operation.

**Figure 61: Various forms of collateral available for people accessing agri-finance from *chamas* in Kenya**

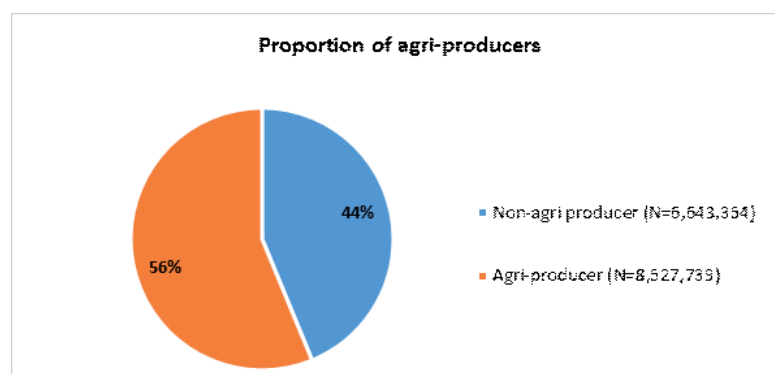


Data Source: 2019 FinAccess Household Survey

### 5.7 Objective 6: Key Production Activities, Value Chains, Markets and the Source of Financing

According to FinAccess 2019 data, about 15.2 million Kenyans aged 16 years and above were directly involved in the agricultural sector. About 8.5 million (56%) of this population are people in agri-production (people who only produce or participate in both production and selling of their agricultural produce) as shown in Figure 62. The rest (44%) are mainly involved in other value chain activities, such as participating in only agri-trade as their main agricultural related activity. The above indicates that most people in agriculture are majorly in production.

**Figure 62: Proportion of agri-producers among the agricultural population**

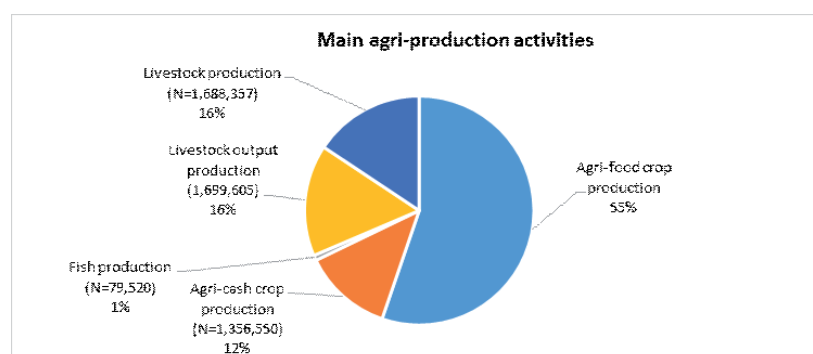


Data Source: 2019 FinAccess Household Survey

### 5.7.1 Agri-producers, level of agri-finance access and source of agri-financing

Among the agri-producers, it is observed that production of food crops is the main agri-production activity as it is practiced by about 55 per cent of the people (Figure 63). Other important agri-production activities were production of livestock, livestock outputs, cash crops and aquaculture (fish farming) at 16, 16, 12 and 1 per cent, respectively.

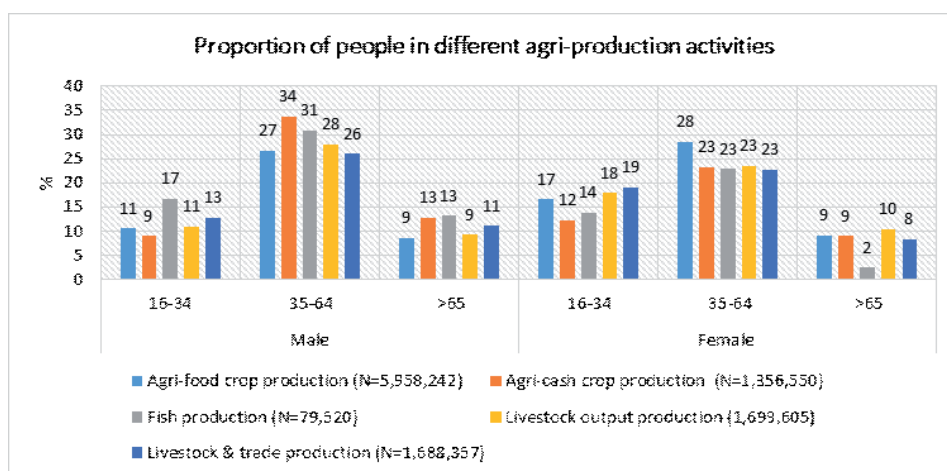
**Figure 63: Proportion of people in agriculture involved in different agri-production activities**



Data Source: 2019 FinAccess Household Survey

Across the different age cohorts, the middle-aged people (between 35 and 64 years) were the most active population involved in agri-production for both male and female (Figure 64). Women largely participate in the production and marketing of food crops such as beans, maize, cassava, sweet potatoes, mangoes and oranges. Women aged 35-64 years were the majority in food crop production (28%) while in cash crop production the majority were male of 34-64 years at 34 per cent. In general, while more women are involved in the production and sale of food crops and sale of output from livestock, more men are involved in the production and sale of cash crops and livestock.

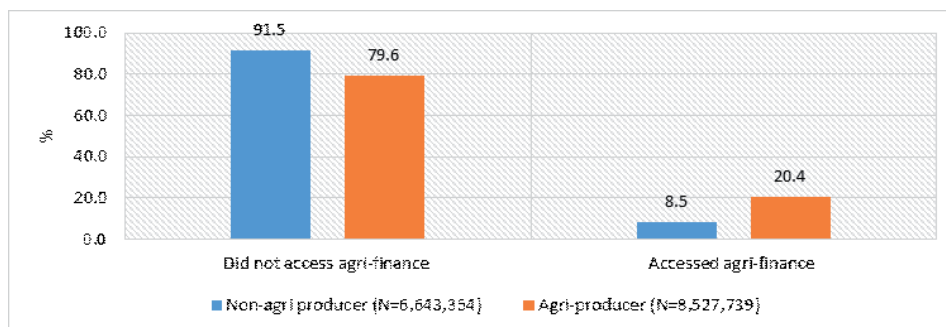
**Figure 64: Proportion of people in different agri-production activities distributed by age cohorts**



Data Source: 2019 FinAccess Household Survey

Further analysis shows that nationally, out of the 8.5 million agri-producers, only 20.4 per cent accessed agri-finance as shown in Figure 65. However, the proportion is higher than that of non-agri producers who accessed agri-finance and which stands at 8.5 per cent. This is probably because agri-producers may have access to production assets such as land, which can be used as collateral for credit access. However, in general, there is low access to agri-finance among the two groups.

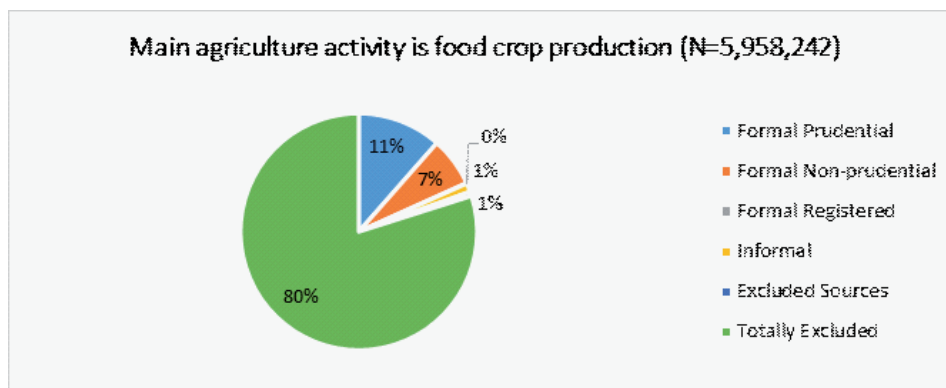
**Figure 65: Proportion of agri-producers and non-agri producers who had access to agri-finance**



*Data Source: 2019 FinAccess Household Survey*

Narrowing down to the various agri-production activities, regarding food crop producers, about 80 per cent of this category are totally excluded from access to agri-finance (Figure 66). Out of the 20 per cent who had access to agri-finance, majority (11%) accessed from formal prudential institutions followed by 7 per cent who accessed from formal non-prudential institutions.

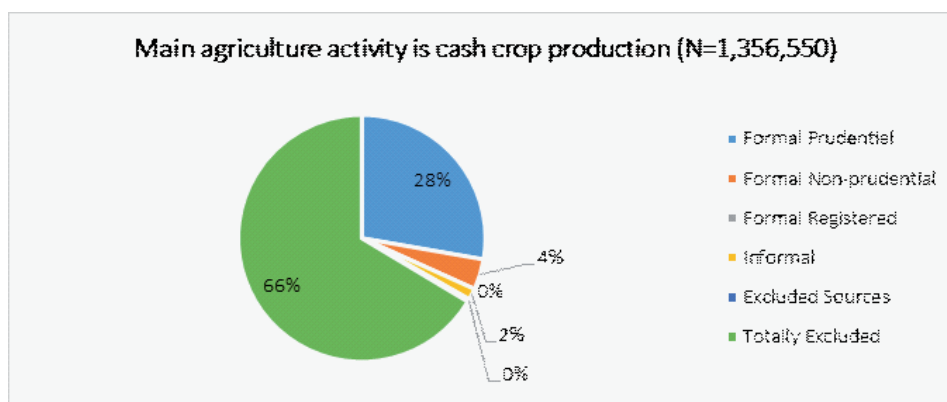
**Figure 66: Access to agri-finance for people whose main agriculture activity is production and selling of food crops**



*Data Source: 2019 FinAccess Household Survey*

About 66 per cent of the agri-cash crop producers had no access to agri-finance (Figure 67). Formal prudential institutions were the preferred sources of agri-finance, accessed by 28 per cent of cash crop producers.

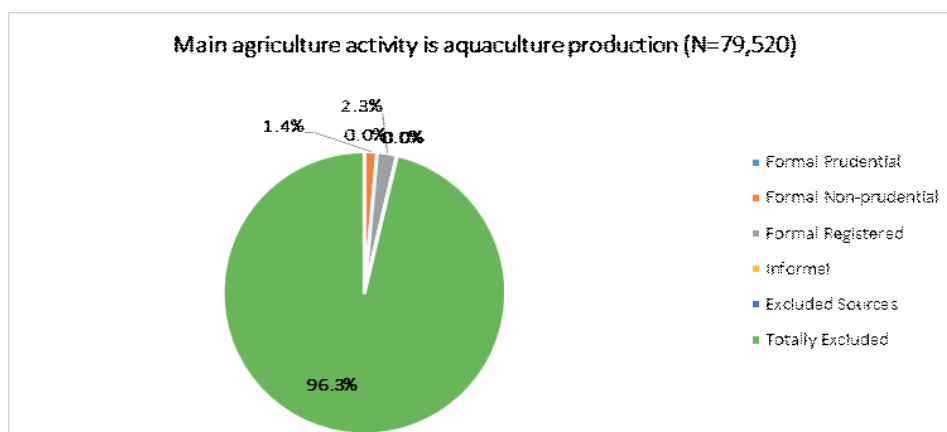
**Figure 67: Access to agri-finance for people whose main agriculture activity is production and selling of cash crops**



Data Source: 2019 FinAccess Household Survey

Fish farming or fishing, including aquaculture, was not a popular main agriculture activity. Similarly, credit access among those in the sub-sector was relatively low with about 96.3 per cent of them having no access to agri-finance as shown in Figure 68. Of those who accessed, 2.3 per cent and 1.4 per cent was from formal registered and formal non-prudential sources, respectively.

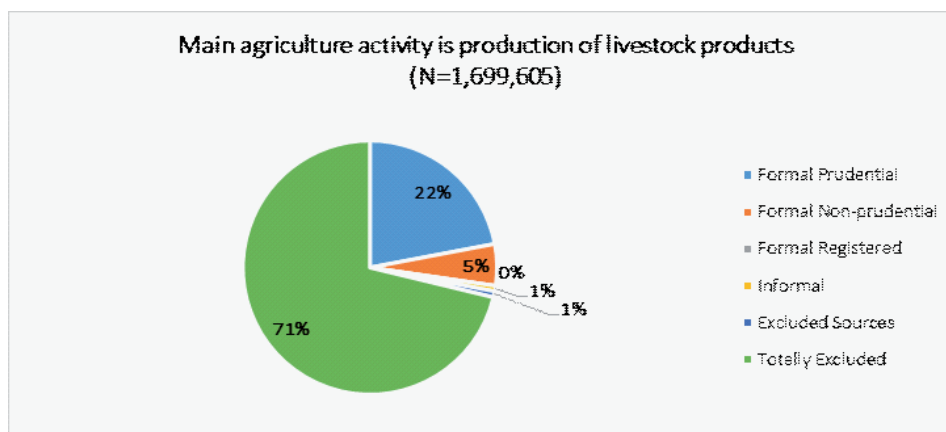
**Figure 68: Access to agri-finance for people whose main agriculture activity is aquaculture production**



Data Source: 2019 FinAccess Household Survey

About 71 per cent of producers of livestock outputs (such as milk, beef, eggs, manure, livestock) from own livestock had no access to agri-credit (Figure 69). Majority of those who had access to agri-finance accessed it from formal prudential institutions (22%) and formal non-prudential institutions (5%).

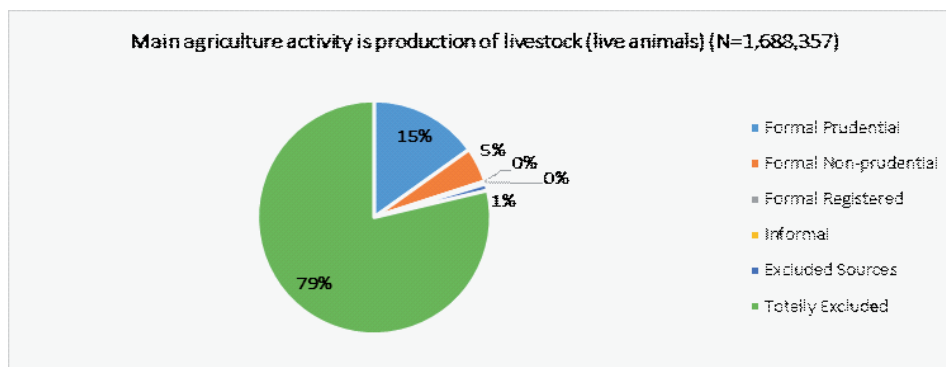
**Figure 69: Access to agri-finance for people whose main agriculture activity is livestock production and sale of livestock output**



Data Source: 2019 FinAccess household Survey

Similarly, majority of livestock producers (79%) had no access to agri-finance as shown in Figure 70. Majority of those who accessed got financial services from formal prudential and formal non-prudential institutions at 15 per cent and 5 per cent, respectively.

**Figure 70: Access to agri-finance for people whose main agriculture activity is livestock production and sale of live animals**

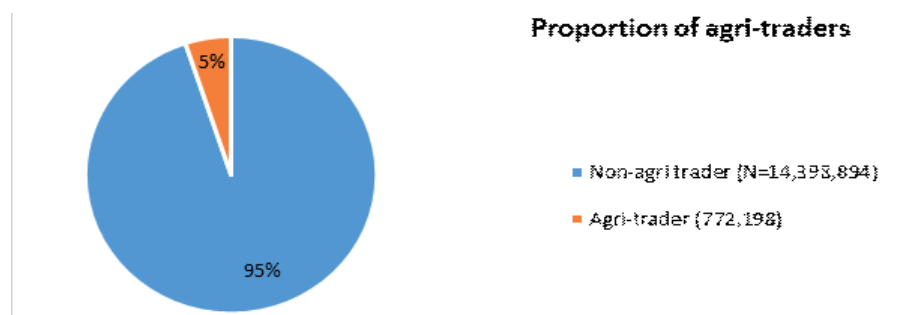


Data Source: 2019 FinAccess Household Survey

### 5.7.2 Agri-traders, level of agri-finance access and source of agri-financing

Out of the about 15 million agricultural population, only about 5 per cent (0.7 million people) were involved in the sector as purely/solely agri-traders (Figure 71).

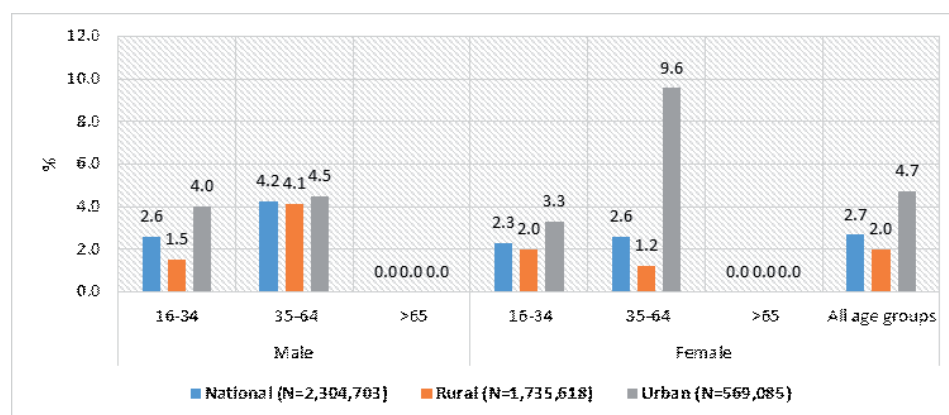
**Figure 71: Proportion of agri-traders among the agricultural population**



Data Source: 2019 FinAccess Household Survey

At the national level, among the individuals that accessed agri-finance, only 2.7 per cent were solely involved in agri-trade (Figure 72). Women aged 35-64 years residing in urban areas had the highest proportion (9.6%), probably because trade in agri-produce in vegetable kiosks/grocery shops in urban areas is commonly done by women. On the other hand, there was no man or woman in agri-trading and above 65 years who had access to agri-finance. This is an indication of not only low agri-finance access among the aged agri-traders, but also they were rarely involved in trading in agri-commodities as their main agricultural activity.

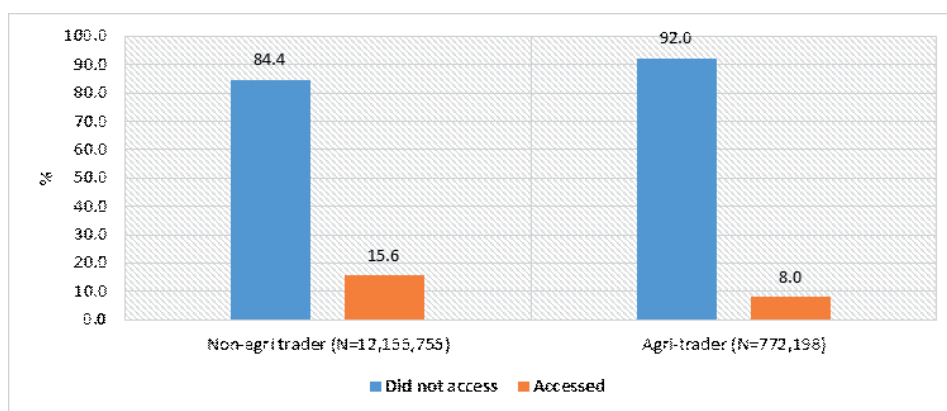
**Figure 72: Proportion of those whose main activity is agri-trade and accessed agri-finance by age cohort**



Data Source: 2019 FinAccess household Survey

Narrowing the agri-trade population, only about 8 per cent of the agri-traders had access as shown in Figure 73. This is lower than the proportion of non-agri traders that had access to agri-finance (15.6%).

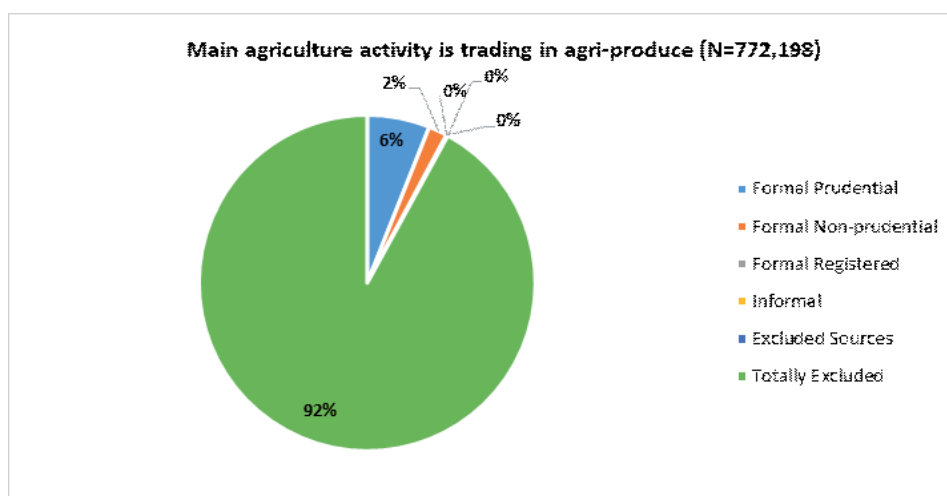
**Figure 73: Proportion of agri-traders and non-agri traders who have access to agri-finance**



Data Source: 2019 FinAccess Household Survey

The few traders that accessed agri-finance rely on formal prudential (6%) and formal non-prudential (2%) financial institutions (Figure 74).

**Figure 74: Access to agri-finance for people whose main agriculture activity is trade in agri-produce**

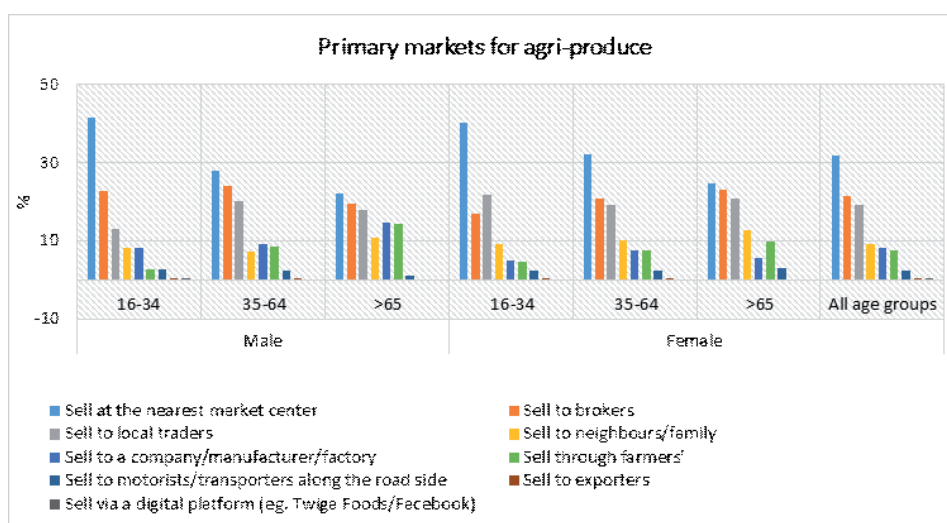


Data Source: 2019 FinAccess Household Survey

### 5.7.3 Markets

The findings reveal that people across all age cohorts primarily sell their produce at the nearest market centres (32%) or to brokers (21%) (Figure 75). Other primary market access avenues include selling to neighbours, companies/ manufacturers/ factory, through farmers cooperatives, and motorists/transporters. It is, however, important to note that less than 1 per cent of the respondents are involved in sourcing export markets and digital platforms markets such as Twiga Foods/ Facebook for their products.

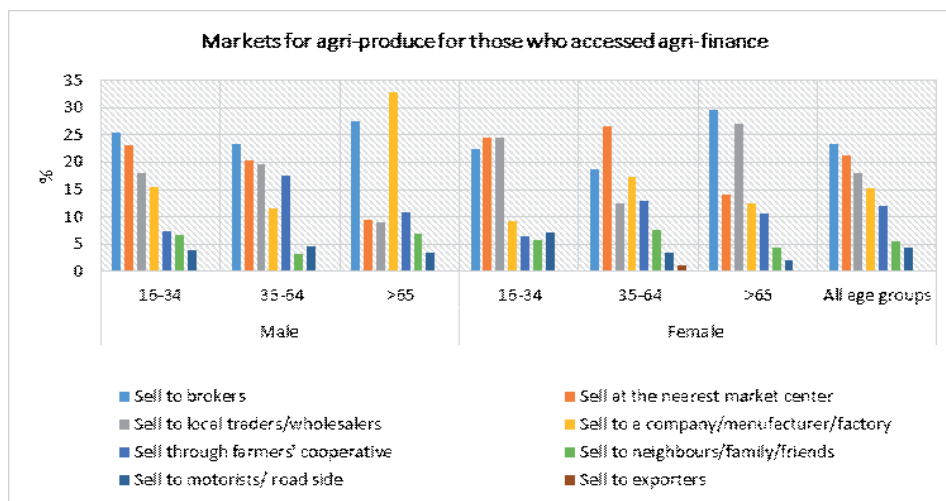
**Figure 75: Primary markets for agri-produce**



*Data Source: 2019 FinAccess Household Survey*

Among those who accessed agri-finance, their primary market was brokers (23%) and nearest market centres (21%) as shown in Figure 76. Notable variation is among men aged above 65 years who mostly sell to companies/manufacturers (33%). This could probably be because such men are large-scale farmers who have engaged in contractual arrangements with such companies, especially for cash crops such as tea and coffee or dairy. On the other hand, 15 per cent and 12 per cent of men of ages 16-43 and 35-64 years, respectively, sell their produce to companies/manufacturers/factory. Among women, 9, 17 and 12 per cent of ages 16-34, 35-64, and 65 years and above, respectively, sell their produce to companies/manufacturers/factory. 7, 18 and 11 per cent of men of ages 16-34, 35-64, and 65 years and above, respectively, sell their produce through farmers' cooperatives. This is in comparison to 7, 13 and 11 per cent of women of ages 16-34, 35-64, and 65 years and above, respectively.

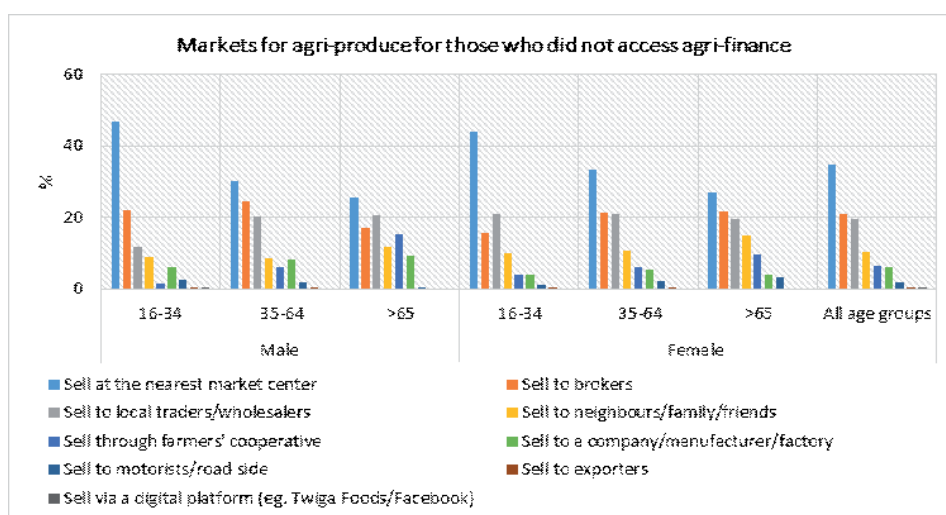
**Figure 76: Primary markets for agri-produce for those who accessed agri-finance**



Data Source: 2019 FinAccess Household Survey

Similar to those who had accessed agri-finance, those who had not accessed it preferably sold their produce to the nearest market centres (35%) and brokers (21%) as shown in Figure 77. This trend is relatively similar across all the age cohorts and for both men and women.

**Figure 77: Primary markets for agri-produce for those who did not access agri-finance**



Data Source: 2019 FinAccess Household Survey

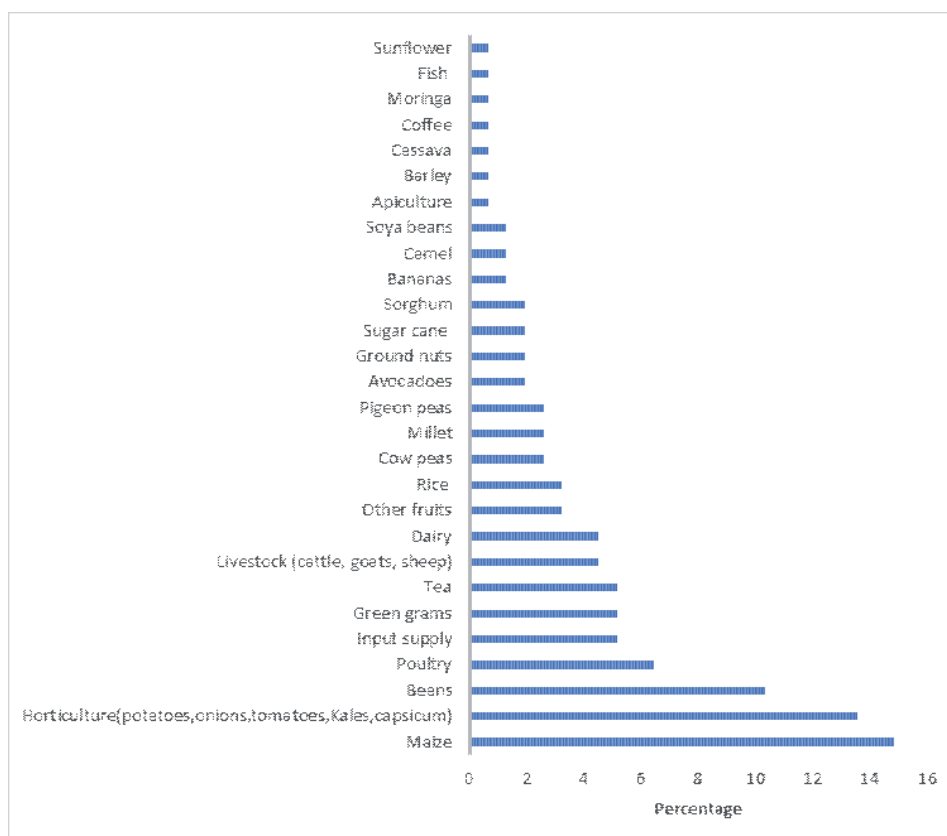
### 5.7.4 Women in agri-business: FGDs observations

This section evaluates the key production activities, value chains, the markets for women in agri-business as observed from FGDs.

#### 5.7.4.1 Agricultural activities by women

Figure 78 shows the common agricultural activities that women participate in along the value chains. Common crops activities include: maize, horticulture (such as potatoes, onions, tomatoes, kales, capsicum), beans, green grams, rice, tea, millet, sorghum, ground nuts and fruits such as avocado and bananas. In livestock, women are involved in rearing of poultry, cattle, sheep and goats (for meat and dairy), camels and fish. These findings are based on key informant interviews of women in retail.

**Figure 78: Agricultural activities by women**



Data Source: Key Informant Interviews (2019)

#### 5.7.4.2 County analysis of women's participation in agricultural value chains

Using data from FGDs, we find that women across the counties studied participate in the production and marketing of various crops and livestock. For crops, women tend to operate in the production and marketing of green grams, peas, sunflower, beans, sugarcane, sorghum, millet, maize, cassava, horticulture such as flowers, fruits and vegetables. Women also participate in the production and marketing of cattle, camel, goat, sheep, donkey, fish and poultry rearing for both meat and meat products, and milk where applicable. The participation in livestock and livestock products is, however, lower compared to that of crops.

Looking at specific county highlights of women's participation in agricultural value chains, in Kitui County for instance, women are involved in farming (production) of green grams, cow peas, horse bean (*kunde*), peas, sunflower, beans, sorghum, millet and maize. They are also involved in smallscale trade of the same crops. In addition, a few of them rear livestock such as goats, cows and donkeys, and rearing poultry for domestic use and in a few instances for commercial purposes. Women are involved in the production and marketing value chains.

In Garissa County, women are involved in the farming of mangoes, lemons, bananas, pawpaw, cane, maize, tomatoes and vegetables, and buying and selling of livestock, which includes goats, donkeys and cows. A few women buy and slaughter animals in their butcheries. Generally, women are involved in the production and marketing value chains. It is important to note that women have also diversified their livelihoods by involving themselves in other non-agricultural activities such as hair dressing, boutique business, cosmetics businesses, among others.

Women in Isiolo County are involved in camel, cattle and goat (aggregator) farming, where some rear them for dairy purposes. Some women groups own coolers for storing camel milk. Women also cultivate tomatoes, maize, beans and horticulture, and rear chicken. Women in Marsabit County participate in farming of vegetables such as kales, spinach and tomatoes; beans, maize, miraa, rearing of poultry, cattle, goats and sheep while others are involved in sale of assorted cereals.

Women in Samburu County are involved in rearing goats, cattle (and by extension dairy farming), poultry, while some women are involved in maize, beans, potato, vegetable, orchards, avocado, kales and spinach farming. Livestock trade and grocery and cereals business is also common among women in Samburu County. Some women also own butcheries while a few more are involved in hay making.

In Kwale County, women are engaged in the farming of maize, beans, pigeon peas, cow peas, green peppers, water melon, tomatoes, green grams, rice, cassava and coconuts. Most women rear chicken, goats and cows on smallscale trade. A

few practise large scale poultry farming and aquaculture. Some women are also involved in fish trading. Additionally, women in Taita Taveta County are involved in farming and sale of maize, beans, irish potatoes, sukuma wiki, beans, cabbage, peas, tomatoes and bananas. Some women are also involved in rearing of chicken, goats, and cows. In addition, one group of women are involved in processing of bananas into jam for sale, while majority are in production and marketing value chains.

Women in Meru County are involved in smallholder dairy and poultry farming, growing of pigeon peas, maize, beans, tea while others are in retail cereal trade and in agro-dealership. In Kirinyaga County, women are involved in the farming of coffee, rice, watermelon, maize, beans, horticulture, bananas and poultry rearing and dairy farming. Majority of women are also involved in trade of cereals, predominantly rice. Some women also run agrovet businesses. Generally, women are involved in the production and marketing value chains.

Women in Nyandarua County are involved in the farming of potato, maize, and beans. The women also rear cattle important for dairy farming, goats, sheep and poultry. Other women are involved in production and marketing value chains of horticulture such as pyrethrum, broccoli, tomatoes, strawberry, cabbages and carrots. Similar to Nyandarua County, women in Nakuru County are involved in dairy, poultry, horticulture (carrot, peas, onions, and cabbages), maize, potato and beans farming. Some women are also involved in wheat production, groundnuts, cereal trade, while others run agrovets. Women are involved at both the production and marketing levels.

In Narok County, women are involved in input supply, potato production, dairy farming, poultry production, pyrethrum, horticulture (cabbages, carrots, broccoli, tree tomato and strawberries) and cereals production. A few women are involved in steers fattening. In Kisumu County, women are involved in fish business, sugarcane, maize, groundnuts, cereal trade (maize, beans, rice) and tomato farming. Women are involved at the production, processing and marketing levels.

Women in Homa Bay County pride themselves in production of groundnuts, fruits, bananas, livestock, maize, wheat, beans, potatoes, tomatoes, cassava, sorghum (some have contracts with East African Breweries Limited), onions, vegetables and fodder farming. Some women are also involved in rearing livestock such as cows, chicken and fish farming in ponds.

In Migori County, women are involved in production of sugarcane, maize, tomatoes, onions, vegetables, beans, chicken rearing, carrots and dairy farming. Other women are involved in fruit processing, packing and selling, and jaggery business. In Kisii County, women are involved in farming, bananas, maize, beans,

tomato, oranges, vegetables, sugarcane, cassava and tea. Others are involved in rearing livestock, dairy, chicken farming and jaggery business. This is both at the production and marketing levels.

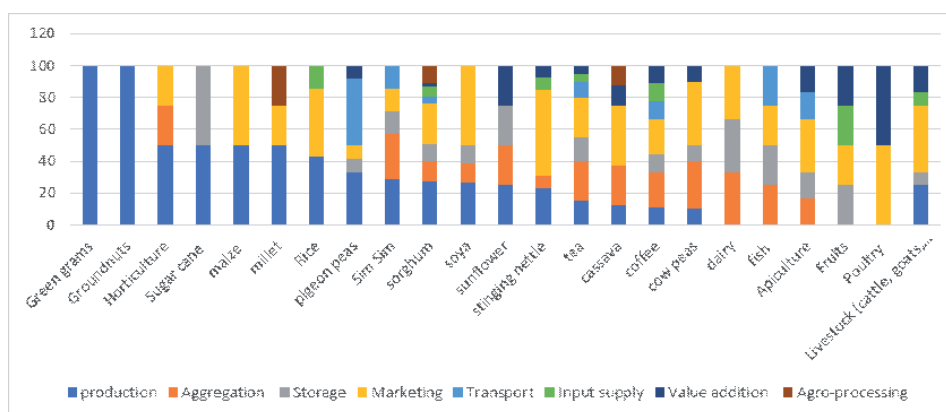
Additionally, women in Bungoma County are involved in production of maize, cassava, beans, onions, tomato, cow peas, green grams and horticulture farming while others are involved in aggregation of cereals. Other activities include poultry and dairy farming. In Trans Nzoia County, women are involved in production of maize, sugarcane, beans, tomatoes, onions, banana, cow peas, horticulture, and green grams. Others are in the business of cereals aggregation, poultry and dairy farming (this includes aggregation and processing - value addition). In Nandi County, women participate in cultivating maize, beans, onions, tomatoes, horticulture, tea and dairy farming. Women are also involved in cereals trade (maize, cow peas and green grams, aggregation of cereals and poultry farming).

In Uasin Gishu, women are involved in production and marketing of maize, wheat, green gram, vegetables, fruits and dairy farming. The main agricultural activities where women are involved in West Pokot County include agribusiness, maize, dairy, poultry, passion fruit, potato, and vegetable farming. In Turkana County, the women participate in the following value chains; dairy goat farming (Toggenberg), grass growing, vegetables (kales, spinach and Kunde), tomatoes, watermelon and mangoes, maize, sorghum, beans and green grams. The women were mainly involved in the production and marketing of the above value chains. There was an attempt to add value by processing juice by one participant though for subsistence consumption.

#### *5.7.4.3 Women in agricultural retail value chain participation*

Based on the key informant interviews, women in retail agriculture tend to operate largely in production of green grams, groundnuts, horticulture, sugarcane, maize, millet, rice pigeon peas, sim sim, sorghum, soya, sunflower, livestock and stinging nettle. Those in aggregation deal with dairy, fish rearing, horticulture, apiculture, simsim, sorghum, coffee, tea and cassava, among others. While women in the storage value chain deal with sugar cane, sunflower, dairy, fish and fruits. Overall, as highlighted earlier, their participation in food crop value chains is much higher compared to that of cash crops and livestock (Figure 79).

**Figure 79: Participation of women along the value chain**



Source: Key Informant Interviews (2019)

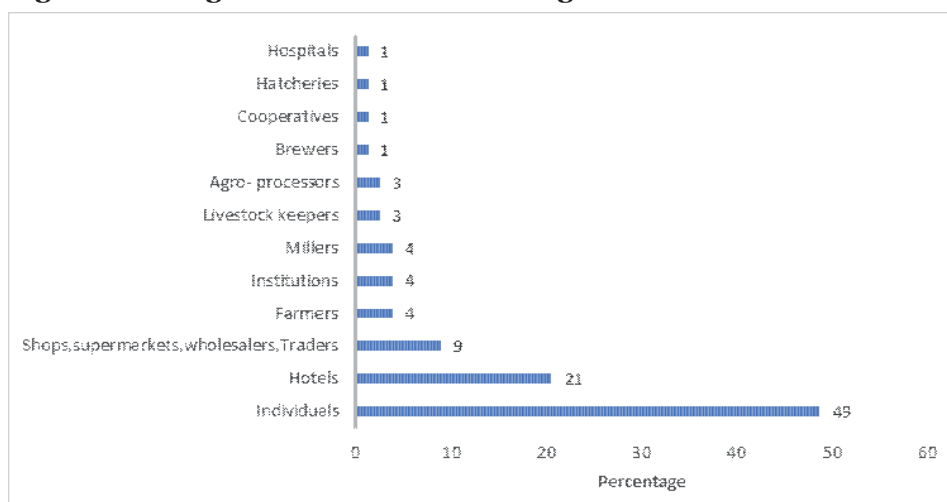
Women in marketing deal with poultry, fish, livestock and crops such as cassava, cow peas, soya, maize, horticulture, and millet, among others. A few women are engaged in the transport of pigeon peas, fish, apiculture and coffee. In terms of value addition women are largely engaged in poultry, fruits, sunflower, and livestock. Those who are in agro-processing deal with millet, sorghum and cassava. Box 5.7 presents a case study of a woman in agriculture and value chain participation.

**Box 5.4: Structured markets in accelerating agribusiness**

The case study woman runs a large-scale potato production enterprise whose combined turnover reached Ksh 3.75 million in 2018. She employs 25 staff (6 male, 21 females and 12 youth) in her enterprise. In 2000, she joined her late husband in an existing farming business based in Kuresoi sub-county, Nakuru County. Despite receiving a loan of Ksh 400,000 from a bank, her enterprise was greatly challenged by the variability of weather and the lack of markets. In 2007/2008, she and other farmers in Kuresoi area suffered as a result of post-election violence. The support from NGOs helped stabilize the community through seed funds. The KCSEED, which is a cooperative and area based development centre, has been crucial in the growth of her agri-business. KCSEED promotes Kuresoi communities' socio-economic development by supporting agricultural-based value chains, capacity building in good agricultural practices (GAPs) and marketing. The private arm of KCSEED in which she is a member provides an assured market for her milk and potato produce. This has increased her's and other members' productivity and produce quality. Using a logbook of a car worth Ksh 1.4 million, a title deed and a bank statement, she received a loan of Ksh 700,000 from AFC. The money helped her increase her labourforce and purchase adequate inputs required for GAPs. However, the loan processing time was too long at six months while she had to pay an upfront fee of Ksh 38,000. She observes that a good financial product for women should expand the security scope to include other assets such as livestock and furniture. She also adds that a shorter period of processing loans, training in farm management, and technical production are crucial for women engaging in agri-business.

**5.7.4.4 Markets for women in agricultural retail**

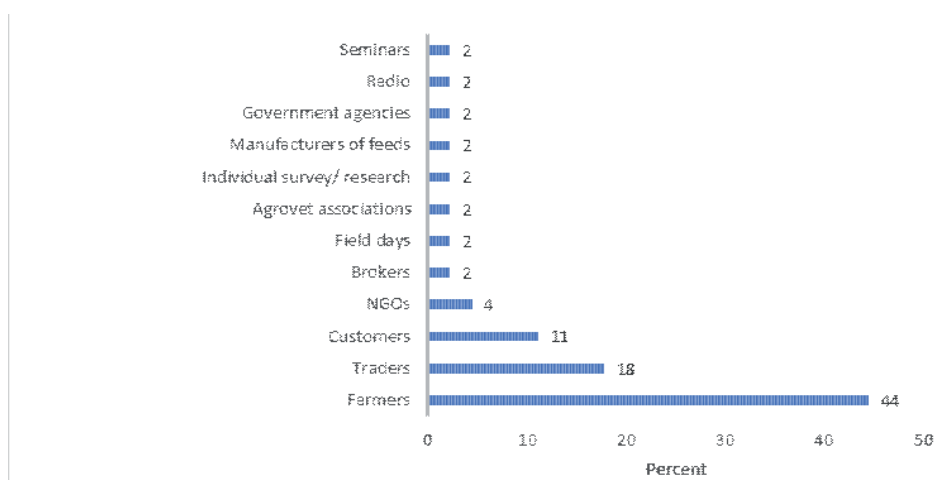
Data from the key informant interviews indicates that the main clients for women in agricultural retail are individuals (49%). Other clients include hotels and shops while hatcheries and hospitals are least considered as client base (Figure 80).

**Figure 80: Target clients for women in agricultural retail**

Source: Key Informant Interviews, 2019

#### 5.7.4.5 Sources of market information

The key informant interviews further reveal that women in agricultural retail mainly rely on fellow farmers (44%) for market information. This is followed by fellow traders (18%) and customers (11%). Other avenues include institutions, farmer field days, radio and seminars, among others. Any programme targeting women in retail agriculture should take into consideration the mentioned sources as avenues of communication (Figure 81).

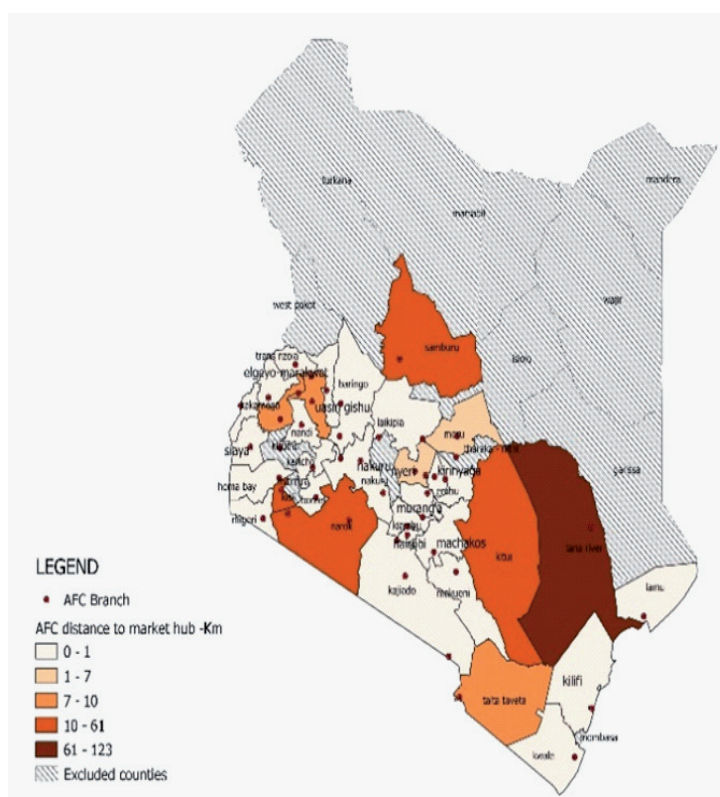
**Figure 81: Sources of information**

Source: Key Informant Interviews (2019)

### 5.7.5 Distance and physical access to markets

Access to markets by farmers and agri-business traders is crucial to the sustainability of agri-finance instruments and structures. Research has shown that differences in household access to markets influence agricultural income (Zeller et al., 1998). In light of this, the study team undertook spatial analysis of the distribution's markets in relation to AFC branch network. The method also applied hub distance analysis to compute the distance of AFC branches to the nearest market locations. Data on market locations was obtained from FinAccess database 2018. The analysis shows that the AFC branch distance to market hubs ranged from 1 kilometre to 123 kilometres (Figure 82). Figure 83 depicts the distance between villages and the nearest market locations. It reveals that some villages are up to 221 kilometres away from markets. The discussion on access to markets is important for gender discourse because transport and mobility needs of men and women are different. Women face more constrained in mobility than men.

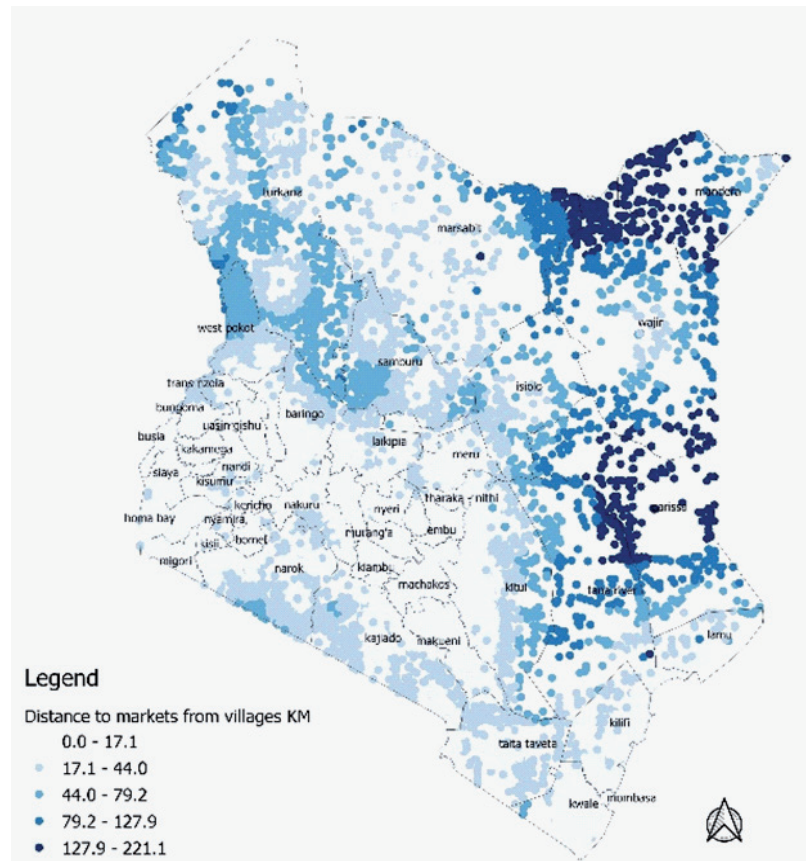
**Figure 82: Distance to markets from AFC branches**



Source: Authors compilation using data from 2019 FinAccess Household Survey

Their travel patterns differ from those of men, mainly due to their gender defined roles. Women are subject to a triple burden of reproductive roles, productive roles and community roles. The domestic work and child care roles of women limit the distance to which they can travel to agricultural markets. There is, therefore, need to develop targeted infrastructure that addresses the needs of women and men, and links rural areas with urban areas and relevant markets.

**Figure 83: Map depicting distance to markets from villages**



Source : Authors compilation using data from AFC and <https://africaopendata.org/dataset/kenya-population-density-2015>

## **5.8 Objective 7: To Determine the Status of Relevant Indicators that Will Assist in Tracking Progress of the Country's "Big Four" Agenda**

Kenya has put in place the "Big Four" agenda to guide its development from 2018 to 2022. The agenda is focused on basic needs that are critical in raising the standard of living of Kenyans, and promoting a strong inclusive economic growth as the country moves towards becoming an upper middle-income country by 2030. The elements of the "Big Four" agenda are universal and affordable healthcare, affordable and decent housing, manufacturing to create more employment, and food and nutritional security. These goals are grounded in the 2010 Constitution of Kenya which recognizes adequate food and nutrition, healthcare and housing as human rights in Articles 43 (for all citizens) and 53 (for children). Table 8 shows the detailed initiatives, the baseline values and the targets for the "Big Four" agenda pillars of food and nutritional security and manufacturing relevant to the study.

Table 8: “Big Four” agenda focus areas and targets in food and nutritional security

Focus Area	Detailed Initiatives	2017/18 (Baseline)	2022 Target
Food availability	Ensuring food self-sufficiency in main crops		
	Maize production	40 million 90 kg bags	67 million 90 kg bags
	Rice production	124,080 metric tonnes (MT)	406,486 metric tonnes (MT)
	Potato production	1.55 million tonnes	2.52 million tonnes
Enhance large scale production	Large scale commercial farming (irrigation)	500,000 acres	1,200,00 acres
	Reduce post-harvest losses through technologies such as cereal drying equipment, hermetic bags, grain cocoons/silos, aquaculture equipment and feed fishing	20 per cent losses	15 per cent losses
Drive smallholder productivity	Establish 1,000 targeted production level SMEs using a performance-based incentive model in the entire value chain	0 SME businesses	1,000 SME businesses
	Improve access to credit/input for farmers through Warehouse Receipt System and strengthen commodity fund		
	Smallholder production and value addition as a percentage of agricultural production and exports	16%	50%
	Contract farmers for Strategic Food Reserve and other commercial off-takers		
Reduce cost of food	Redesign subsidy model to maximize impact by focusing on specific farmer needs (flexible voucher and incentive-based model)		
	Secure investments through PPP in post-harvest handling (storage, cold storage for fish, aggregation) and market distribution infrastructure to reduce losses		
	Rehabilitate and operationalize fish landing sites in Lake Victoria (Migori, Homa Bay and Busia)		
	Eliminate multiple levies across counties in the agriculture value chain (enforce laws on roads)		
	Reduce cost of food as a percentage of income	47%	25%
	Reduce value chain inefficiencies		50%

Manufacturing			
Agro processing	To more than triple the amount of processed agricultural exports from the current annual growth of 16 percent to 50 percent by 2022	16%	50%
	Create an additional 1,000 small and medium size enterprises (SMEs) which will have access to affordable capital, skills and markets		1000 SMEs
Leather	Create an additional 200,000 jobs and wealth for Kenyans		200,000 jobs
	Increase export revenue by US\$ 500 million by 2022	US\$ 140 million	US\$ 500 million
	Creating 50,000 new jobs	0	50,000
	Make 20 million shoes		20 million
Textile/ apparel/ cotton	Increase revenue from textile industry from US\$ 350 million to US\$ 2 billion	US\$ 350 million	US\$ 2 billion
	Create 500,000 cotton jobs	0	500,000
	Create 100,000 new apparel jobs; the government will train 50,000 youths and women to be involved in this sector	0	100,000

Source: 2018 Budget Policy Statement: Creating jobs, transforming lives- "The Big Four" plan

Women and youth in agriculture and manufacturing sectors can be an accelerator to the achievement of the “Big Four” agenda. While the agenda on manufacturing has some specific initiatives on women and youth (train 50,000 youth and women in textile/apparel/cotton industries), there is need for specific initiatives in agriculture to enable women contribute to the food and nutrition security agenda. Women and youth’s participation in agro-processing SMEs should also be enhanced.

### **5.9 Objective 8: To Determine the Status of Relevant Indicators that will Assist in Tracking Progress of the SDGs Focusing on Women**

In 2015, the United Nations Member States adopted the 2030 Agenda for Sustainable Development with 17 goals to support the universal call to action to end poverty, protect the planet and ensure that all people enjoy peace and prosperity by 2030. For a developing country such as Kenya, which heavily relies on the agricultural sector to spur its economic growth, key among these goals are goals 1, 2, 5, 8 and 12 that directly support the prosperity of women and youth in agriculture. This is important given that agriculture contributes 34.2 per cent of GDP while women account for 75-89 per cent of the labour force in smallscale agriculture and manage an estimated 40 per cent of smallscale farms (Action Aid 2015; KNBS, 2019a). This is amid concerns of low participation of youth in agriculture, with statistics showing increasing youth unemployment in the country, which currently stands at 55 per cent (KNBS, 2019a). The selected SDGs are:

- (a) Goal 1: End poverty in all its forms everywhere;
- (b) Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture;
- (c) Goal 5: Achieve gender equality and empower all women and girls;
- (d) Goal 8: Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all;
- (e) Goal 12: Ensure sustainable consumption and production patterns.

Based on estimates of extreme poverty (living on less than US\$ 1.90/day), about 57 per cent of Kenya’s population are among the poorest 20 per cent of the global population (P20) (ID, 2019). On the other hand, the SDG Index and Dashboards Report 2018 indicates that, globally, Kenya ranks position 119 with a global index score of 56.8 per cent and gender equality score of 69.3 while Tanzania and Uganda rank 123 and 125, respectively. There seems to be a correlation between

the gender equality score and the East African countries' Gross Domestic Products (GDPs). Kenya's GDP stands at US\$ 2,925.6 while Uganda's GDP is US\$ 1,687.1 (Adopted from *SDG Index and Dashboards Report 2018*).

To ensure no one is left behind in eradicating poverty among other socio-economic problems, Kenya has domesticated and localized the United Nations Agenda 2030 on Sustainable Development Goals (SDGs) through its Third Medium Term Plan (MTP) (2018-2022) of the Vision 2030. Those at high risk of being left behind are those with limited financial resources, especially women in relation to land rights and unemployed youth with limited economic opportunities. Promotion of marginalized categories of people especially women and youth remains an integral part of each of the 17 SDGs in order to deliver the promises of shared and sustainable prosperity, peace and human progress. Protection of marginalized groups is also enshrined as an obligation to the State in the Bill of Rights in Kenya's new Constitution 2010.

In Kenya, the Ministry of Devolution and Planning is responsible for the overall management and coordination of implementation, monitoring and reporting of SDGs process. However, for successful implementation to realize the targets by 2030, there is need for a multi-sectorial collaborative effort of the national government, county governments, private sector, civil society organizations and development partners. So far, notable progress has been seen in moving towards achieving the SDGs targets, for example through national programmes and increased budgetary allocation. For example, in relation to SDG 2 on ending hunger, in 2018/19 the State Department of Crop Protection received 1 per cent of the national budget (Ksh 25.3 billion) which is a 44 per cent increase from the previous year. On the other hand, in supporting SDG 1 on zero poverty, the Department of Social Protection budgetary allocation in 2018/19 was 68 per cent higher than what it received during its establishment in 2013 (DI, 2017). Other indicators of progress towards attainment of SDGs targets include a decline in proportion of population living below the national poverty line from 46.6 per cent in 2014 to 36.1 per cent in 2016 (Goal 1); a rise in annual growth rate of real GDP per employed person from -0.55 per cent in 2014 to 0.40 per cent in 2016 (Goal 8) and a decline in food loss index from 79 per capita (Kcal) in 2014 to 73.3 per capita (Kcal) in 2016 (Goal 12) (KNBS, 2019b).

The status of each of the 5 goals in relation to gender, finance and agriculture targets by 2030 in Kenya is as shown in Table 9.

Table 9: Tracking progress of the SDGs progress focusing on women

Relevant SDG Goal	Indicator description	Baseline (2016)	Target by 2030	Baseline Data Source	
Goal 1: End poverty in all its forms everywhere	1.2.1 Proportion of population living below the national poverty line, by sex and age	36.1% (Total) 40.1% (Rural) 29.4% (Urban)	Reduce the levels of poverty by at least 30%	KNBS (2019b)	
		Ending Drought Emergencies Strategy 2015 Launched	End the worst of the sufferings caused by drought	KNBS (2019b)	
	By Sex	36.2% (Female) 36.1% (Male)	Reduce poverty among women by at least 50%	KNBS (2019b)	
	By Age group	41.5% (0-17 yrs) 29.1% (18-35 yrs) 32.5% (36-59 yrs) 36.2% (60-69 yrs) 39.1% (70+ yrs)	-	KNBS (2019b)	
	1.2.2 Proportion of men, women and children of all ages living in poverty in all its dimensions according to national definitions	a) Children aged 0-17 years deprived in 3 or more dimensions	(Children 0-17 years) 45% (National) 19% (Urban) 56% (Rural)	-	KNBS (2019b)
		b) Multi-dimensional poverty	38.9% (Total) 20.3% (Urban) 48.4% (Rural)	-	KNBS (2019b)
1.3.1	Proportion of population covered by social protection floors/systems, by sex, distinguishing children, unemployed persons, older persons, persons with disabilities, pregnant women, newborns, work-injury victims and the poor and the vulnerable	352,000 Orphans and vulnerable children (OVC) covered by social protection 46,917 Persons with severe disabilities (PWSDs) covered by social protection	At least 30% of vulnerable populations including the older persons, PWSDs and children provided with social protection At least 20% of the informal sector and rural labour have access to social security	KNBS (2019b)	

1.4.2	Proportion of total adult population with secure tenure rights to land, with legally recognized documentation and who perceive their rights to land as secure, by sex and by type of tenure	94% - Men only owned title deeds 5% - Women and Men owned title deeds 1% - Men only owned title deeds	By 2030, ensure that all men and women, in particular, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	Kenya Land Alliance (2018)	
					1.a.1
Goal 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture	2.3	2.3.1 Volume of production per labour unit by classes of farming/pastoral/forestry enterprise size.	-	-	
		2.3.2 Average income of small-scale food producers, by sex and indigenous status	Ksh 465/day	Ksh 625/day	
Goal 5: Achieve gender equality and empower all women and girls	5.1.1	Whether or not legal frameworks are in place to promote, enforce and monitor equality and non-discrimination on the basis of sex	The Constitution of Kenya, 2010, Article 23; National Gender and Equality Commission Act, No. 15 of 2011, Section 8; The Matrimonial Property Act, 2013; Public Procurement and Assets Disposal act 2015 in which Access to Government Procurement Opportunities (AGPO) is enshrined; Prevention against Domestic Violence Act, 2015	Fully enforce AGPO which reserves 30% to women, Youth & PWDs. Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	KNBS (2019b)

<p><b>Goal 8:</b> Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all</p>	5-a.1	Proportion of total agricultural population with ownership or secure rights over agricultural land, by sex; and (b) share of women among owners or rights-bearers of agricultural land, by type of tenure	94% - Men only owned title deeds 5% - Women and Men owned title deeds 1% - Men only owned title deeds	Undertake reforms to give women equal rights to economic resources, as well as access to ownership and control over land and other forms of property, financial services, inheritance and natural resources, in accordance with national laws	Kenya Land Alliance, (2018)
	5-a.2	Proportion of countries where the legal framework (including customary law) guarantees women's equal rights to land ownership and/or control [SDG 1.4.2 is also related to this one]	The Constitution of Kenya, 2010, Article 45 (3); The Matrimonial Property Act, 2013; The Marriage Act, 2015	[SDG 1.4.2 is also related to this one] By 2030, ensure that all men and women, in particular, the poor and the vulnerable, have equal rights to economic resources, as well as access to basic services, ownership and control over land and other forms of property, inheritance, natural resources, appropriate new technology and financial services, including microfinance	KNBS (2019b)
	8.2.1	Annual growth rate of real GDP per employed person	0.40%	The economy to grow at 10% annually supported by more creation of many decent jobs in Micro, Small and Medium Enterprises (MSMES). Currently (2019) GDP growth rate is 6.3% up from 5.9% in 2016	KNBS (2019b)
	8.3.1	Proportion of informal employment in non-agriculture employment, by sex	83.01%		KNBS (2019b)

Ensure sustainable consumption and production patterns	8.10.1	Number of commercial bank branches and automated teller machines (ATMs) per 100,000 adults	Number of branches 1,541 Number of branches per 100,000 adults = 7 Number of branches per 100,000 adults = 11	-	KNBS (2019b)
	8.10.2	Proportion of adults (15 years and older) with an account at a bank or other financial institution or with a mobile-money-service provider	73%	-	KNBS (2019b)
<b>Goal 12:</b>	12.3.1	Food loss index	73.3 per capita (Kcal) (food loss per capita derived from Food Balance Sheet (FBS))	By 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses	KNBS (2019b)

Data Source: Various sources as indicated on the table

Implementing the 2030 Agenda requires a robust framework that is evidence-based. The need for quality gender disaggregated data can therefore not be overlooked. Access and rigorous analysis of quality gender disaggregated data ensures that evidence-based policies are devised and that governments can monitor and deliver on social inclusion commitments, including gender.

### 5.10 Causal Models for Access to Agricultural Finance

Table 10 presents the results on the determinants of access to agri-finance among the agricultural population.

**Table 10: Binary logit model for determinants of access to agri-finance among the agricultural population: Average marginal effects**

Variables	dy/dx	Std. Err.
<b>Sex (1=Male, 0=Female)</b>	<b>0.018*</b>	<b>0.010</b>
Mobile_own (1=own, 0=Don't own)	0.018	0.020
<b>Saving (1=Yes, 0=No)</b>	<b>0.142***</b>	<b>0.018</b>
Own formal financial account (1=Yes, 0=No)	-0.010	0.021
Own land (1=Yes, 0=No)	0.003	0.013
Education level (Base=None)		
<b>Primary</b>	<b>0.058***</b>	<b>0.015</b>
<b>Secondary</b>	<b>0.067***</b>	<b>0.018</b>
<b>Tertiary</b>	<b>0.090***</b>	<b>0.024</b>
Marital status (1=married living with spouse, 0=Not married/no spouse)		
	0.007	0.012
Wealth quantile (Base=Lowest)		
<b>Second Lowest</b>	<b>0.031**</b>	<b>0.015</b>
<b>Middle</b>	<b>0.037**</b>	<b>0.017</b>
<b>Second Highest</b>	<b>0.072***</b>	<b>0.020</b>
<b>Highest</b>	<b>0.062***</b>	<b>0.020</b>
Average cost to nearest financial provider (Base=Close enough to walk)		
Less than Ksh 50	-0.025	0.017
Ksh 51-100	0.011	0.020
Ksh 101-200	0.037	0.030
Ksh 201-500	0.062	0.040
More than Ksh 500	-0.033	0.049
Age (years)		
	0.002	0.002
age_squared		
	0.000	0.000
Household size (Number)		
	-0.004	0.002
<b>Log Monthly income (Ksh)</b>	<b>0.018***</b>	<b>0.006</b>
Number of obs = 4,712		

Source: Author computations, based on FinAccess 2019 Data

Table 10 shows the determinants of access to agri-finance among the agricultural population in Kenya in reference to those who did not access agri-finance as determined by sex, savings, education level, wealth quintile, household size and log of monthly income. On sex, males have a 1.8 per cent higher probability of having access to agricultural finance compared to their female counterparts, holding other factors constant. This finding can be supported by the view that, in many cases, males' own properties and assets can easily be used as collateral when applying for financial assistance compared to females. Savings too was observed to be a significant factor in explaining access to agri-finance: individuals who have kept some savings have a 14.2 per cent higher likelihood of accessing agricultural finance *vis-à-vis* those who did not keep savings, *ceteris paribus*. This finding is expected since people who save show they are more conscious about the future and hence can use savings to acquire further financing to fulfill shortages they may be experiencing for agricultural activities. Concerning education level, being educated increases the probability of accessing agricultural finance. Compared to those with no education, individuals who acquire primary, secondary and tertiary education have a 5.8, 6.7 and 9.0 per cent higher chance of accessing agri-finance, respectively. The probability increases with the level of education. This finding is expected since education provides one with the importance of accessing finance to develop themselves, and more educated people also tend to be in employment, which then makes it easier for them to access finance as they can pay back.

The table further shows wealth quintile as an explanatory variable for determining probability of accessing agri-finance. The findings show that wealth increases the probability of accessing agricultural finance. Compared to individuals in the lowest quintile, individuals in the second lowest, middle, second highest and highest wealth quintile have a 3.1, 3.7, 7.2 and 6.2 per cent, respectively, higher likelihood for accessing agri-finance. This finding is expected since people with better wealth status can place part of their wealth as collateral to access agri-financing compared to those in low wealth quintiles. Concerning monthly income, every unit increase in the logarithm an individual's income leads to a 1.8 per cent increase in their probability of accessing agri-finance, *ceteris paribus*. This finding is supported by the view that people who earn monthly income can use pay slip as collateral or have more chance of paying back the loan through check-off system, thus can easily get finance. Variables such as ownership of mobile phone, ownership of a financial account, land ownership, marital status, having savings, land ownership, marital status, cost to nearest financial provider, and age were observed not to have a significant effect on probability to access agri-finance through formal financial institutions.

Next, we present the marginal effect of the multinomial regression results (Tables 11, 12 and 13).

**Table 11: Multinomial logit model for determinants of access to agri-finance from formal prudential financial institutions among the agricultural population**

Multinomial logit marginal effects results		
Average marginal effects		
Number of obs = 711		
Formal prudential		
Variables	dy/dx	Robust Std. Error
Sex (1=Male, 0=Female)	-0.008	0.030
Mobile_own (1=own, 0=Don't own)	0.031	0.058
Saving (1=Yes, 0=No)	-0.063	0.062
Own formal financial account (1=Yes, 0=No)	<b>0.437***</b>	<b>0.107</b>
Own land (1=Yes, 0=No)	<b>0.071**</b>	<b>0.036</b>
Education level (Base=None)		
Primary	<b>0.120*</b>	<b>0.066</b>
Secondary	<b>0.209***</b>	<b>0.072</b>
Tertiary	<b>0.393***</b>	<b>0.093</b>
Marital status (1=married living with spouse, 0=Not married/no spouse)	0.006	0.034
Wealth quantile (Base= Lowest)		
Second Lowest	0.040	0.049
Middle	<b>0.116**</b>	<b>0.051</b>
Second Highest	<b>0.088*</b>	<b>0.053</b>
Highest	<b>0.146**</b>	<b>0.063</b>
Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh 50	0.021	0.061
Ksh 51-100	-0.055	0.046
Ksh 101-200	0.070	0.088
Ksh 201-500	-0.103	0.100
Above Ksh 500	<b>3.263***</b>	<b>0.220</b>
Age (years)	0.004	0.005
age_squared	0.000	0.000
Household size (Number)	-0.007	0.007
Log Monthly income (Ksh)	<b>0.088***</b>	<b>0.015</b>

Source: Author computations, based on FinAccess 2019 data

This finding can be supported by the view that ownership of a formal financial account is not a pre-requisite for accessing finance from formal non-prudential financial institutions such as mobile financial services.

Table 11 shows the determinants of access to agri-finance from formal prudential financial institutions as determined by ownership of a formal financial account, ownership of land, education level, wealth quintile and log of monthly income. On ownership of a formal financial account, individuals who own a formal financial account have a 43.7 per cent higher likelihood of accessing agri-finance from formal prudential financial institutions. This finding can be supported by the view

that ownership of a formal financial account is a prerequisite for accessing finance from formal prudential financial institutions. Ownership of a formal financial account increases the confidence of financial services providers that the funds will be better managed, and it will be possible to track in the event of default. Turning to ownership of land, individuals who own land have a 7.1 per cent higher chance of accessing agri-finance from formal prudential financial institutions in relation to those that do not own land. This is an expected finding since land is mainly used as a hard collateral item among many farmers who wish to access agri-finance. Concerning education level, individuals who acquire primary, secondary and tertiary level of education have 12.0 , 20.9 and 39.3 per cent higher probability of accessing agri-finance from formal prudential financial institutions in relation to those with no education. This finding can be supported by the view that education increases literacy levels and makes people more conscious of the need to seek finance to develop themselves. In addition, educated people tend to get employed, which allows them to better able access finance than the less educated ones.

The table further shows wealth quintile as an explanatory variable for determining the probability of accessing agri-finance through formal prudential financial institutions. The findings show that individuals in the middle, second highest and the highest wealth quantiles have 11.6, 8.8 and 14.6 higher chance of accessing agri-finance in relation to the lowest quantile, if other factors are assumed constant. This finding can be backed up by the view that wealthier people can use their wealth as collateral when applying for agri-finance, and that wealthier people tend to deal more with formal prudential financial institutions such as banks and MFIs than with other channels of access.

Looking at average cost to nearest financial provider, individuals who spend above Ksh 500 increase their probability of accessing agri-finance from formal prudential financial institutions by 3.263. Spending more increases the ability of one to reach formal prudential financial providers that would otherwise not be within easy reach. Concerning log of monthly income, every unit increase in the log of an individual's income leads to a 8.8 per cent increase in their probability of accessing agri-finance from formal prudential financial institutions, *ceteris paribus*. This finding is supported by the view that people who earn monthly income can use pay slip as collateral or have more chance of paying back the loan through check-off system, thus can easily get finance. Variables such as sex, mobile phone ownership, having savings, marital status, cost to nearest financial provider, age and household size were observed not to have a significant effect on probability to access agri-finance through formal prudential financial institutions.

**Table 12: Multinomial logit model for determinants of access to agri-finance from formal non-prudential financial institutions among the agricultural population**

<b>Formal non-prudential</b>		
<b>Variables</b>	<b>dy/dx</b>	<b>Robust Std. Error</b>
Sex (1=Male, 0=Female)	0.0004	0.0316
Mobile_own (1=own, 0=Don't own)	0.0535	0.0606
Saving (1=Yes, 0=No)	0.0876	0.0621
Own formal financial account (1=Yes, 0=No)	<b>-0.3239***</b>	<b>0.1052</b>
Own land (1=Yes, 0=No)	<b>-0.0622*</b>	<b>0.0359</b>
Education level (Base=None)		
Primary	-0.0933	0.0658
Secondary	<b>-0.1827**</b>	<b>0.0713</b>
Tertiary	-0.0929	0.0944
Marital status (1=married living with spouse, 0=Not married/no spouse)	-0.0277	0.0351
Wealth quantile (Base= Lowest)		
Second Lowest	-0.0761	0.0490
Middle	<b>-0.1203**</b>	<b>0.0509</b>
Second Highest	<b>-0.1344**</b>	<b>0.0545</b>
Highest	<b>-0.1670**</b>	<b>0.0663</b>
Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh 50	-0.0594	0.0626
Ksh 51-100	0.0632	0.0491
Ksh 101-200	-0.0631	0.0887
Ksh 201-500	0.0945	0.0985
Above Ksh 500	<b>-3.4798***</b>	<b>0.2291</b>
Age (years)	-0.0055	0.0054
age_squared	0.0000	0.0001
Household size (Number)	0.0095	0.0078
Log Monthly income (Ksh)	<b>-0.0571***</b>	<b>0.0161</b>

Source: Author computations, based on FinAccess 2019 data

Table 12 shows the marginal effects of access to agri-finance from formal non-prudential financial institutions as determined by ownership of a formal financial account, education level, wealth quintile and log of monthly income.

On ownership of a formal financial account, individuals who own a formal financial account have a 32.39 per cent lower likelihood of accessing agri-finance from formal non-prudential financial institutions. This finding can be supported by the view that individuals who own formal financial accounts are more likely to access agri-finance from formal prudential sources compared to formal-non prudential sources. Concerning education level, individuals who have acquired secondary level are less likely to access agri-finance from formal non-prudential financial institutions by 18.27 per cent compared to those with no education. This

finding can be supported by the view that educated people are likely to prefer prudentially regulated and supervised financial service providers such as banks, more for than non-prudential sources of finance such as mobile money.

The table further shows wealth quintile as an explanatory variable for determining probability of accessing agri-finance through formal non-prudential financial institutions. The findings show that individuals in higher wealth quantiles, that is in the middle, second highest and the highest wealth quantiles have a 12.03, 13.44, 16.70 per cent, respectively, lower probability of accessing agri-finance in formal non-prudential sources relative to individuals in the lowest wealth quantile. Wealthier people are likely to prefer prudentially regulated and supervised institutions that control risks to safeguard their wealth and interests in relation to non-prudential sources. Further, looking at average cost to nearest financial provider, individuals who spend above Ksh 500 reduce their probability of accessing agri-finance from formal non-prudential financial institutions by 3.48. As initially highlighted, spending more increases the ability of one to reach formal prudential financial providers that would otherwise be not within easy reach. Turning to log of monthly income, every unit increase in the log of an individual's income leads to a 5.71 per cent decrease in their probability of accessing agri-finance from formal non-prudential financial institutions, *ceteris paribus*. This finding is supported by the view that as people's incomes grow, they tend to look for sources that are more secure and assure them of deposit protection, which makes them less likely to use non-prudential sources of finance. Variables such as sex, mobile phone ownership, having savings, land ownership, marital status, cost to nearest financial provider, age and household size were observed not to have a significant effect on probability to access agri-finance through formal non-prudential financial institutions.

**Table 13: Multinomial logit model for determinants of access to agri-finance from informal financial institutions among the agricultural population**

<b>Informal Variables</b>	<b>dy/dx</b>	<b>Robust Std. Error</b>
Sex (1=Male, 0=Female)	-0.007	0.015
Mobile_own (1=own, 0=Don't own)	<b>-0.037**</b>	<b>0.018</b>
Saving (1=Yes, 0=No)	0.005	0.015
Own formal financial account (1=Yes, 0=No)	<b>-0.060***</b>	<b>0.019</b>
Own land (1=Yes, 0=No)	-0.001	0.019
Education level (Base=None)		
Primary	-0.021	0.020
Secondary	-0.006	0.024
Tertiary	<b>-0.234***</b>	<b>0.060</b>
Marital status (1=married living with spouse, 0=Not married/no spouse)	0.020	0.017

Wealth quantile (Base= Lowest)		
Second Lowest	0.006	0.017
Middle	<b>-0.034**</b>	<b>0.018</b>
Second Highest	0.005	0.030
Highest	<b>0.138**</b>	<b>0.052</b>
Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh 50	-0.009	0.017
Ksh 51-100	0.009	0.025
Ksh 101-200	-0.033	0.024
Ksh 201-500	-0.012	0.028
Above Ksh 500	<b>0.163***</b>	<b>0.039</b>
Age (years)	<b>0.006**</b>	<b>0.002</b>
age_squared	<b>0.000**</b>	<b>0.000</b>
Household size (Number)	-0.001	0.004
Log Monthly income (Ksh)	<b>-0.026**</b>	<b>0.010</b>

Source: Author computations, based on FinAccess 2019 Data

Table 13 shows the determinants of access to agri-finance from informal financial as determined by ownership of a mobile phone, ownership of a formal financial account, age of individual, age-squared and log of monthly income.

For the case of ownership of a mobile phone, individuals who own a mobile phone have a 3.7 per cent lower chance of accessing agri-finance from informal financial institutions compared to those who do not own a mobile phone. This finding is expected since by owning a mobile phone, individuals can access finance through other means such as mobile financial services, mobile banking and others compared to informal sources such as *chamas* and friends. On ownership of a formal financial account, individuals who own a formal financial account have a 6 per cent lower likelihood of accessing agri-finance from informal financial institutions vis-à-vis those who do not own accounts, holding other factors constant. Individuals who own formal financial accounts are more likely to access agri-finance from formal prudential sources compared to informal sources.

Achievement of tertiary level of education reduces the probability of access to informal agri-finance sources by 23.4 per cent. Being educated increases the probability of individuals accessing finance from formal and more structured, regulated sources compared to informal sources. The wealth quantile gives interesting results. Increasing wealth increases the probability of accessing finance from informal sources. Being in the middle wealth quantile reduces the probability of accessing agri-finance from informal sources by 3.4 per cent whereas individuals in the highest wealth quantiles have a 13.8 per cent higher probability of accessing agri-finance in informal sources relative to individuals in the lowest wealth quantile. Wealth is, however, expected to improve the probability of

accessing formal sources of finance, thereby reducing the probability of accessing informal sources.

Looking at average cost to nearest financial provider, high cost of access (above Ksh 500) increases the probability of accessing informal sources of agri-finance by 16.3 per cent. This could be as a result of individuals trying to seek substitute sources of finance where formal sources are not within reach. The table further shows that for the age of individual, every unit increase in years of age leads to an increase in likelihood of accessing agri-finance through informal channels by 6 per cent, if other factors are assumed constant. This finding is supported by the view that most informal sources of finance are easily accessible in terms of distance and time needed, and do not have the stringent requirements of formality which makes them a darling for older populations. Concerning the square of age, the results show that the relationship between age and probability to access informal agri-finance is non-linear, and therefore the probability may increase up to a certain point and then decrease in a non-linear fashion. Turning log of monthly income, every unit increase in the log of an individual's income leads to a 2.6 per cent decrease in their probability of accessing agri-finance from informal financial institutions, *ceteris paribus*. This finding is supported by the view that as people's incomes grow, they tend to look for sources that are more secure and assure them of deposit protection, which makes them less likely to use informal sources of finance. Variables such as sex, having savings, land ownership, education level, marital status, wealth quintile, cost to nearest financial provider and household size were observed not to have a significant effect on probability to access agri-finance through informal financial institutions.

The excluded access group was the reference category in the analysis, and it was also observed that the formal registered group dropped from the analysis partly because only a few individuals accessed agri-finance through this access strand compared to the other channels.

The analysis highlights the need to promote the economic, human, social and cultural rights of the agricultural population, and particularly that of women, to enhance their ability to access agricultural finance.

## CHAPTER SIX

### 6. Conclusion, Policy Implications and Recommendations

#### 6.1 Conclusion

The agriculture sector contributes 34.2 per cent of the country's Gross Domestic Product (KNBS, 2019) and employs over 60 per cent of the population (KALRO, 2018) of which 70 per cent are living in rural areas. The sector is also one of the key drivers of the 10 per cent annual economic growth envisaged in the Kenya Vision 2030.

Limited access to affordable agricultural finance has been identified as one of the major challenges leading to low agricultural productivity in the country (MTP III). Other constraints include limited access to appropriate and affordable technology, limited access to markets, lack of access to quality inputs, climate change, and poor infrastructure. Poor access to agricultural finance is often attributable to lack of collateral, inadequate savings culture, and practice of agriculture for subsistence purposes as opposed to agri-business. The situation is aggravated by reliance on 'traditional' forms of collateral such as title deeds and lack of appropriate credit packages for base of the pyramid agriculture actors such as smallholder farmers and traders.

The situation is worse for women despite the significant role they play in agriculture. According to the World Bank, women account for approximately 75 per cent of the agricultural labour force in Kenya compared to 51 per cent for Kenyan men. In addition, women manage approximately 40 per cent of the smallscale farms and, therefore, play a major role in storage and preparation of food (ActionAid, 2015). While the constraints in the sector face the population at large, studies have shown that women ultimately bear the largest brunt of these challenges.

To drive the desired growth in agriculture and ensure affordable source of agricultural credit, the Government of Kenya established the Agricultural Finance Corporation (AFC) in 1969 under the AFC Act (Cap 363) of the Laws of Kenya. The Corporation is a Development Finance Institution (DFI) mandated to assist in the development of agriculture and agricultural industries by making loans to farmers, cooperative societies, incorporated groups representatives, private companies, public bodies, local authorities and other persons engaged in agriculture and agricultural industries. The Corporation has made deliberate effort towards financial inclusion

through initiatives and models that prioritize lending to marginalized groups, including women and youth. However, data has shown that access to credit in all loan products is lower for women as compared to men. For example, livestock and fisheries development loans have been the most popular loan products for the last five years, and women account for less than 5 per cent while men account for over 40 per cent across the five years with 35.8 per cent for 2018. This is despite women generally being better loan repayors than men.

The government has taken initiatives aimed at enhancing financial inclusivity and economic empowerment among vulnerable groups, such as Women Enterprise Fund (WEF), Youth Enterprise Development Fund (YEDF), Uwezo Fund and Biashara Kenya Fund. In order to directly target women involved in agriculture, the Agricultural Finance Corporation (AFC) is undertaking affirmative financing targeting women through an initiative called Women Affirmative Access Window (WAAW). The initiative is intended to enhance financing of women across the entire agricultural value chain, including production, mechanization, post-harvest management, processing, value addition and access to local and export markets. The initiative aspires to propel the loan portfolio held by women from approximately Ksh 25 million (US\$ 250,000) to Ksh 1 billion (US\$ 10,000,000) in a period of 2 years. Under the WAAW initiative, even women who lack title deeds or other hard collateral will be able to access agri-credit and get help to venture into agri-business. The AFC, therefore, commissioned a baseline survey to understand the issues of women finance and help it to develop the WAAW programme, in collaboration with partners that include the Kenya Institute for Public Policy Research and Analysis (KIPPRA) and the Kenya National Bureau of Statistics (KSBS). The baseline was supported by UN-Women, Food and Agriculture Organization of the United Nations (FAO) and the European Union (EU). The broad objective of the study was to undertake a national baseline survey to understand the status of access to agricultural finance by women in Kenya. It focusses on different activities within the agricultural value chains.

Findings from previous studies demonstrate that improving women's access to financial services can significantly improve productivity in agriculture, increase food availability for families, and raise income levels, which in turn would further enhance food and nutritional security. It can also lift many out of poverty. According to MoALF (2017), the agriculture sector presents a huge opportunity for the creation of employment to absorb the youth and ensure achievement of food security for future generations.

**Methodology:** Both primary and secondary data sources were used. Secondary data was the 2019 FinAccess Household Survey, which has an agricultural module. Also, data from the AFC for the last five years was used. Primary data involved the

use of women's focus group discussions (FGDs) and key informant interviews (KII) for women in agri-business in major markets. Six case studies were also conducted to show case models of access to agricultural finance by women in Kisumu, Nakuru and Meru counties. The sampling procedures involved the National Sample Surveys and Evaluation Programme (NASSEP V) for FinAccess 2019 data. The analysis thus focussed on the 3,041 agricultural households of the 8,669 interviewed households. For the AFC data, the entire loan dataset for the last five years was used. Data cleaning was done to remove outliers. For the case of primary data, the FDGs sample survey covered 25 counties across different livelihood zones in Kenya. The survey conducted 50 FGDs with 500 women participants. Other than the FDGs, data was collected from 50 women (two per county) engaged in agri-business in major markets. Participants were women of the age 18 years and above participating in different agricultural value chains and at different levels.

**Data analysis:** The Grounded Analysis approach was used in the analysis of qualitative data, whereby data/information gathered from discussions and conversations allowed the data to “speak for itself “. For secondary data analysis, both descriptive and regression analysis approaches were used to analyse the data using binary logit and multinomial logit models.

**Finding on demographic characteristics:** The agricultural population in 2019 FinAccess data comprised of 7,362,289 (48.5%) males and 7,808,804 (51.5%) females. Of the overall population (15,171,093 people), 75.4 per cent of them reside in rural areas while 24.6 per cent reside in urban areas. The distribution of the population is done by gender, area of residence and among principal age groups (62-34 years; 35-64 years; 65 years and above).

**Finding on status of access to agricultural finance:** Access to agri-finance is generally lower for both women and men across the country. In overall, 14.66 per cent of the agricultural population has access to agri-finance (formal and informal sources). 13.85 per cent have access to formal agri-finance while 9.61 per cent of the agricultural population accesses agri-finance through formal prudential sources. 84.81 per cent of the agricultural population do not use any form of agricultural finance while 0.53 per cent obtain agri-finance from “excluded sources”. The level of access to agri-finance are lowest for women above 65 years residing in urban areas (6.8%) in relation to the lowest access levels among men, which is observed to be for those between 16-34 years residing in the rural areas (11.5%).

**Finding on access to savings, credit and insurance:** At the national level, men have higher access to formal prudential sources of loans with men of ages 65 and above having the highest access (81%). Women residing in rural areas favour formal non-prudential sources of loans, with the highest being among women above 65 years (48.3%). A favourable share of women of ages 35-64 residing in rural areas

also access loans from formal prudential sources (55.8%). In terms of savings, 92.4 per cent of the agricultural population save through formal sources of finance. Men primarily save through formal prudential sources with highest being among men of 35-64 years in urban areas (88.9%). Women are observed to utilize informal sources of finance to save than men do, with the highest proportion being among women of ages 16-34 years in rural areas (12.5%).

Access to agri-insurance is very low in Kenya, despite the significance of insurance as a risk mitigation measure. The data showed that uptake of insurance is generally low for both women and men at less than 1 per cent of the total agricultural population. Despite the low numbers, the uptake of agri-insurance is higher among men (N=33,057) compared to women (N=23,343). Across age groups, the uptake is higher among the population of ages 35-64 among both men and women. Furthermore, the uptake of livestock insurance among the agricultural population as a coping mechanism strategy is highest among men of ages 35-64 in rural areas (1.09%) followed by women of the same age group (0.6%). Among women, the highest uptake of crop insurance is among women of ages 16-34 years residing in rural areas at 0.11

**Finding on spatial effects of access to agri-finance:** There is a wide distribution of financial institutions in Kenya. However, the distribution is sparse in northern and coastal regions of Kenya. Agent banking has played a big role in enhancing coverage of financial service touch points. The AFC branch network coincides with regions that have a high population density. The distances between AFC branches and location of the nearest 5,000 villages to AFC branches in Kenya was also computed, and it was found that the distance ranges from 156 meters to 47 km.

**Findings on needs, constraints, priorities and the level of satisfaction in agri-financing in Kenya:** Finding on saving needs: At the national level, 5.5 per cent of the agricultural population saved for purposes of buying agricultural land, with more men than women saving to purchase agricultural land and the highest savings rates being among men of ages 35-65 in urban areas (13.5%), with the highest 6.4 per cent of women of ages 16-34 years in the urban areas. For women aged 65 years and above and who reside in rural areas, they save mainly to purchase livestock. Furthermore, the distribution of savings needs to purchase agricultural inputs increase with age for both women and men. The highest score (7.4%) is observed among rural men of ages 65 and above. This is in comparison to 6.7 per cent of women in the same age group. Other reasons for saving include agricultural improvement and transport of farm produce to markets. In general, savings towards agricultural operations are low across all groups.

**Finding on credit needs:** More men than women seek credit for purposes of buying agricultural assets/machinery. This need is highest among men of ages 35-54 years residing in urban areas (25.9%) followed by those of ages 16-35 years (21%). Among women, the need is greatest for women of ages 16-34 years residing in rural areas (19.1%) followed by those 35-64 years residing in urban areas (17.3%). Furthermore, 16.6 per cent of the population seek agri-credit for purposes of farm or land expansion. The needs are shown to increase with age and are highest among men of ages 65 and above residing in rural areas (25.2%). Among women, 23.1 per cent of women of ages 65 and above years in urban areas seek credit for this purpose followed closely by 20.8 per cent of women of the same age group residing in rural areas. On diversification of agricultural activities, about 15.6 per cent of the population seeking credit seek for purposes of diversifying agricultural activities. The needs are higher among men of ages 16-34 years residing in rural areas (31.7%). Women generally seek credit for purposes of day to day running of the farm. The needs are greatest among women of ages 65 and above (about 65%) in both rural and urban areas. Another reason for seeking credit is to buy inputs.

**Finding on constraints:** Denial of credit is among the key challenges faced in agriculture. The results show that 9.7 per cent of the agricultural population that sought agricultural credit were denied at the national level. Among women, majority of those denied are those between ages 35-64 years; 16.6 per cent in rural areas and 7.6 per cent in urban areas. Men of ages 65 and above were most affected by credit denial; 16.7 per cent in rural areas and 35.5 per cent in urban areas. The reasons why credit was denied from banks (formal prudential source) in rural areas was that savings were too low (40%), or due to lack of collateral (16.7%). Existing debts is a key reason given by SACCOs (32%) while for mobile banks' bad credit history (54%) and inactive lines (46%) are presented as reasons for denial of credit. In urban areas, all individuals denied credit by banks was due to lack of collateral whereas for SACCOs it was mainly because the individuals still had a debt to pay. Those denied by MFIs was mainly for lack of guarantors. For those denied by mobile banks, 74.1 per cent was due to existing debts while 25.9 per cent was due to bad credit history. Walking time to nearest financial provider was seen to be a constraint to access finance especially for individuals in rural areas.

**Finding on loan defaults:** Women of ages 16-34 years mainly default on loans due to basic needs demands (26.6%); similarly to those of ages 35-64 years (29.6%), while those of 65 years and above default mainly because they had borrowed too much originally (43.9%). In the case of men, the youth (16-34 years) mainly default on loans due to lack of planning well (37%), those of ages 35-64 years defaults due to basic needs (35%), while those of 65 years and above default mainly due to poor business performance. The FDGs also revealed that most women reported to have diverted the funds to other activities or needs contrary to initial plan or

agreement. Agri-finance was diverted towards school fees payment, medical emergencies, repayment of outstanding loans and other incidental costs such as funeral arrangements.

**Finding on additional constraints:** Additional constraints were noted based on the FGDs as: poor climatic conditions and pest infestation, in turn leading to low yields and heavy losses; lack of collateral in the form of title deeds; low prices of agricultural produce in markets leading to difficulty in repayment; loan requirements; difficulty in getting guarantors; and finally spousal consent, support, and risk of the spouse diverting funds to other uses.

**Finding on socio-cultural constraints to women's access to agricultural finance:** Analysis of the FGDs showed that majority of women stated that it was very difficult to get their spouses to borrow on their behalf or even guarantee their loans. In other instances, spouse may give consent, but wife takes more than agreed. When the spouse does not get husband consent to take a loan, they therefore secretly photocopy their husband's ID and try to copy their signatures and telephone numbers to get a loan. When repayment time comes and the husband learns what the wife did, some women undergo physical abuse from spouse or in-laws while others run for safety at parents or friends house. Some may even contemplate suicide, as a case of Moyale showed. Other risks associated with defaulting on loans include child harassment. The area chief may not want to intervene in family affairs, though in some cases the chief, village elders and church are important conflict resolution mechanisms.

**Finding on decision making and agency constraints in access to finance:** Decision making and agency constraints among women in Kenya decrease with age. The proportion of women making their own financial decision is 52 per cent for ages 16-34 years, 65.8 per cent for ages 35-64 and 80.2 per cent for ages 65 years and above. On the other hand, the proportion of men making their own financial decision is 62.7 per cent of the youth (16-34 years), 67.5 per cent for ages 35-64 and 71.7 per cent for ages 65 years and above. The results imply that women in general have agency regarding financial decision making. However, there are more males who make decisions for their females (8.9%-ages 16-34 years; 2.4% for ages 35-64 and 1.6% for ages 65 years and above) than females do for males (12.6% for men of ages 16-34). Similar findings were observed in the FGDs where women stated that in some cases, women preferred making major decisions with their spouses for support and consent. In other instances, the men make the major decisions. Agency by women and empowering women to make financial decisions can help them succeed in agriculture, and this is imperative for AFCs WAAW programme.

**Finding on liquidity challenge and priorities or preferences in addressing liquidity challenges:**

Both women and men equally face liquidity challenges in both urban and rural areas. At the national level, 64.6 per cent of the agricultural population experienced liquidity challenges in their operations. To address these liquidity challenges, 42.0 per cent of the individuals went for excluded sources, 30.6 per cent for informal sources, 12.7 per cent for formal prudential sources, 7.0 per cent for formal non-prudential, 0.1 per cent for formal registered sources while 6.3 per cent did not go for any source of finance (totally excluded). Excluded sources are prioritized for individuals feeling most comfortable with these sources (57.3%) while informal sources scored the most (69.9%) in having less paper work. Formal prudential sources are most preferred for privacy (23.2%) while formal non-prudential sources are considered most for being fast/easy to access (11.91%). In order to select a source of finance, women mainly consider the timeliness and accessibility or less processes with no bureaucracy. Mobile money is attractive because it is fast, convenient and there is no harassment in case of default, except text message notifications. In SACCOs, ability to use deposits and savings as collateral, low interest rate, accessibility and minimal procedures made them attractive. Micro-finance institutions are preferred because of the flexible repayment plans and use of alternative collateral such as chattels as opposed to land title deeds. Commercial banks were indicated to be favourable because they are fast in loan processing and once a long-term relationship is established, a client could easily negotiate for unsecured credit.

**Findings on level of satisfaction:** Assessing level of satisfaction, more than 90 per cent of the individuals whose choice of liquidity distress device was from formal and informal sources portrayed satisfaction with the choices made in rural areas and urban areas. 78.2 per cent in rural areas and 80 per cent in urban areas of those who went for excluded sources were satisfied with the distress devices while 17.4 per cent in rural areas and 38.8 per cent in urban areas of those who did not go for any form of financial distress device expressed satisfaction with the choices made. In terms of satisfaction with various financial providers, 25 per cent of women of ages 16-34 years report to have experienced unexpected charges from banks. 19 per cent of men of the same age category report to have experienced issues with ATM machines. Similarly, the levels of satisfaction on all the SACCOs indicators were above 80 per cent for both men and women.

MFIs, however, ranked low among men of age 16-34 years on service received at the office or agent and on unexpected charges. Similarly, 35 per cent of women of ages 35-64 years indicated to have experienced unexpected charges while 28 per cent experienced poor services at the MFIs offices or agents. Overall, the level of satisfaction with mobile money is high among both men and women across all ages.

Lower levels of satisfaction are, however, observed on the “no service system down time” indicator. Among women, 33 per cent of the youth (ages 16-34) were the most dissatisfied on this indicator while 38 per cent of men of ages 35-64 years expressed dissatisfaction on the same. Similarly, the mobile bank service indicator that scored lowest was on the “no service system down time” with 27 per cent of women of ages 16-34 years and 30 per cent men of ages 65 and above, indicating some level of dissatisfaction.

**Finding on the level of awareness or usage of different agri-finance channels in Kenya:** At the national level, mobile money is the most popular channel of accessing agri-finance with 5.1 per cent usage. Among women, mobile money usage, however, declines with age with 5.0, 4.8 and 4.5 per cent usage among women of ages 16-34, 35-64 and 65 and above, respectively. Usage of *chama*/groups is also popular among women of ages 16-34 (3.6%) and 35-64 (4.3%) years. Usage of mobile money is slightly higher for men compared to women at 4.9, 5.7 and 4.7 per cent for ages 16-34, 35-64 and 65 and above, respectively. *Chamas*/groups are, however, not very popular with men. On the other hand, a higher share of men of ages 65 years and above use SACCOs (4.5%) and banks (3.8%) compared to the other categories.

At the rural level, mobile money remains the most popular channel of accessing agri-finance with 5.8 per cent usage. Among women, higher levels of usage are seen compared to the national level with 5.7, 5.1 and 5.2 usage among women of ages 16-34, 35-64 and 65 and above, respectively. Usage of *chamas*/groups is also slightly higher among women of ages 16-34 (4%) and 35-64 (4.8%) years. Among men, usage of mobile money ranks highest compared to other channels at 5.5, 6.9 and 4.4 per cent for ages 16-34, 35-64 and 65 and above, respectively. As observed at the national level, a higher share of men of ages 65 years and above use SACCOs (4.9%) and banks (4.2%) compared to the other categories.

The distribution of channels in urban areas reveals a fair mix in usage among the various categories. Majority of women of ages 16-34 (3%), and 35-64 (3.5%) use mobile money while those of age 65 and above use SACCOs more (4.4%). Use of banks is also popular among women of ages 35-64 and 65 and above years at 2.4 per cent and 3.1 per cent, respectively. Among men, while majority of the youth (3.8%) and men of age 65 and above (6.2%) use mobile money, those of age 35-64 years mainly use banks (4.3%). Banks are, however, also popular with men of ages 16-34 years (3.3%).

Analysis of the banking channels indicates that majority of women and men seek banking services from the branch in rural areas. 39, 57 and 88 per cent of women of ages 16-34, 35-64 and 65 years and above, respectively, mainly visit the bank branch to access banking services. In urban areas, 40 per cent and 39 per cent of women of

ages 16-34 years seek services from bank branches and ATMs, respectively. 36 per cent of women of ages 35-64 years visit bank branches and bank agents while 100 per cent of those of ages 65 years and above go to the bank branch. Regarding SACCOs, women and men in rural and urban areas predominantly visit the SACCO branches for financial services. A similar trend is observed for MFIs where more than 60 per cent of the population in urban and rural areas seek services at the branch. There is a higher number of men of ages 35-64 years in urban areas (31%) who use microfinance agents bank. Women of ages 35-64 years in urban areas record the highest use of mobile phone applications to access microfinance services at 30 per cent.

Analysis of the group contribution channels shows that more than 90 per cent of women and men in rural areas make group contributions by cash. In urban areas, 100 per cent of men and women of ages 65 years and above make their contributions in cash. Similarly, 99 per cent of women of ages 35-64 also make their contributions in cash. While the youth in urban areas predominantly also use cash, 47 per cent and 21 per cent of youth men and women, respectively, utilize mobile money. Men of ages 35-64 years record the highest use of bank deposits at 13 per cent.

**Finding on assessing the status of financial literacy and access to agri-finance information in Kenya:** Overall, 47 per cent of the rural population and 68 per cent of the urban population were able to compute the question on interest rates correctly. Among women, 41 per cent and 48 per cent of the youth (ages 16-34) in rural and urban areas, respectively, were able to answer the question correctly. 45 per cent and 49 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Fewer women of ages 65 years and above (24% and 12% in rural and urban areas, respectively) were able to compute the question on interest rates correctly. Men in rural and urban areas exhibited a higher ability to compute interest rates than women. 50 per cent and 82 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly. 63 per cent and 82 per cent of men between ages 35-64 years in rural and urban areas, respectively, were able to compute interest rates correctly. Similarly, to women, fewer men of ages 65 years and above (26% and 39% in rural and urban areas, respectively) were able to compute the question on interest rates correctly.

On knowledge about the transaction costs, 61.5 per cent of the rural population and 78.5 per cent of the urban population were able to identify transaction costs correctly. Among women, knowledge on transaction costs decreases with age. 63.6 per cent and 70.2 per cent of the youth (ages 16-34) in rural and urban areas, respectively, were able to identify the costs correctly. 52.7 per cent and 60 per cent of women between ages 35-64 years in rural and urban areas, respectively, were able

to identify the costs correctly. Fewer women of ages 65 years and above (29.3% rural areas) were able to identify the costs correctly. Generally, men in rural and urban areas exhibited a higher ability to identify transaction costs correctly compared to women. 72.7 per cent and 89.1 per cent of men of ages 16-34 in rural and urban areas, respectively, were able to answer the question correctly. 78 per cent and 86.7 per cent of men between ages 35-64 years in rural and urban areas, respectively, were able to answer the question correctly. For the 65 years and above, 43.6 per cent of men in rural areas and 71.9 per cent in urban areas identified the transaction costs correctly.

The distribution of access to agri-finance information reveals that at the national level, majority of the population (41.5%) rely on their own personal experience for agri-finance information. 33.6, 52.6 and 58.4 per cent of individuals with access to formal prudential, informal, and excluded sources, respectively, rely on friends/family for agri-finance information. On the other hand, 42.0, 100.0 and 42.7 per cent of individuals with access to formal non-prudential, formal registered, and the totally excluded individuals, respectively, rely on their own personal experience. Contrary to expectation, access to agri-finance information from the social media, especially among the youth, was low. Religious institutions play a very limited role.

On awareness of the Credit Reference Bureau (CRB), majority of women of ages 16-34 (41.2%) and 35-64 (36.4) years who are aware of the CRB report obtain agri-finance information from friends/family and own personal experience, respectively. However, for women of ages 65 and above, 52.1 per cent and 47.9 per cent of those who are aware of the CRB report obtain agri-finance information from MP/political leaders and formal financial institutions, respectively. Among men, majority of men of ages 16-34 (40.4%) and 35-64 (39.2%) years who are aware of the CRB report obtain agri-finance information from friends/family and own personal experience, respectively. 51.3 per cent and 22 per cent of men of ages 65 and above who are aware of the CRB report obtain agri-finance information from own personal experience and media and advertisement, respectively.

**Finding on forms of collateral available for women accessing agri-financing in Kenya:** Salary and guarantors are the most popular forms of collateral used when accessing bank loans nationally. Salary as a form of collateral is more common among males than females in all age cohorts. Guarantors, on the other hand, are a more predominant form of collateral among women. About 65 per cent of women youth who accessed agri-finance from banks used guarantors. Women above 65 years did not indicate having used any form of collateral to access loans from banks. Land /title deed as collateral for borrowing in banks is more common among men above 35 years of age. A small proportion (6%) of women indicated having used land/title deed as collateral in the banks. This serves as an indicator of

lack of access to land/title deeds as collateral by women in all age cohorts. Only 2 per cent of youth male used land title deeds to access agri-financing. This is possibly because land is ancestral and in the parents' names, hence minimal use by youth males. In SACCOs, guarantors are predominantly used as a form of collateral in all age cohorts. Group collateral and movable assets such as livestock and motor vehicle are only used by women in all age cohorts. Across all age groups, guarantors (30%) and movable assets (23%) are collateral used in MFIs. In Chamas, approximately 45 per cent of the people who accessed agri-finance reported not having needed any collateral, as trust is the main requirement.

**Finding on key production activities, value chains, markets and the source of financing:** According to FinAccess 2019 data, about 15.2 million Kenyans aged 16 years and above were directly involved in the agricultural sector. About 8.5 million (56%) of this population are people in agri-production (people who only produce or participate in both production and selling of their agricultural produce). The rest (44%) are mainly involved in other value chain activities, such as participating in only agri-trade as their main agricultural related activity. The above indicates that most people in agriculture are majorly in production.

Among the agri-producers, it is observed that production of food crops is the main agri-production activity as it is practiced by about 55 per cent of the people. Other important agri-production activities were production of livestock, livestock outputs, cash crops and aquaculture (fish farming) at 16, 16, 12 and 1 per cent, respectively. Across the different age cohorts, the middle-aged people (between 35 and 64 years) were the most active population involved in agri-production for both male and female. Further analysis shows that nationally, out of the 8.5 million agri-producers, only 20.4 per cent accessed agri-finance.

Out of the about 15 million agricultural population, only about 5 per cent (0.7 million people) were involved in the sector as purely/solely agri-traders. In terms of access to agri-finance, at the national level, among the individuals that accessed agri-finance, only 2.7 per cent of them were solely involved in agri-trade. Women aged 35-64 years residing in urban areas had the highest proportion (9.6%). This could probably be because trade in agri-produce in vegetable kiosks/grocery shops in urban areas is commonly done by women. Narrowing the agri-trade population, only about 8 per cent of the agri-traders had access. This is lower than the proportion of non-agri traders that had access to agri-finance (15.6%). The few traders that access agri-finance rely on formal prudential (6%) and formal non-prudential (2%) financial institutions.

On markets or selling points, the findings reveal that people across all age cohorts primarily sell their produce at the nearest market centres (32%) or to brokers (21%). Other primary market access avenues include selling to neighbours, companies/

manufacturers/factory, through farmers cooperatives, motorists/transporters. It is, however, important to note that less than 1 per cent of the respondents are involved in sourcing export markets and digital platform markets such as Twiga Foods/ Facebook for their products.

The common agricultural crops produced were maize, horticulture (such as potatoes, onions, tomatoes, kales, capsicum), beans, green grams, rice, tea, millet, sorghum, ground nuts and fruits such as avocado and bananas. In livestock, women are involved in rearing of poultry, cattle, sheep and goats (for meat and dairy), camels and fish. These findings are based on key informant interviews of women in retail. However, their participation in these crops varies based on counties where one lives. Women in marketing deal with poultry, fish, livestock and crops like cassava, cow peas, soya, maize, horticulture, and millet among others. A few women are engaged in the transport of pigeon peas, fish, apiculture and coffee. In terms of value addition, women are largely engaged in poultry, fruits, sunflower, and livestock. Those who are in agro-processing deal with millet, sorghum and cassava. Data from key informant interviews indicates that the main clients for women in agricultural retail are individuals (49%). Other clients include hotels and shops while hatcheries and hospitals are least considered as client base.

In terms of distance and physical access to markets, analysis shows that the AFC branch distance to market hubs ranged from 1 kilometre to 123 kilometres, whereas the distance between villages and the nearest market locations showed that some villages are up to 221 kilometres away from markets.

**Causal models for determinants of access to agri-finance in Kenya:**

Binary logit results showed that sex, savings, education level, wealth quintile, household size and log of monthly income were key determinants for access to agri-finance. However, ownership of mobile phone, ownership of a financial account, land ownership, marital status, having savings, land ownership, marital status, cost to nearest financial provider, and age were observed not to have a significant effect on probability of access to agri-finance through formal financial institutions.

The marginal effect of the multinomial regression results on access to agri-finance from formal prudential financial sources revealed that ownership of a formal financial account, ownership of land, education level, wealth quintile and log of monthly income were the determinants. Variables such as sex, mobile phone ownership, having savings, marital status, cost to nearest financial provider, age and household size were observed not to have a significant effect on probability to access agri-finance through formal prudential financial institutions.

On determinants of access to agri-finance from formal non-prudential financial institutions among the agricultural population, the marginal effects of access were

determined by ownership of a formal financial account, education level, wealth quintile and log of monthly income. Variables such as sex, mobile phone ownership, having savings, land ownership, marital status, cost to nearest financial provider, age and household size were observed not to have a significant effect on probability to access agri-finance through formal non-prudential financial institutions.

On determinants of access to agri-finance from informal financial institutions among the agricultural population, the marginal effects of access were determined by ownership of a mobile phone, ownership of a formal financial account, age of individual, age-squared and log of monthly income. Variables such as sex, having savings, land ownership, education level, marital status, wealth quintile, cost to nearest financial provider and household size were observed not to have a significant effect on probability to access agri-finance through informal financial institutions.

## **6.2 Policy Implications and Recommendations**

### **6.2.1 Policy implications**

#### **Transforming and growing the agricultural sector through access to credit for women**

The Agricultural Sector Transformation and Growth Strategy (ASTGS) 2019-2029 is anchored in the belief that food security requires a vibrant, commercial and modern agricultural sector that sustainably supports Kenya's economic development. The MTP III, on the other hand, aims at creating sustainable and gainful self-employment for the youth and women through their participatory engagement in agriculture by offering incentives and enhancing uptake of agricultural insurance to manage risks and losses, increase productivity and improve credit access. The study found that women mainly source finance for agricultural operations from non-prudential sources and informal sources such as family and friends. This could be explained by lack of control over assets that could be used as collateral in accessing credit from formal sources. On the other hand, there is a wide acceptance of social/reputation and loose collateral by the informal sources which are easily accessible or owned by women. However, reliance on informal sources of finance is an impediment to vibrancy and modernization of the agricultural sector.

It is imperative therefore that specific government institutions and initiatives focusing on access to agricultural finance refocuses their lending approaches to create more impact by re-organizing their security requirements. Alternatively, the informal sources of agri-finance for women, such as groups, could be transformed

to formal or quasi-formal structures to leverage on the existing uptake and stated preference of the informal sources, and take advantage of fintech solutions, digital banking and mobile money innovations. This means that financial sector policies and regulations would need to be reviewed to cater to the scale and style of operation of informal sources of finance.

### **Access to collateral**

Given collateral is identified as a key barrier in securing loans from formal financial institutions, there is need for financial institutions to operationalize the provisions in the Movable Property Security Rights Act 2017. The Act enables persons who do not own real (immovable) property to secure credit by facilitating borrowing against their various types of movable assets, whether tangible or intangible, including future assets. The Act also defines a tangible asset to mean all types of goods which include motor vehicles, crops, machineries and livestock whereas intangible assets include: receivables, deposit accounts, electronic securities and intellectual property rights. To achieve full impact of the law, there is need to prioritize and fast-track the establishment and operationalization of a centralized electronic registry of movable property that is expected to assist financial institutions' registration, management and verification of the security offered. Further, the credit guarantee mechanism, as mentioned in the ASTGS, can enable agricultural SMEs and borrowers access bank loans without standard forms of collateral.

### **Savings instruments**

The baseline findings show that mobile money and *chamas* (groups) are the most popular savings instruments among women in both rural and urban areas. Men in rural areas and the youth in general also prefer mobile money as savings instruments. This means that a substantial section of the population are increasingly opting for mobile money providers for savings. However, it is important to note that savings for agricultural operations is negligible. Efforts towards financial inclusion should focus on developing laws and policies that could endear women and youth to formal financial institutions for savings. While mobile money providers and *chamas* are popular across all groups, it is critical to explore mechanisms of ensuring that the interests of women, men and youth are protected through legal and regulatory measures.

### **Access to Insurance**

Improved access to insurance would go a long way in availing agricultural credit to farmers, including women and youth farmers. The uncertainties associated with relying with rain-fed agriculture with the changing climate bring with them the potential for agricultural insurance. With usage of insurance, the financial burden

and loss from risks in production and marketing of agricultural products are likely to reduce. Credit providers are likely to face less risk on farmers defaulting on their loans and be more willing to provide them with credit. This need is partly addressed by the National Agriculture Insurance Policy launched in 2016 modeled as a public-private partnership. However, there is still very low uptake of agri-insurance for crops and livestock by men, women and youth in rural and urban areas. Seeking assistance from family and friends is the most dominant form of coping mechanism and is identified in all the shocks women face. Policy response should focus on improvement of insurance uptake through sensitization and awareness creation and diversification of insurance packages to suit various people engaged in different agricultural activities. In addition, there is need to avail affordable covers especially among the rural farmers.

### **Participation in agricultural activities and value chains**

The ASTGS seeks to develop and grow ~1,000 existing farmer-facing SMEs as the key change agents to drive agricultural transformation in Kenya. This flagship seeks to improve farmer access to affordable, appropriate inputs, well-priced markets for offtake and improved post-harvest handling and aggregation. It will prioritize SMEs serving the top 5-10 key value chains that will provide the greatest potential impact to small-scale farmers in improved yield and increased incomes. These value chains include: potatoes (seed multipliers and ambient storage); horticulture aggregators; dairy (fodder producers and small-scale chilling centres); poultry (hatcheries and small-scale processors); beef feed lots; fish hatcheries, chilling units and feed producers. The study found that women in urban and rural areas are largely in the production and marketing value chain of food crops such as beans, maize, cassava, sweet potatoes, mangoes and oranges. They are not adequately participating in the top key value chains. In response to the ASTGS, there is need to upscale women's participation in the high potential value chains identified. There is need to enhance their skills and capacity to engage in advanced levels of the value chains that would enhance their productivity and income. Policy focus should seek to diversify women's value chain participation beyond production and marketing.

### **Expanding the scope of financial products availed to women in agriculture**

It is of policy importance that agricultural finance providers include financial products that cater for all the needs of women in agriculture. The study finds that women divert borrowed agricultural credit to cater for other pressing household needs such as education fees, medical expenses and home improvement. This has adverse effects on their agricultural activities and productivity across the value chain. A variety of financial products that are oriented to women in agriculture and

mobilize deposits can be conceived. Experimentation, innovation and adoption of new financial technologies and products that make use of the existing informal sources of finance that women rely on can further improve women's access to agricultural finance.

### **Agricultural finance policy for demand-led financial services for women**

Agricultural finance falls within the spheres of macroeconomic policy, agricultural sector policy, and the financial sector policy. Policies in these sectors have a bearing on provision of cost-effective and sustainable agricultural credit services. As such, agricultural finance is often perceived as a "policy orphan." Kenya does not have a distinctive agricultural finance policy, and this is a possible gap in access to agricultural finance by women. It is important to define an agricultural finance policy to secure the availability of appropriate and affordable financial services to rural households. The agricultural finance policy would ensure provision of demand-led financial services with specified provision for women and youth.

### **Making agriculture profitable to enhance debt and repayment capacity of women**

Profitability of farming is imperative for agricultural finance. The study observed that there are various factors that impede the profitability of farming by women, such as low scale of operation, lack of access to farm inputs, low prices, poor access to markets and inadequate production practices, among others. It is incumbent on the National and County Governments to put in place measures for removal of pricing and supply distortions in agricultural products. This would ensure that women's agricultural activities that benefit from credit receive adequate remuneration to cover the debt and support their incomes. The National and County Governments need to provide non-financial incentives such as essential rural infrastructure and support services such as roads, markets, agricultural research and extension services.

### **Spatial distribution of financial institutions**

Despite relative wide distribution of financial institutions in densely populated regions of the country, the vast arid and semi-arid counties in coastal and northern regions of the country have sparse distribution of financial institutions, hence affecting access to finance. Moreover, the vast counties do not have adequate infrastructure network that is critical for functional financial institutions. The counties in the arid and semi-arid regions tend to have nomadic, pastoralist and semi-pastoralist communities. Proximity between the lenders (financial institutions) and the borrowers is also key in acquisition of financial information. Policies and interventions to enhance access to finance should be tailored to

the context and realities in the vast counties in northern and coastal regions. Key priorities in the sparsely populated regions should include expanding telecommunications network to support mobile money, overall infrastructure development, establishment of ‘mobile’ financial institutions, and offering loan packages suited to economic activities in the regions.

### **Sustainable Development Goals**

Despite the 2010 Kenyan Constitution, laws and agricultural strategies promoting gender equity and mainstreaming it in its national development agenda, gender inequalities continue to persist in the country. For instance, despite having laws providing for use and management of land in equitable, efficient, productive and sustainable ways, the country has a long way to go in eliminating discriminating customs and practices related to land. The gender inequalities are largely due to the conceptualization of power in the communities. The predominant zero-sum conception of power and resources such as land rights, where improving/increasing the power of one household member (woman) indicates decreased power of another (man) undermines the attainment of SDG 5. Other than provision of laws, there is need for development strategies on gender equity to be packaged in a way that places value in a whole-family approach to empowerment rather than being seen to be advocating for women’s empowerment at the expense of men losing power.

### **The Big Four Agenda**

Kenya’s “Big Four” agenda on food security and manufacturing are aligned to SDG 2 and SDG 8 aimed at eradicating hunger and promoting economic growth and productive employment, respectively. While the agenda on manufacturing has some specific initiatives on women and youth (train 50,000 youth and women in textile/apparel/cotton industries), there is need for specific initiatives in agriculture to enable women contribute to the food and nutrition security agenda. Women and youth’s participation in agro-processing SMEs should also be enhanced. Barriers limiting the youth in engaging in agro-processing as highlighted in the Kenya Youth Agribusiness Strategy 2017-2021 should be addressed to enhance their participation. These include limited knowledge and skills; limited information on value addition technologies; low capacity to meet needs in terms of quality, standards, quantity and consistency; and capital investment requirements.

### **6.2.2 Recommendations for the Women Affirmative Access Window programme**

In an effort to carry out the affirmative financing targeting women and youth, the following recommendations can be inferred from the study on desirable financial products/services:

- a) Access to finance needs to be viewed beyond credit, and more focus be placed on expansion of accessible products, ease and timeliness of access, and quality of products to drive long term transformation of smallholder farmers and agri-based SMEs. For financial institutions, emphasis need to shift from credit-only products to provision of bundled packages that include different aspect such as financial management, insurance, among others.
- b) While interest rates are important determinants of agricultural credit facilities, analysis of the FGD reports indicate that service delivery is preferred. A good agricultural credit facility should not only encompass interest rate considerations but should pay attention to service delivery as well. Preference is for a product that is customer centric with a friendly and responsive workforce providing services.

In programming of WAAW, the following should be taken into consideration during product development:

- c) Women in agriculture desire a financial product with less turnaround time; that is less procedures and timely disbursements for ease of meeting agricultural needs.
- d) A good financial product should encompass other agri-finance attributes such as capacity building and sensitization of women on other aspects of agriculture.
- e) Emphasis on hard collateral such as title deeds as a basis for advancing credit to women in agriculture is a key barrier hindering access. A good financial product should be aimed at navigating such stringent conditions. Because of group dynamics, women increasingly prefer social collateral as opposed to hard collateral. Use of household items and farm produce or livestock can also be considered. There is need for enough information disclosure on any financial product to build trust amongst clientele and facilitate decision making.
- f) Where possible in coming up with a financial programme for women in agriculture, AFC should partner with other institutions such as banks, SACCOs, and mobile phone service providers to enable penetration and reach

through other channels of finance well known to women, youth and people with disability. This is in appreciation of the fact that AFC may not have presence in all corners of the country.

- g) A good financial product should be blended with adequate financial education programmes to facilitate and enhance financial literacy among women, youth and people with disability. This will enhance trust, decision making and sustainability of the programme in terms of timely repayments.
- h) Use of technology solutions, such as mobile money, should be incorporated as an important alternative delivery channel for financial products and services.
- i) The WAAW product should enhance the agricultural population's ability to market their products. Limited capacity of both men and women to better market agricultural products could result in lower prices, and in turn limit their access to financial services and products and where there is access to credit, this may limit their ability to repay.

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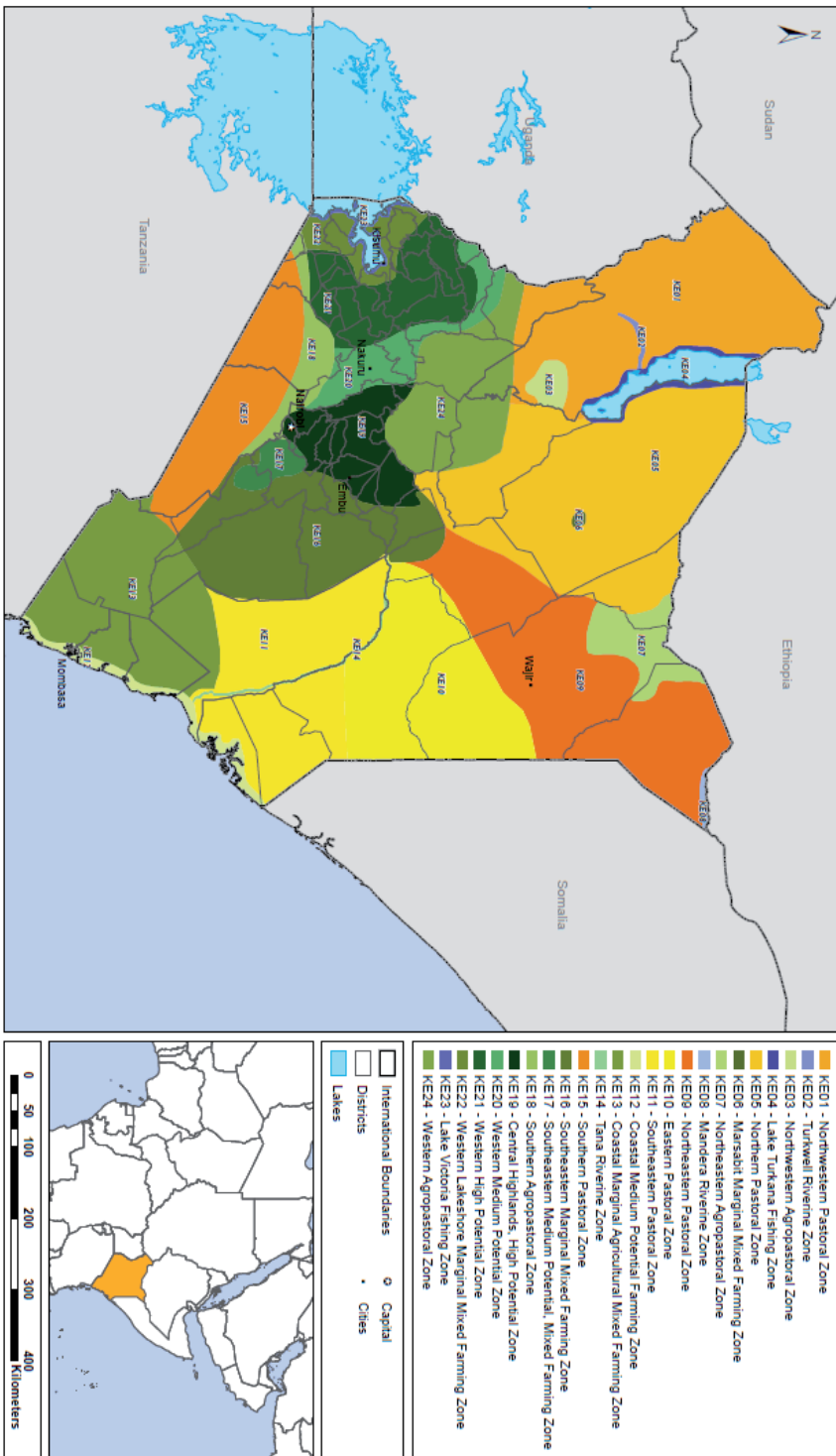
## ANNEXES

### Annex 1: AFC loan products proportions

Group loan product (proportions)	2014		2015		2016		2017		2018	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Livestock and Fisheries Development	2.37	42.4	4.03	46.37	3.68	43.83	3.46	41.09	3.63	35.81
Seasonal Crop Loan	0.33	13.97	0.64	10.49	1.01	12.81	1.21	13.49	1.52	13
Cash Crop Loan	0.57	12.53	0.44	9.58	0.32	7.76	0.27	6.69	0.26	5.77
Land Purchase Loan	0.59	6.1	0.53	5.05	0.46	4.53	0.36	4.42	0.28	4.27
Agribusiness Loan	0.2	4.64	0.71	4.18	0.53	4.11	0.49	3.93	0.89	3.81
Horticulture and Floriculture Development	0.43	3.39	0.57	4.1	0.45	3.69	0.52	3.58	0.45	3.16
Machinery Loan	0	2.29	0.53	2.78	0.43	2.73	0.81	2.46	0.97	2.34
Rescheduled Loan	0.03	0.8	0.15	0.68	0.52	3.03	0.41	2.42	0.69	2.13
Stawisha Group Loan	0.07	3.08	0.33	3.16	0.22	2.1	0.17	1.63	0.13	1.26
Water Development Loan	0.08	0.86	0.23	0.69	0.15	0.7	0.14	0.79	0.12	0.66
Vuna Account	0	0.23	0	0.14	0	0.1	0	0.07	0	0.06
Agribusiness/Machinery Loan	0.07	0.11	0.04	0.08	0.03	0.06	0.02	0.05	0.02	0.04

Data Source: AFC Database

**Annex 2: Kenya livelihood zones**

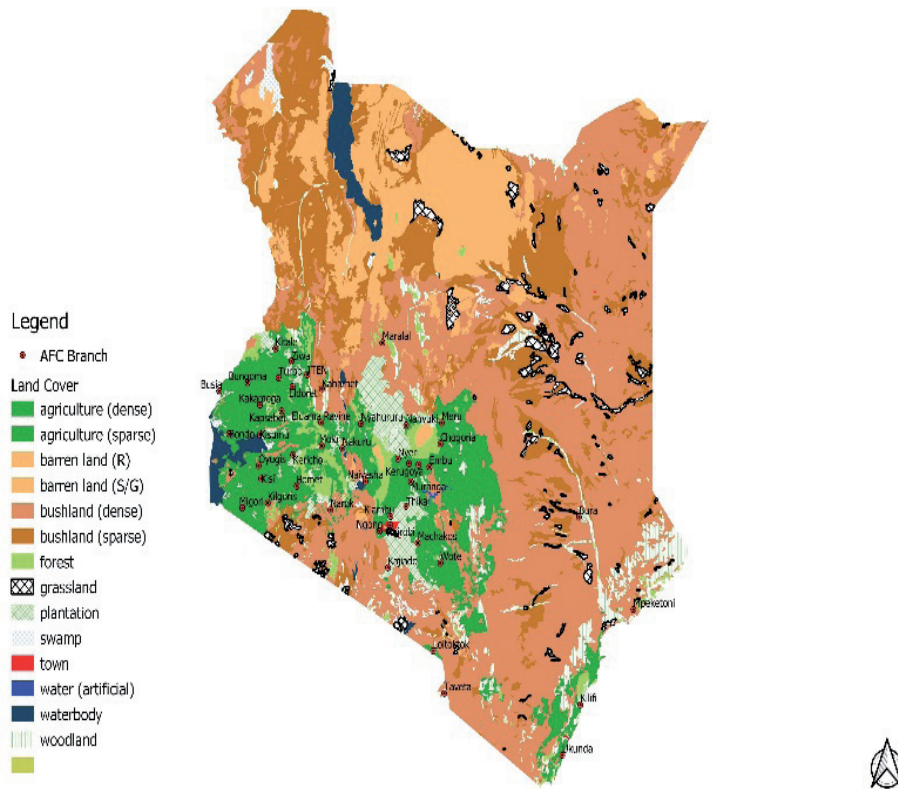


Source: <http://jeuvs.net/east-africa/kenya/livelihood-zone-map/march-2011>

**Annex 3: Sample distribution by region**

	<b>Region</b>	<b>County (Based on livelihood zones/agro-ecological zones)</b>
1	Coast	Kwale
		Taita Taveta
2	Nyanza	Kisii
		Migori
		Homabay
		Kisumu
3	Western	Bungoma
		Kakamega
4	Rift Valley (North)	Turkana
		Uasin Gishu
		West Pokot
		Trans Nzoia
		Nandi
		Samburu
		Baringo
		Nakuru
		Narok
5	Central	Kirinyaga
		Nyandarua
6	Eastern (Upper)	Marsabit
		Meru
7	Eastern (Lower)	Machakos
		Kitui
8	North Eastern	Isiolo
		Garissa
	<b>TOTAL (Counties)</b>	<b>25</b>

#### Annex 4: Spatial analysis of AFC branch network and land cover



Source: Authors compilation using data from AFC and <https://africaopendata.org/dataset/kenya-population-density-2015>

### Annex 5: Coefficients for Binary Logit model for determinants of access to agricultural finance

Access to Agricultural Finance (1= Access, 0= No access)	Coef.	Robust Std. Err.
<b>FORMAL_PRUDENTIAL</b>		
Sex (1=Male, 0=Female)	-1.07	0.95
Mobile_own (1=own, 0=Don't own)	6.01***	1.25
Saving (1=Yes, 0=No)	2.19**	0.87
Own formal financial account (1=Yes, 0=No)	9.39***	1.76
Own land (1=Yes, 0=No)	1.09	1.11
Education level (Base=None)		
Primary	1.90*	1.14
Secondary	3.10**	1.32
Tertiary	17.50***	2.49
Marital status (1=married living with spouse, 0=Not married/no spouse)	-0.95	0.94
Wealth quantile (Base= Lowest)		
Second Lowest	-2.78**	1.02
Middle	-1.58	1.24
Second Highest	-3.53**	1.76
Highest	5.62**	2.11
Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh. 50	-3.81***	1.10
Btw Ksh. 51-100	0.91	1.53
Btw Ksh. 101-200	-0.66	1.51
Btw Ksh. 201-500	-1.82	1.42
Above Ksh. 500	4.22**	1.79
Age (years)	0.15	0.13
age_squared	0.00	0.00
Household size (Number)	0.14	0.21
Log Monthly income (Ksh)	1.95***	0.57
Constant	-28.40***	5.52
<b>FORMAL_NON_PRUDENTIAL</b>		
Sex (1=Male, 0=Female)	-1.03	0.94
Mobile_own (1=own, 0=Don't own)	5.98***	1.26
Saving (1=Yes, 0=No)	2.69***	0.81
Own formal financial account (1=Yes, 0=No)	6.58***	1.60
Own land (1=Yes, 0=No)	0.61	1.08
Education level (Base=None)		
Primary	1.12	1.08
Secondary	1.70	1.26
Tertiary	15.40***	2.46
Marital status (1=married living with spouse, 0=Not married/no spouse)	-1.04	0.92
Wealth quantile (Base= Lowest)		
Second Lowest	-3.14***	0.99
Middle	-2.40**	1.21
Second Highest	-4.25**	1.73
Highest	4.56**	2.11

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Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh. 50	-4.04***	1.08
Btw Ksh. 51-100	1.31	1.53
Btw Ksh. 101-200	-1.13	1.45
Btw Ksh. 201-500	-1.12	1.30
Above Ksh. 500	-19.05***	1.62
Age (years)	0.12	0.13
age_squared	0.00	0.00
Household size (Number)	0.20	0.21
Log Monthly income (Ksh)	1.41**	0.56
Constant	-19.09***	5.28
<b>INFORMAL</b>		
Sex (1=Male, 0=Female)	-0.81	0.81
Mobile_own (1=own, 0=Don't own)	1.84*	0.96
Saving (1=Yes, 0=No)	1.56**	0.67
Own formal financial account (1=Yes, 0=No)	1.75	1.50
Own land (1=Yes, 0=No)	0.38	0.86
Education level (Base=None)		
Primary	-0.07	0.85
Secondary	0.91	1.22
Tertiary	-0.25	2.08
Marital status (1=married living with spouse, 0=Not married/no spouse)	0.20	0.70
Wealth quantile (Base= Lowest)		
Second Lowest	-1.40*	0.83
Middle	-2.46**	1.12
Second Highest	-2.00	1.41
Highest	7.88***	2.34
Average cost to nearest financial provider (Base= Close enough to walk)		
Less than Ksh. 50	-2.47**	1.04
Btw Ksh. 51-100	1.00	1.19
Btw Ksh. 101-200	-1.79	1.23
Btw Ksh. 201-500	-1.17	1.34
Above Ksh. 500	-0.17	1.22
Age (years)	0.29**	0.12
age_squared	0.00**	0.00
Household size (Number)	0.08	0.17
Log Monthly income (Ksh)	-0.12	0.35
Constant	-5.18*	3.13
<b>EXCLUDED (BASE OUTCOME)</b>		





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