STIPRO

Opportunities for learning and upgrading within agricultural global value chains: A Case from the Avocado industry in Tanzania

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Background

- The Tanzanian economy has experienced rapid growth over the last decade, growing from 6.9 percent in 2003 to 7.2 percent in 2014(IMF, 2014; World Bank; 2016)
- However, the current economic prosperity has not been inclusive, poverty levels have decreased rather moderately, from **33.3% in 2007** to **28.2% in 2012** (NBS, 2015; UNDP and URT 2015) .
- Some of main reasons include
  - economic growth driven by sectors that are not labor intensive
  - the annual agriculture growth has continued to decline from about 5.9 per cent in 2002 , to around 4.3% per cent in 2015 (World Bank, 2016).

Background

- The decline of productivity in the agriculture sector due to
  - inadequate physical and human capital to most farmers
  - lack of necessary skills and production capabilities in the farming activities
  - credit constraints that limit them access modern technologies.
- *Given that 66.9% of the workforce* is employed in agriculture (ILFS, 2014) , it seems that there is a need of looking for strategies that would lead to ***improved agricultural productivity***
- One among the strategy that has been observed to address this aspect is the participation of farmers in Global Value Chains (GVCs).

Problem Statement

- Evidence from other developing countries has shown that when farmers participate in GVCs, they are able to improve their socio-economic wellbeing as a result of improved productivity through learning and upgrading [Nadvi & Schmitz, 1999; Schmitz & Knorringa, 2001; Giuliani et al., 2005
- However, there is ***limited empirical evidence on the same to Tanzanian farmers***.
- The ***main research question*** was to find out if there is any benefit to farmers participating in a global agricultural value chain in terms of learning of farmer and upgrading of their product and processes

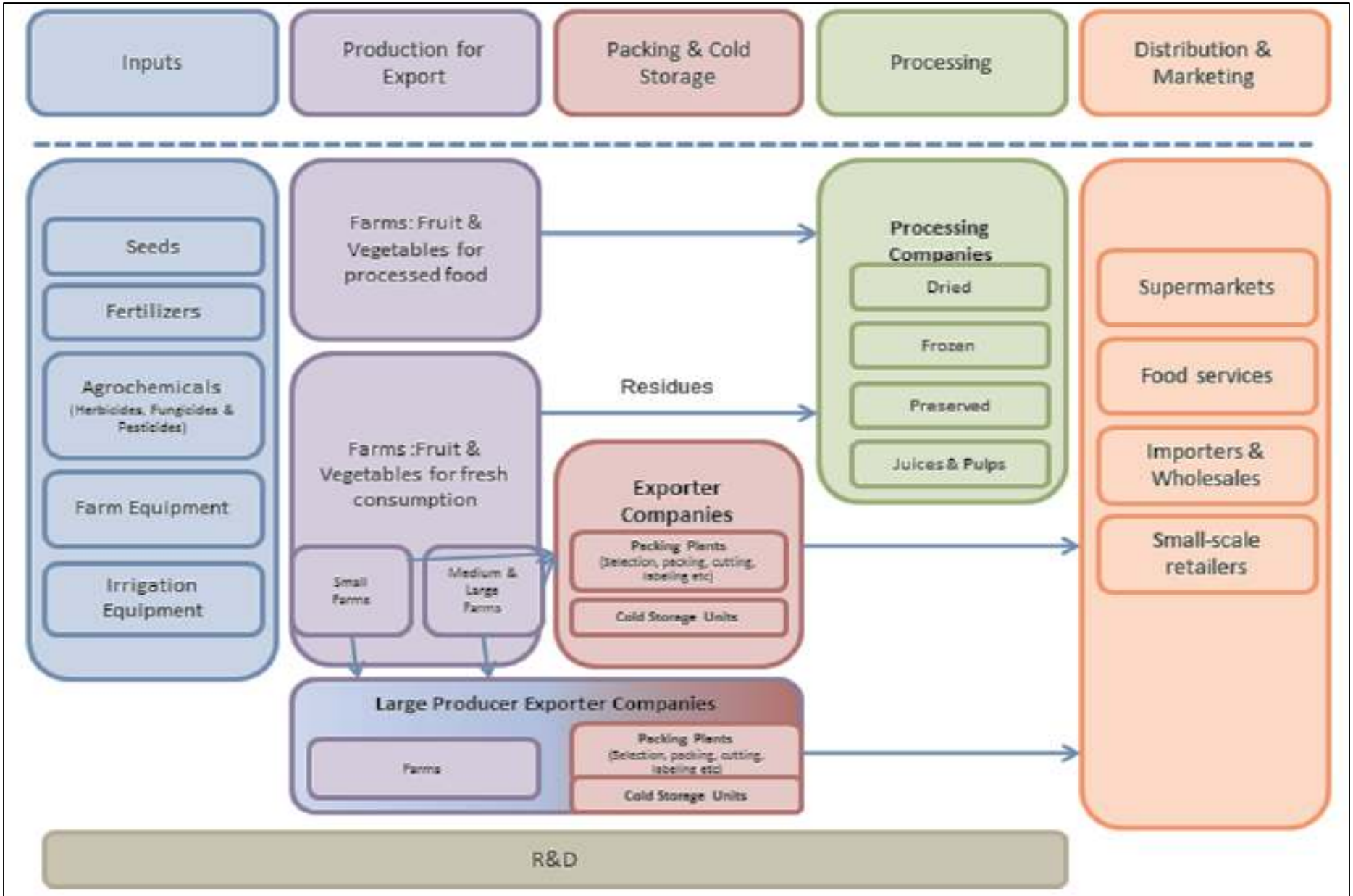
Research Questions

1. How does participating in a GVCs benefit the farmers in Tanzania in terms of learning?
2. How does the participation in GVCs allow farmers to upgrade?
3. What are the available effects of GVCs to farmers in terms of social economic wellbeing?

Theoretical Framework: Conceptual Issues

- GVC describes a value chain where the different production activities are increasingly disintegrated and carried out by different firms that form part of the network located in different countries
- The firm that coordinates all different activities performed by other actors in the network is called a *lead firm;* the lead firm can either be a buyer or a manufacturing firm
- For example, in a fruit and vegetable value chain, the lead firm is usually a large retailer who sets the standards (production, logistical or distribution standards) that are to be followed by other actors in the network such as farmers, seedling supplier, packaging facility

A Fruit and Vegetable Value Chain



Theoretical Framework: Learning Mechanisms

- Several studies have shown that the interactions between global buyers and local firms in developing countries within a GVC often generate learning and innovation activities (Nadvi & Schmitz, 1999; Schmitz & Knorringa, 2001; Gereffi, Humphrey & Sturgeon, 2005; Giuliani et al., 2005).
- In order for the local firms to enter into the GVCs, they are required to meet stringent international standards related to production, products quality, and delivery as well as meeting any other quality requirements imposed by lead firms.

Theoretical Framework: Learning Mechanisms

- Learning happens
  - direct investments by the lead firms
  - personal efforts local firms
  - Interaction between the local firms and other GVC actors
- Gereffi et al (2005) argued that the ***governance structure*** that is adopted by the lead firm is a determinant of the type of learning mechanism that occurs within a GVCs.

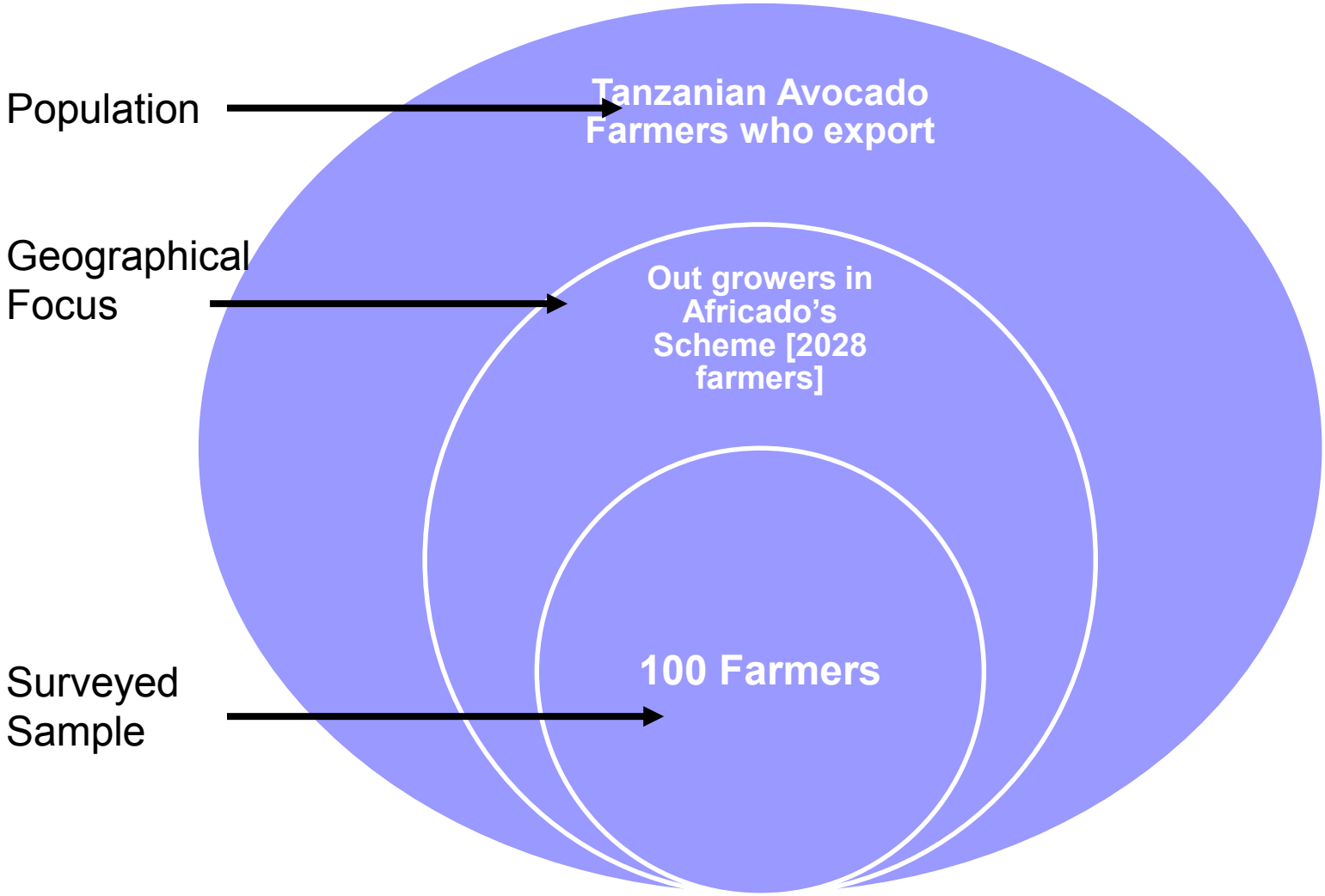
Governance Type	Learning Mechanisms
Market	➢ Knowledge spillovers ➢ Imitation
Modular	➢ Learning through pressure to accomplish international standards ➢ Transfer of knowledge embedded in standards, codes and technical definitions
Relational	➢ Mutual Learning from face to face interactions
Captive	➢ Learning via deliberate efforts by lead firm ➢ Confined to a narrow range of task (eg assembly)
Hierarchy	➢ Imitation ➢ Turnover of skilled managers or workers ➢ Training by foreign leader/owner ➢ Knowledge spillovers

Theoretical Framework: Upgrading

- Upgrading describes the dynamic movement within the value chain as firms improve their competitiveness and move into higher value chain activities
- Gereffi et al (2005) identified and describe four types of upgrading that can occur within value chains

Product upgrading	***Process upgrading***
Functional upgrading	***Inter-chain upgrading***

Methodology



Methodology

- The study used two main data collection instruments; ***open-ended questionnaire*** and a ***semi-structured interviews***
- A descriptive approach was used to analyze the quantitative data, while qualitative data was analyzed using content analysis.
- Learning was measured through
  - observing the compliance to the quality standards imposed
  - Efforts taken to meet standards
  - Effects of the efforts taken to meet the standards
- Upgrading was measured by observing changes in the product and/or process adopted by the farmer

Case Study: Who is Africado

- Africado Ltd is a agribusiness company located in Sanya Juu established in 2007 with the objective of growing and exporting Hass Avocados variety.
- Due to the high demand of the Hass variety in European supermarkets, Africado saw it necessary to expand the farming of the variety to other farmers in Kilimanjaro
- USAID fund covers seedling cost. One Hass seedling is supposed to be sold at 5000 Tsh but USAID has covered 4500 Tsh. Therefore, one seedling is 500 Tsh
- Norfund is used to support different services such as banners, record books and extension services.

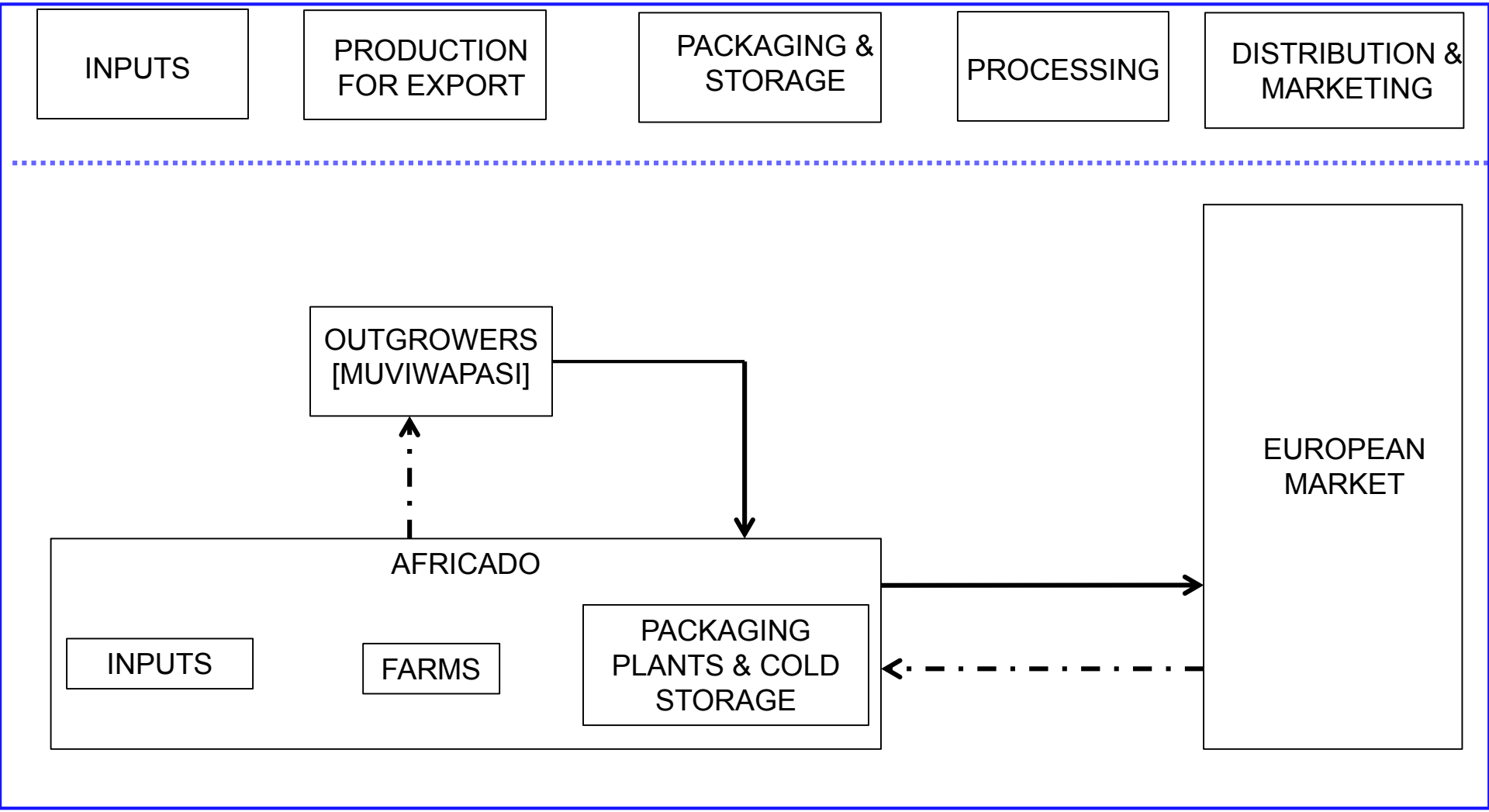
Case Study: Who is Africado

- The out growers scheme started in 2009, and by 2016 2,028 farmers were registered in Kilimanjaro, Arusha and Manyara regions.
- Africado took several initiatives to build the capacity of the out growers such as
  - training and technical advice in site selection,
  - planting, irrigation, mulching, pests and diseases control, pruning, compaction, pre and post-harvest handling.
  - On farm training was conducted and some farmers were taken to estate in Kifufu Company for further demonstration
- Other actors such as churches and NGOs were important in disseminating information and building the capabilities of farmers

Case Study: Standards imposed

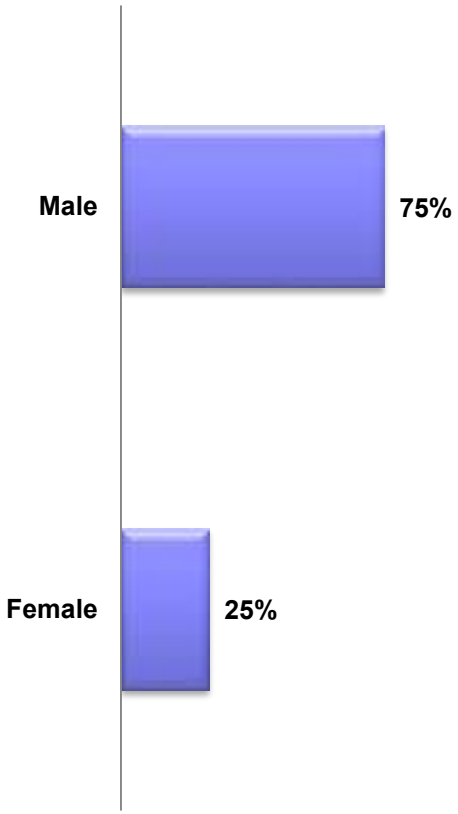
- The farming of Hass avocado has to adhere to Global Good Agriculture Practices (Global GAP) standards which aim at safeguarding both the producers and users.
- Africado strictly ensures that avocados farmed by the out growers adhere to the GAP, and the following requirements
  - Standards on the fruits produced
  - Standards on the health of pickers and that of farmers
  - Standards on harvesting

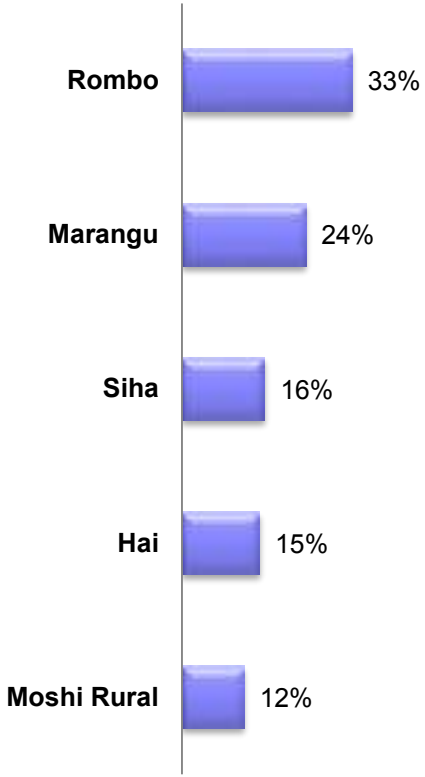
The Avocado Value Chain In Kilimanjaro



Analysis: Summary Statistics

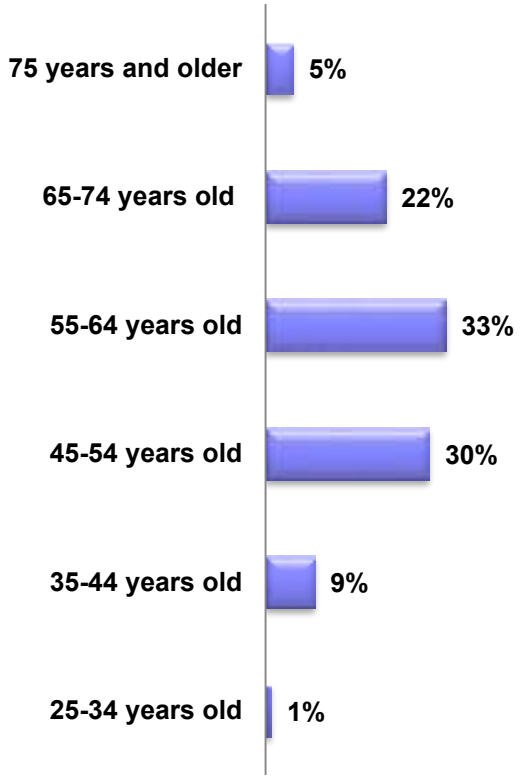
Gender and Geographical location



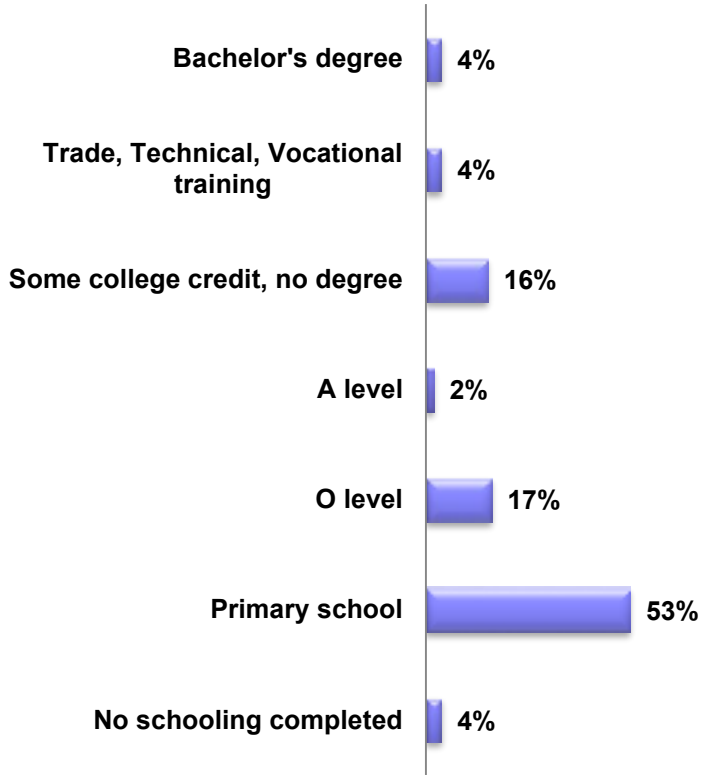


Analysis: Summary Statistics

Respondent's Age



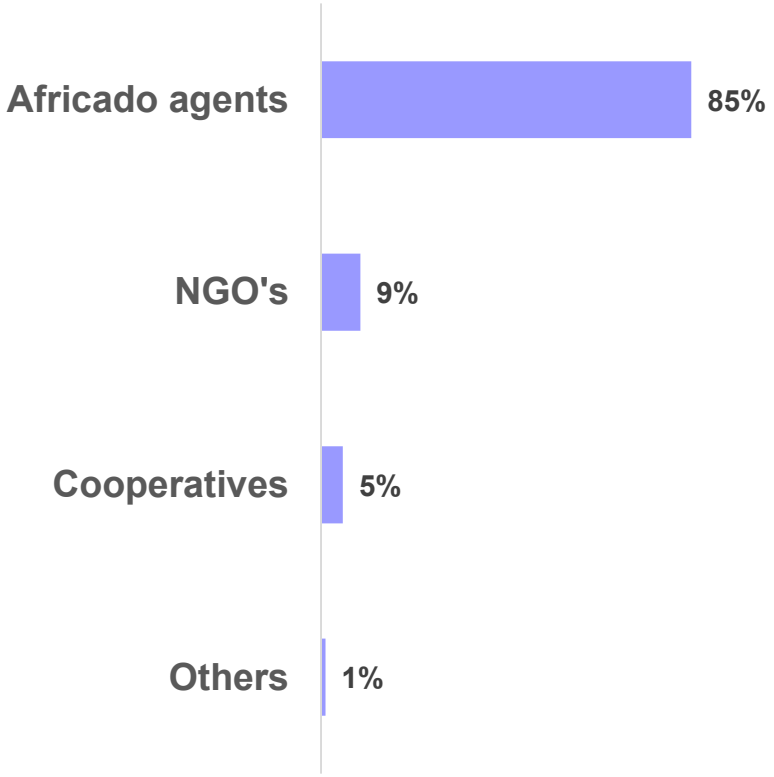
Respondent's Education



Analysis: Learning Mechanisms

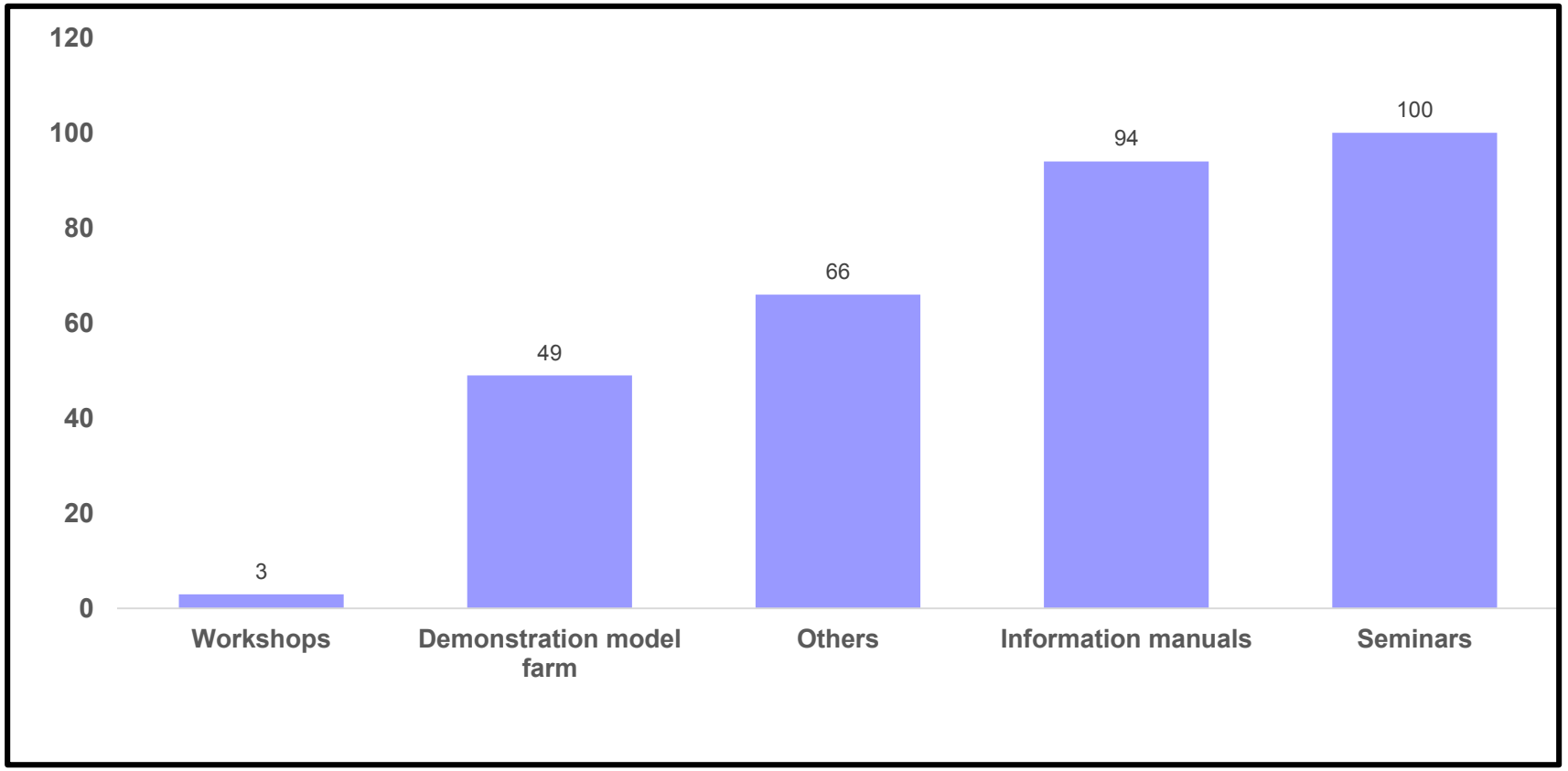
- Learning efforts within the avocado GVC in Kilimanjaro Region is heavily dominated and coordinated by Africado
- Learning occurs mainly through
  - Training
  - Farm Inspection
  - Standard requirements

Effort to archive capabilities among farmers



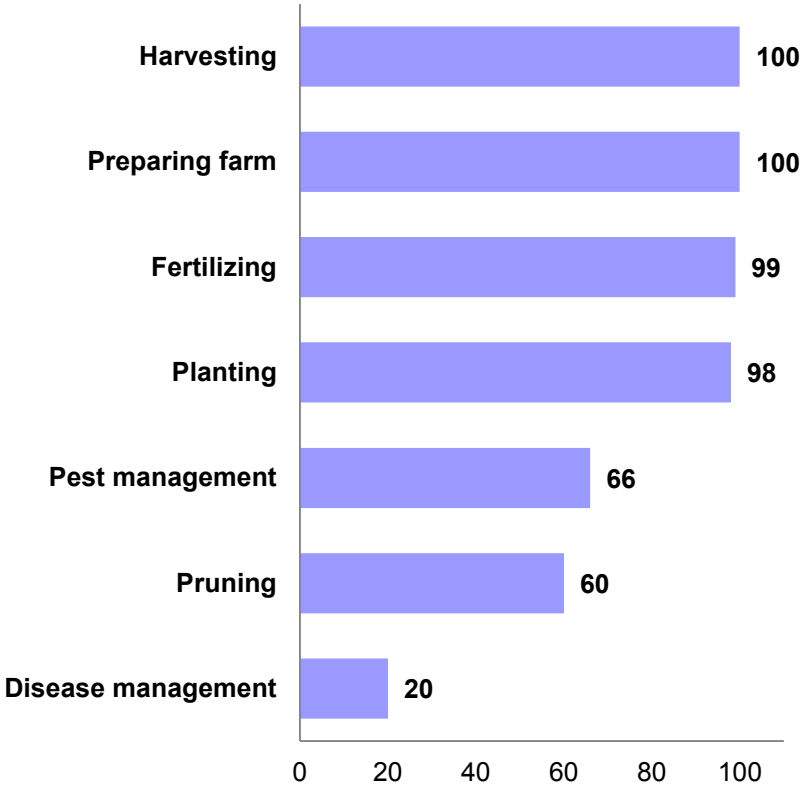
Analysis: Learning Mechanisms (Training)

Means of Training most common used

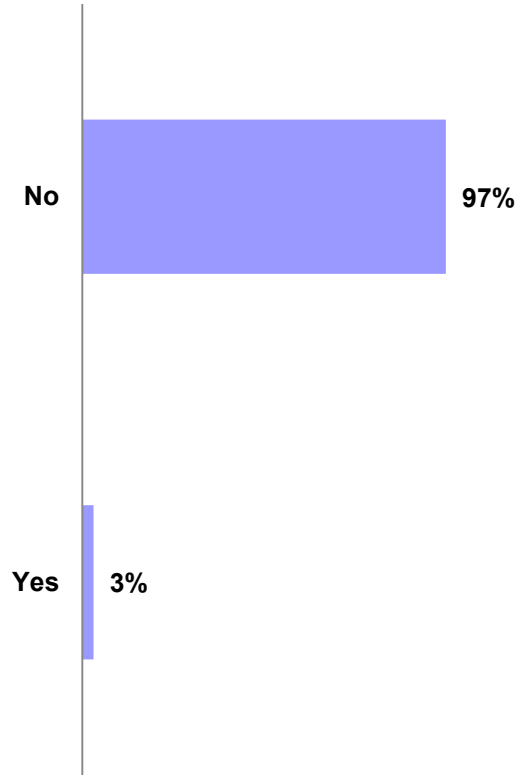


Analysis: Learning Mechanisms (Training)

Improvement in Farming Techniques



Ability to conduct budding



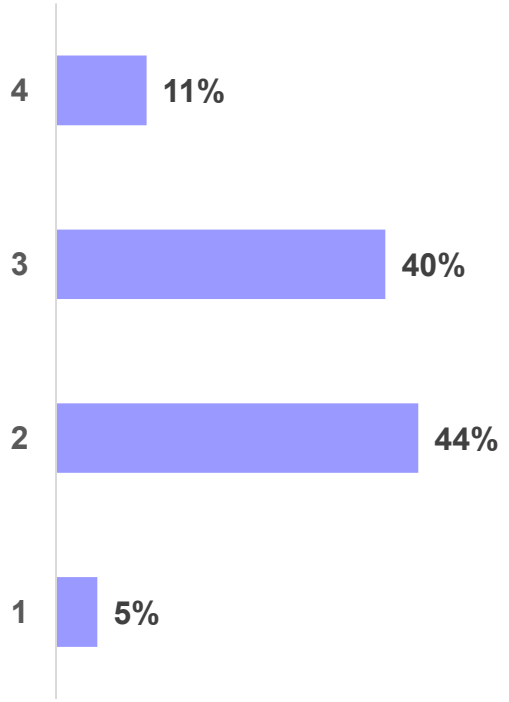
Analysis: Learning Mechanisms (Farm Inspection)

- Africado conducts multiple inspection during the course of the season to ensure that strict standards are adhered to by farmers.
- Furthermore, before harvesting, external auditors from European Union come to Tanzania to inspect whether standards are implemented by farmers or not. If farmers are found not to follow these standards , auditors give farmers 28 days to do so

Analysis: Learning Mechanisms (Farm Inspection)

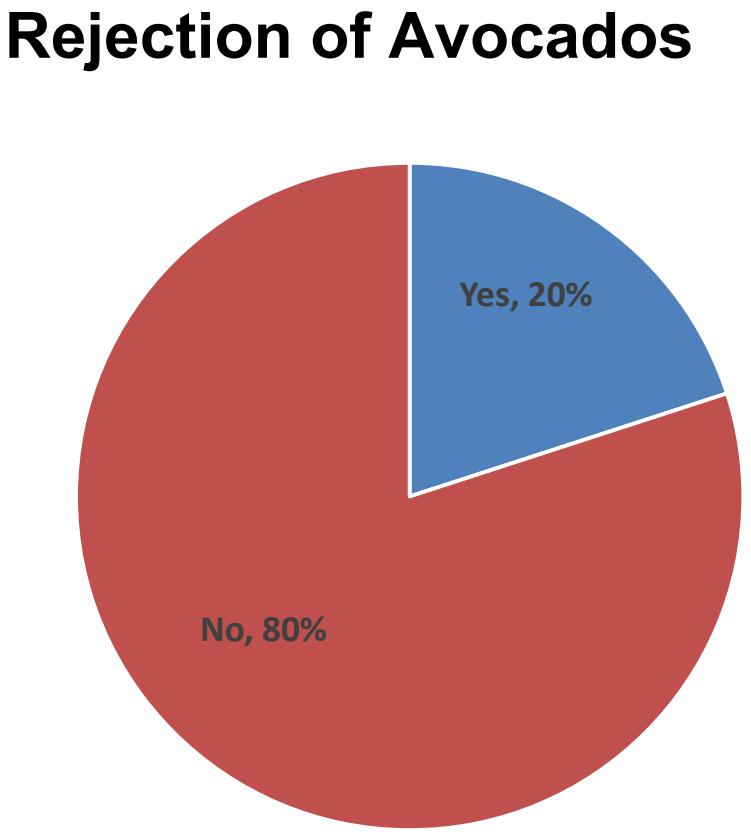
- Most of the learning occurs during “farm inspection”.
- Through inspection, most farmers ***learnt by observing*** the different functions performed by the agents for example harvesting and planting techniques
- As a result of learning, the frequency with which some farmers were inspected decreased because they were now able to carry out these functions on their own

Frequency of inspections during the year



Analysis: Learning Mechanisms (Standards)

- Farmers are well aware of the standards that were required in the international markets
- The "penalty" of not meeting standards a good motivator amongst farmers to learn

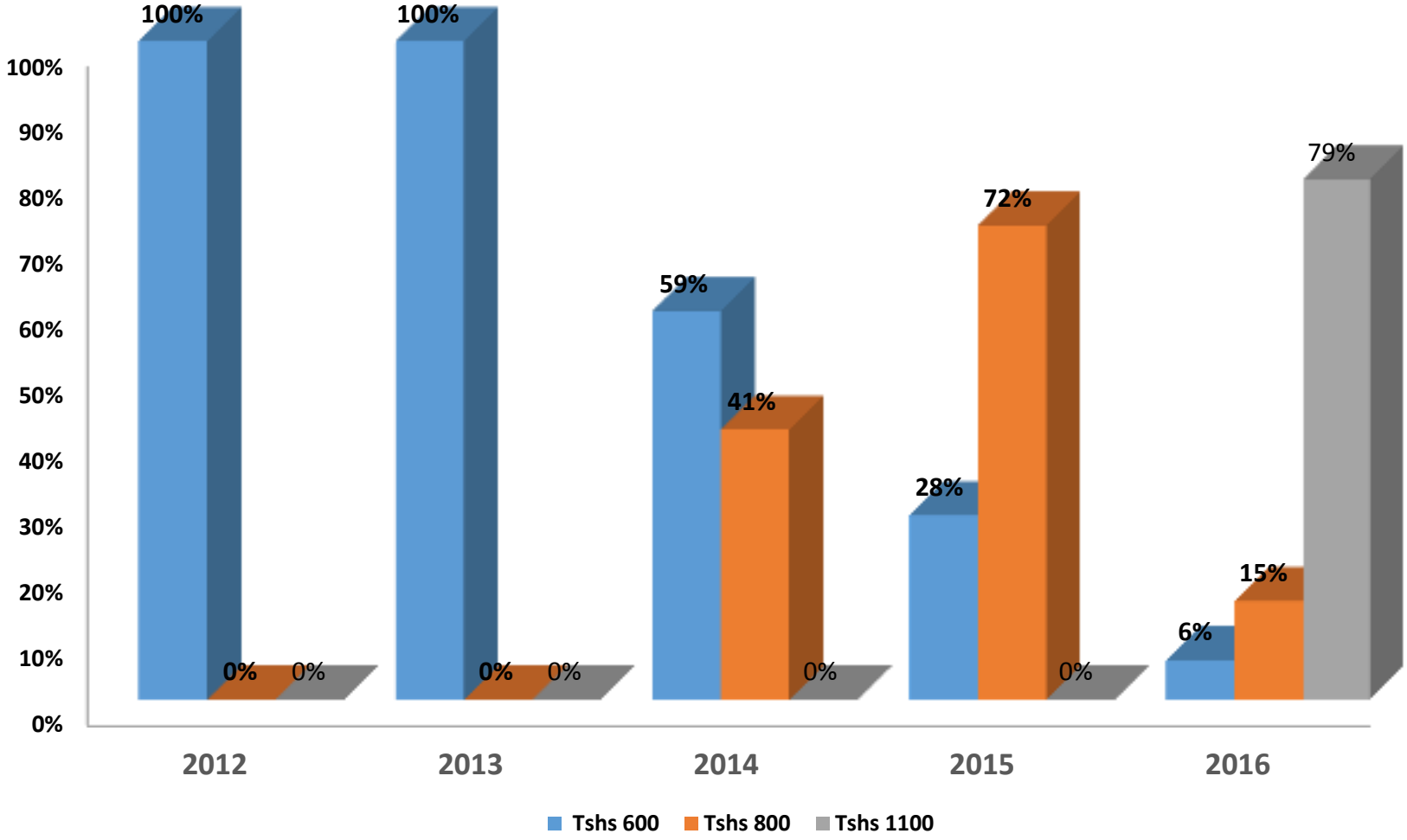


Analysis: Learning Mechanisms (Standards)

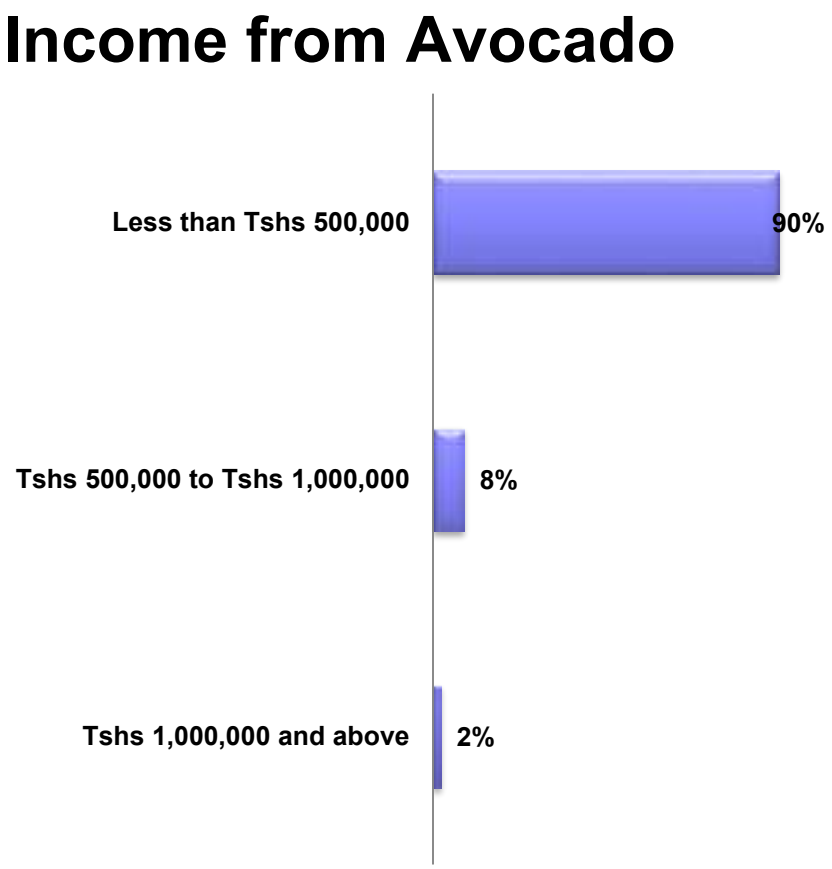
- Because the Hass variety is exported and there are stringent requirement during harvesting and post-harvesting procedures, we observed that most learning that occurred during this *procedures*
- The traditional variety is usually harvested by *shaking the fruit* and enters the market almost immediately. However, Hass avocado are harvested using special technology such as cutter and iron pole hooked with a clipper.
- As a result of Africado's efforts to build farmers capabilities, in 2014, 26 farmers were successful certified to GLOBALG.A.P and in 2015, 228 farmers had received the certification

Analysis: Learning Mechanisms (Standards)

Analysis: Product Upgrading



Analysis: Socio-Economic Impact

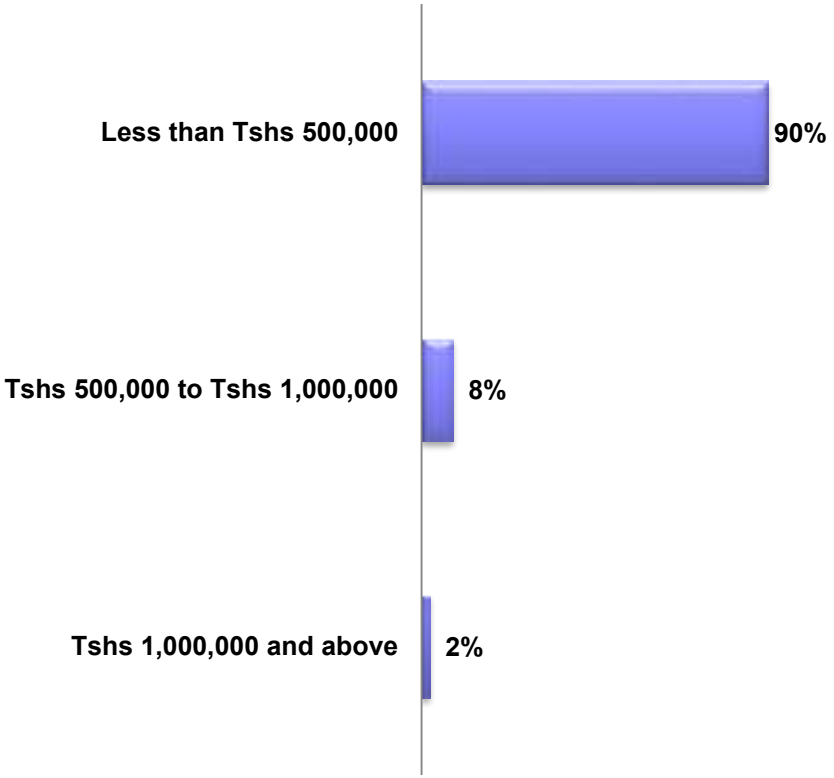


Given the nature of land ownership in Kilimanjaro,

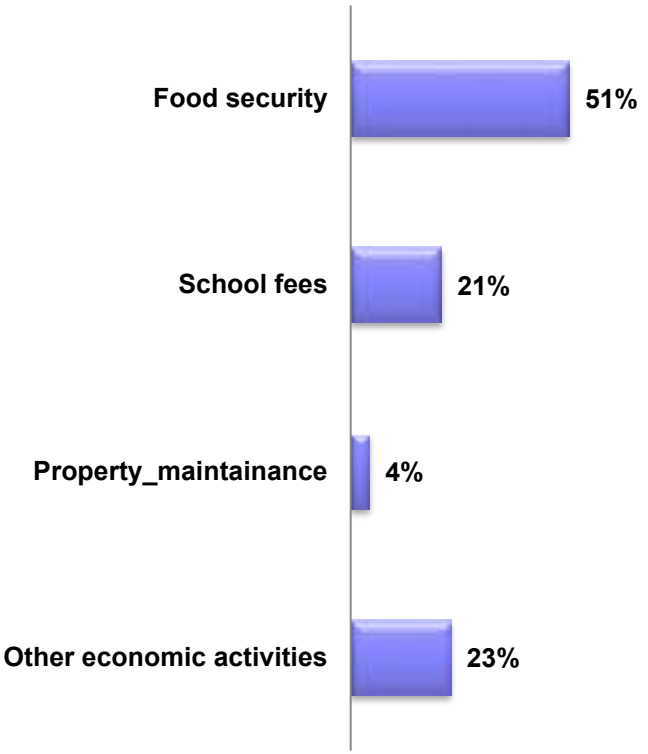
- -grades of avocado
- -size of farms
- -number of seedlings

Analysis: Socio-Economic Impact

Income from Avocado

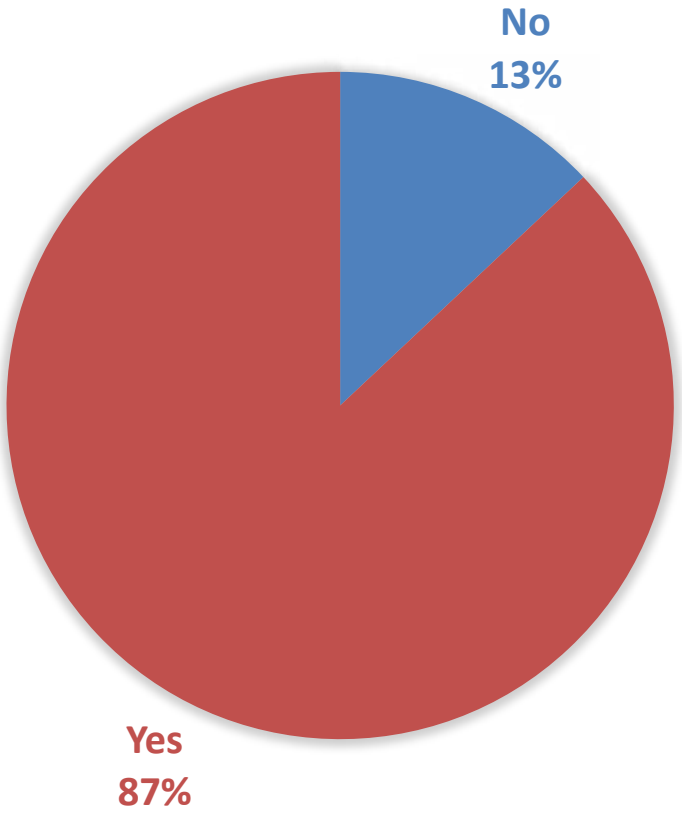


Use of the income from Avocado



Analysis: Legal Issues

Understanding of the contract



- 13% of the respondents had to rely on Africado agents to understand the contract
- Despite understanding the contract, when probed further most respondents were not aware of
  - Arbitration options
  - Risk sharing incase of disastrous
  - Although contract gives mandate to farmers to take action if Africado doesn't come for harvesting, in some cases farmers were not able to do so.

Conclusion

- We saw evidence of “some learning” and upgrading amongst farmers
  - Certification
  - Improve in grades produced by the farmers
- We also observed that the farmers in Kilimanjaro are in a ***captive value chain***,
  - Information asymmetry within the value chain and power relations
  - Not a sustainable solution for upgrading for farmers from developing countries because they are small, voiceless
  - Big confusion about the role of AFRICADO vs MUVIWAPASI amongst farmers

Conclusion

- Sustainability of avocado farming for export amongst small scale farmers
  - Africado is a monopolist buyer
  - Impact of other buyers from Kenya on learning and upgrading especially due to effect on quality, will other buyers provide extension services?
- Farmers are replacing coffee tress with avocado trees,
- All in all, the study has confirmed that penetrating the international market by small scale farmers needs capacity building. This is hard to achieve by farmers on their own, and operating in a GVC provides the farmer with such opportunities to *learn and upgrade*


Thank you for listening….
AFRICADO