

# SDM: Tembo Coffee Company

Case owner: **Tembo Coffee Company**

Location: **Tanzania**

Commodity: **Coffee**

Services:



Farmer training



Fertilizer & Crop protection



Financing



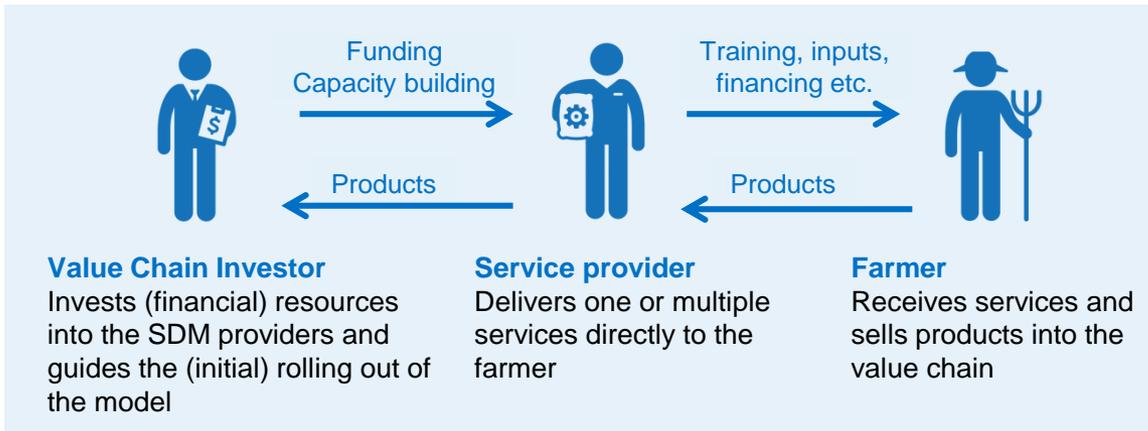
Supply chain transparency



# Introducing Service Delivery Models

Service Delivery Models (SDMs) are supply chain structures which provide services such as training, access to inputs and information to farmers required to increase their performance and sustainability.

SDMs aim to achieve or further either economic, social or environmental sustainability in a supply chain.



## Focus of this study

- 1 **Map variety of SDMs** by different companies in different sectors and geographies; on their objectives, structure and organization, types of services, and delivery approach.
- 2 **Aggregate data** from the individual case studies collected into the database
- 3 **Analyze the economic sustainability** of the SDMs at the level of the farmer, service provider and VCI
- 4 **Extract lessons learned** on topics such as key success factors, risks, scalability, and cost-effectiveness

## Purpose of the study and benefits to supply chain



- Design more cost-effective SDMs, through better insights into what works in which cases



- Gain insights into how to design and implement more cost-effective SDMs

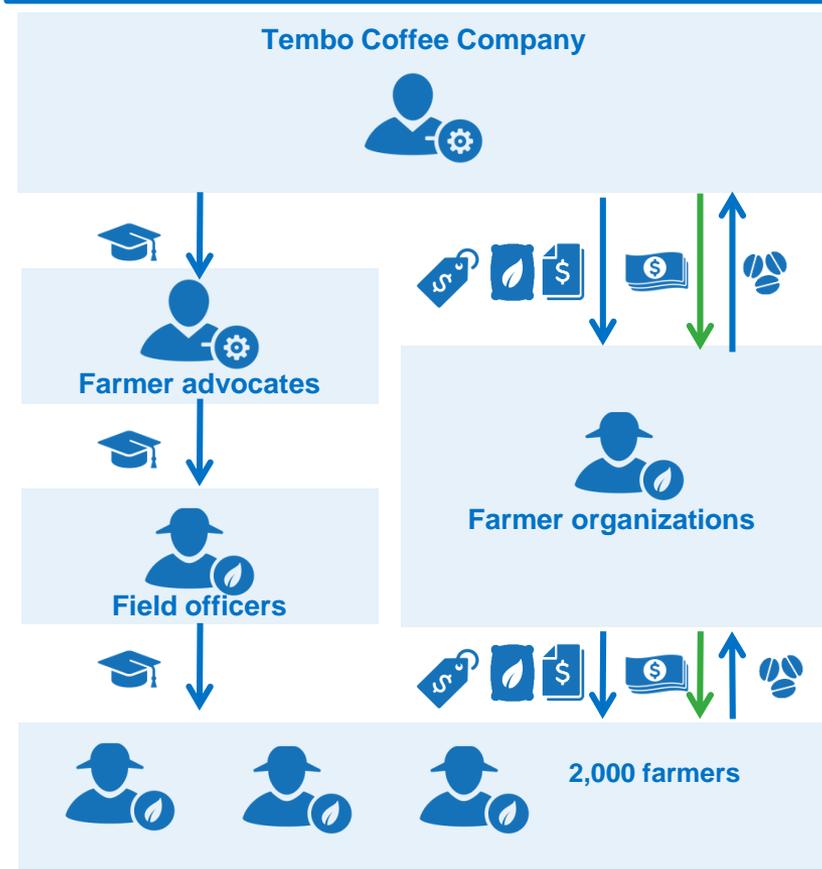


- More efficient services delivery and impact generation (better livelihoods, higher productivity, etc.)
- More transparency on whom to work with



- Benefit from strategic learning trajectory within and across sectors, based on a unifying methodology
- Opportunity to join learning platform

# Tembo's SDM objectives and structure



**Legend** ← Flow of goods and services → Cash flow

Founded by Westrock Coffee in 2012, Tembo Coffee Company is a green grading and processing facility for high-quality Arabica coffee from the Southern Highlands in Tanzania

## Objectives of Tembo Tanzania's SDM:

1. To increase the long-term viability of the farmers that constitute its supply base by improving coffee yields and quality
2. To give farmers access to the higher-value specialty coffee market with higher prices in a shorter supply chain. Ultimately, this will lead to higher farmer income and welfare.

## General SDM information:

Location: Southern Highlands, Tanzania

Start of the program: 2014, with a switch to a new model called "Tembo Direct" focused on direct services to farmers in 2016

Scale: reaching up to ~10,000 farmers in 2020

Funding: Tembo covers most of the SDM costs, also receives donor support from the Bill & Melinda Gates Foundation via DEG

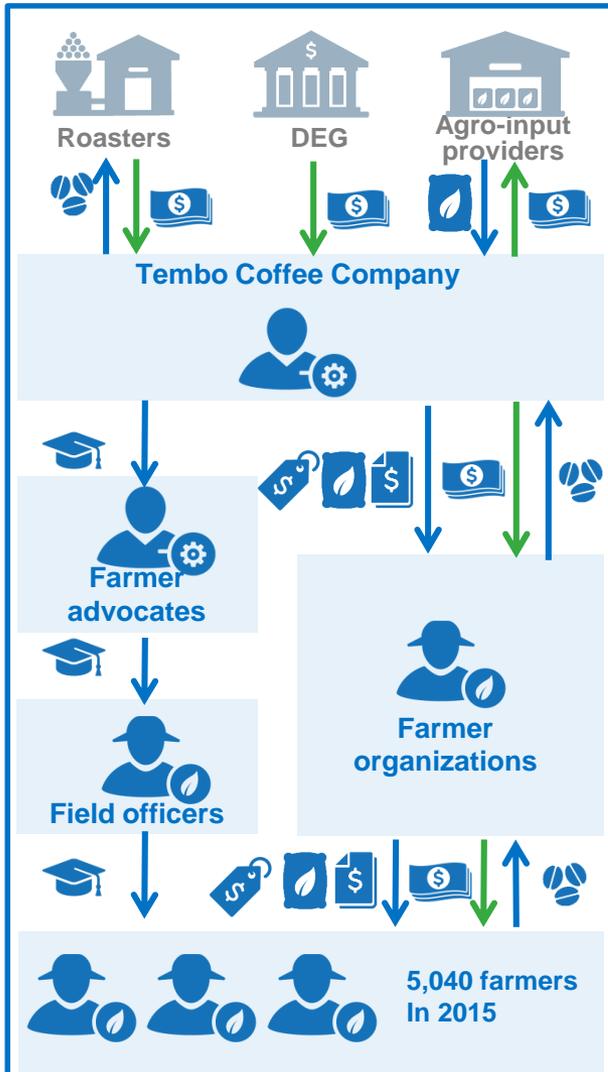
SDM operator: Tembo Coffee Company

Services provided to the farmers in the 'old' model (2014-15):

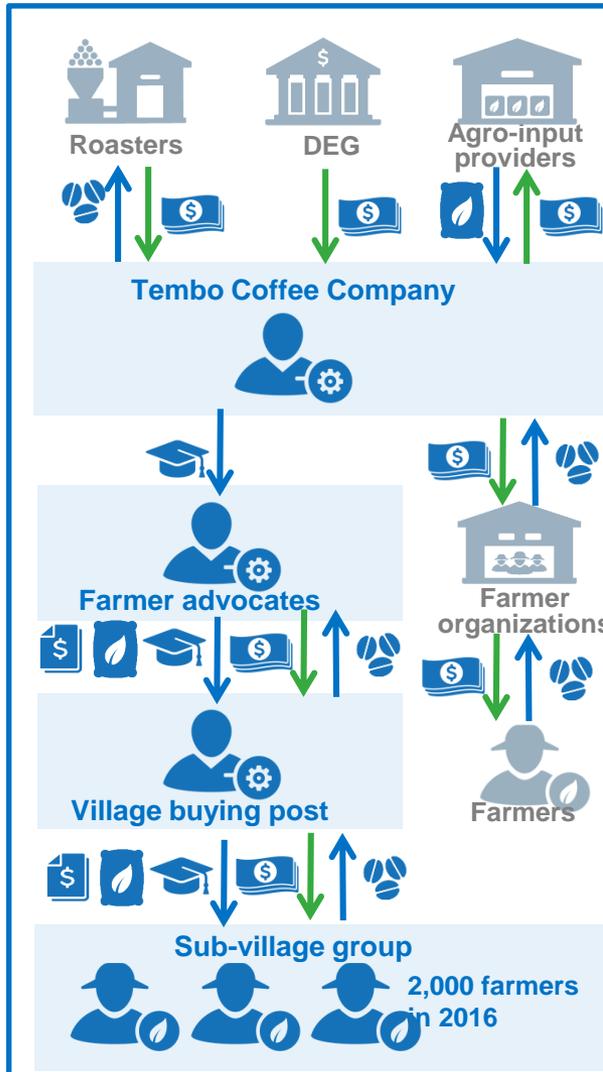
- Farmer training
- Fertilizer and crop protection have been provided to farmers via group loans to farmer organizations;
- Farmer organizations have also received finance for crop advancements and capital investments in for example machinery.
- To improve supply chain transparency, Tembo directly deals with farmer groups (cutting out middle men) and facilitates the registration of the farmer groups at the government level.

# Tembo transitions to a new SDM in 2016 (Tembo Direct)

Old model (2014-2015)



New model: Tembo Direct (2016)



After the first full year of operating its SDM, Tembo decided to switch toward a model with more direct farmer contact: Tembo Direct. Under this model, Tembo will source coffee from villages that can deliver 20+ tons annually rather than from groups. A field officer will organize the farmers in the village, train them and purchase coffee directly. This allows Tembo to truly wrap the farmer impact efforts into their sourcing methods for holistic supply chain development.

The village buying post can also facilitate agro-input distribution to farmers via saving schemes from the second year onward. At a later point in time the posts will be trained to manage their own nurseries. As in the old model, field officers are coordinated and trained by farmer advocates..

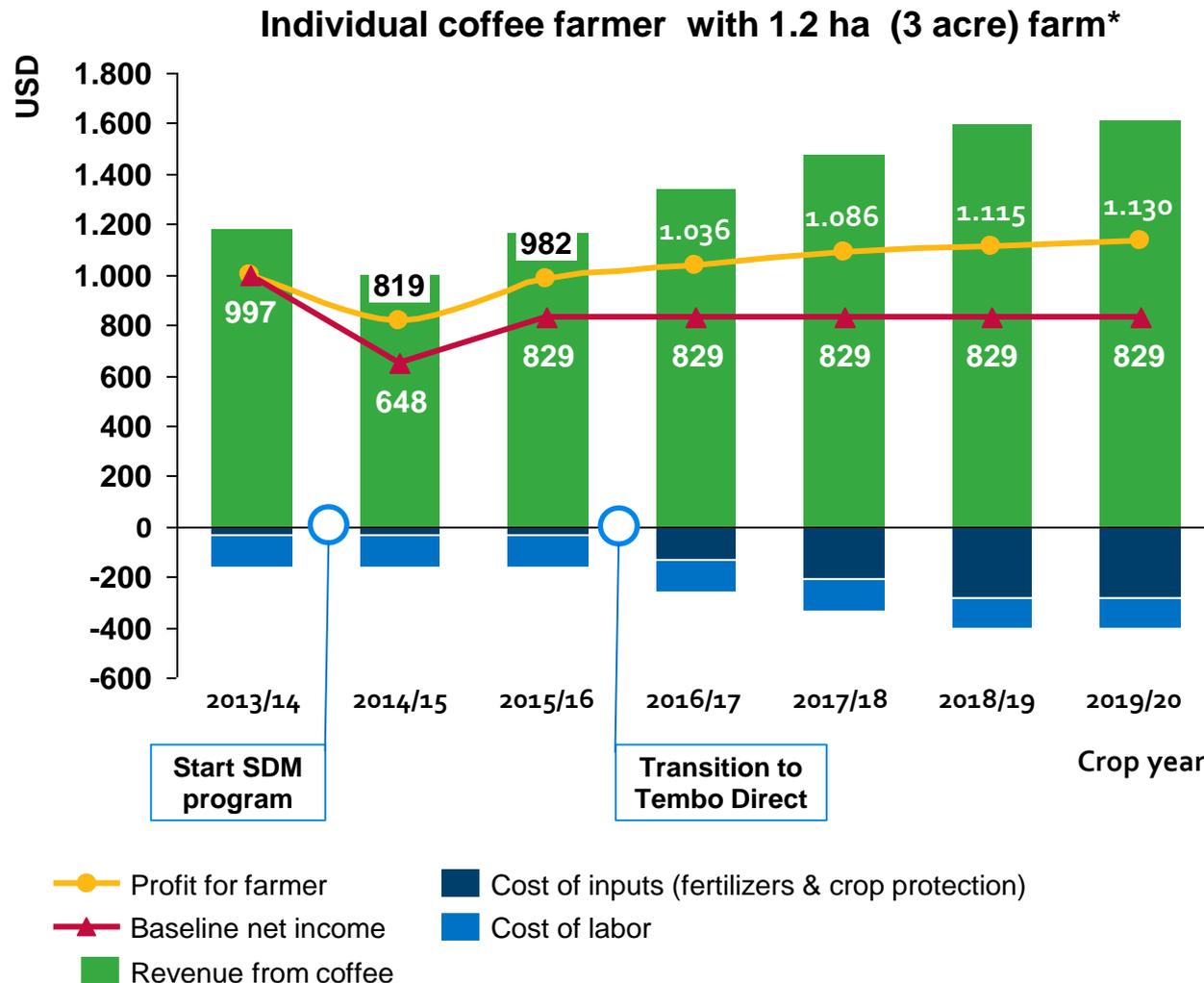
In villages with strong and effective farmer groups Tembo will keep sourcing from farmer groups, however, not as part of the SDM.

Legend ← Flow of goods and services → Cash flow \*Agro-inputs will be provided from year two onwards only.

# Types of services delivered within the SDM

|  | Value Chain Investors & Service Provider   | Other  |
|--|--|--|
|  |   |              |
|  <b>Training</b>                         | <ul style="list-style-type: none"> <li>• Tembo's farmer impact manager manages 3 farmer advocates who train and coordinate field officers provide the train to farmers</li> <li>• Tembo pays for all training costs (staffing, materials, logistics). They receive match-funding from DEG</li> </ul>                                   | <ul style="list-style-type: none"> <li>• <b>DEG</b> provides funding from the Bill &amp; Melinda Gates Foundation for SDM operations</li> </ul>                                    |
|  <b>Fertilizer &amp; crop protection</b> | <ul style="list-style-type: none"> <li>• Tembo provides fertilizer and crop protection to farmer groups on group loans, and monitors fair distribution and proper use among farmers</li> <li>• In the Tembo Direct model, agro-inputs will be provided to individual farmers.</li> </ul>   | <ul style="list-style-type: none"> <li>• <b>Agro-input providers</b> deliver quality fertilizer and crop protection inputs to Tembo as well as advise on good practices</li> </ul> |
|  <b>Financing</b>                       | <ul style="list-style-type: none"> <li>• In 2014/15, Tembo provided working capital loans to farmer groups, to be recovered via coffee deliveries</li> <li>• The Tembo Direct model stops this finance provision to most of the groups.</li> </ul>   |  |
|  <b>Supply chain transparency</b>      | <ul style="list-style-type: none"> <li>• By working directly with farmer groups, Tembo cuts out agents and middlemen and increases the profit margin of farmers</li> <li>• Tembo Direct will further shorten the supply chain as trade will happen directly with the farmer. This will further increase the farmer profits.</li> </ul> |  |

# The SDM's economic sustainability at farmer level



## Economic sustainability at farm level

- Farmer P&L data for 2013/14 and 2014/15 are based on data from farmer surveys and actual coffee prices.
- Data for 2016 and beyond are based on assumed impact of the Tembo Direct model (with stable coffee prices).
- The graph shows an increase of over 35% of net income for the average SDM farmer in 2020 compared to the baseline income for farmers outside the SDM.

## Main revenue drivers

- Coffee revenue is calculated by multiplying the production volumes with the selling prices. Although SDM farmers reported around 10% productivity increase in 2014/15, the positive impact on farmer income was severely tempered by a 30% decrease in coffee prices compared to the previous year.
- Using stable coffee prices for projections beyond 2015, the positive impact of training (+5%) and fertilizer (+40%) on increasing production become visible.

## Main cost drivers

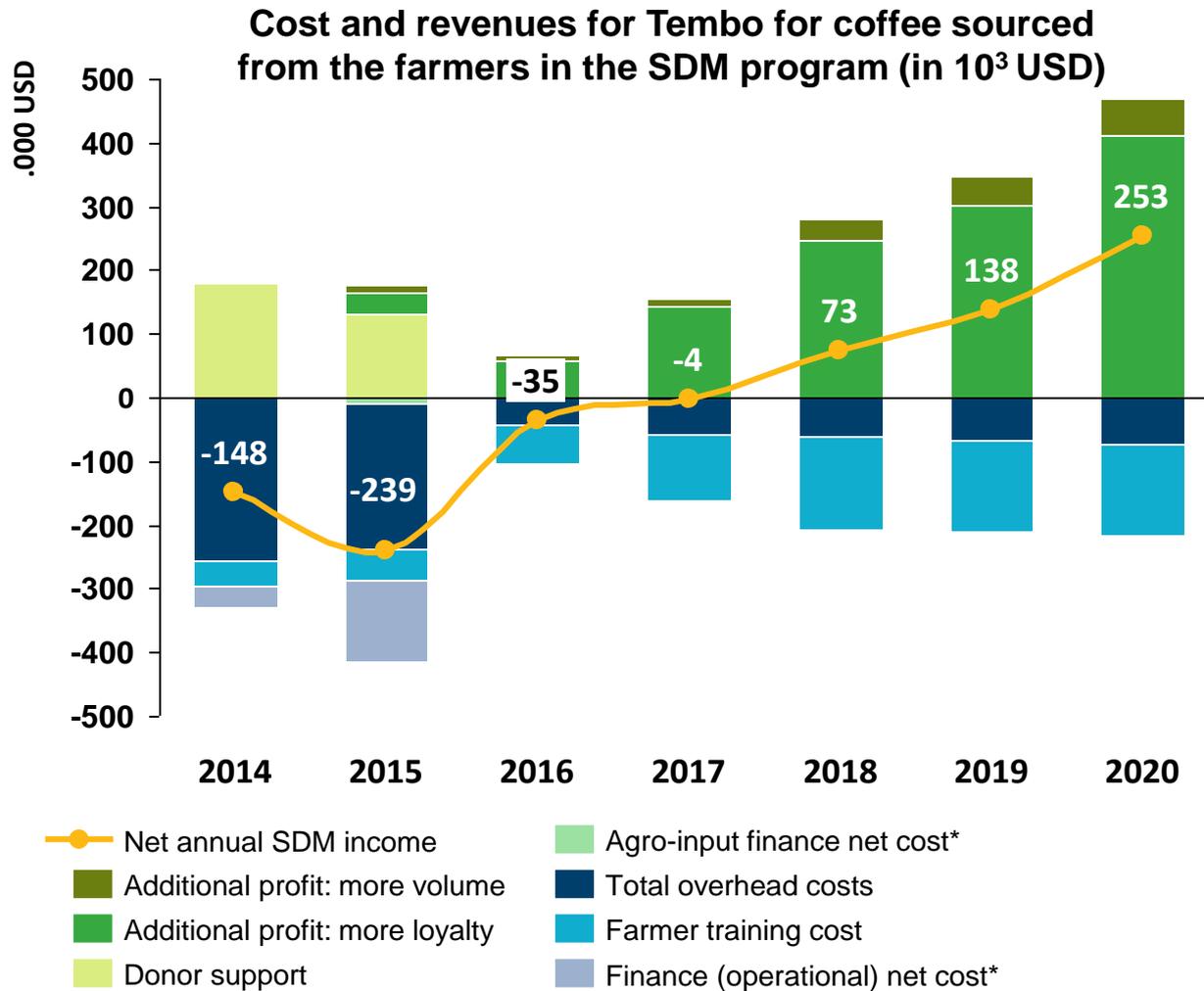
- The biggest cost component for the SDM coffee farmer is fertilizer, followed by hired labor costs. Note that in the transition year to Tembo Direct (2015/16) no fertilizer is distributed.

\*Past years data are based on monitored costs and estimated impact, from 2015/16 onwards data are projections of the Tembo Direct model.

\*\* FOB prices (USD/kg green coffee): 4.35 in 2014; 3.39 in 2015; 3,82 for 2016-2020 (last decade average). Farm gate price: 58% of FOB (68% for farmers under Tembo Direct).

# The SDM's economic sustainability for Tembo

## Service operator/Value chain investor P&L



### Economic sustainability at value chain investor level

- Tembo has integrated its SDM into its sourcing strategy, aiming to recover the costs made via higher volumes and quality of coffee received from their SDM farmers. The projections indicate that Tembo will start receiving net annual returns from its SDM from 2018 onwards.

### Main revenue drivers

- The additional revenue streams for Tembo consists for the largest part on an increase of farmer loyalty (from 30% in 2014 to 60% in 2020) and production increases from SDM farmers (+45 %).
- Tembo also receives significant donor support in 2014/15 that helped developing the program to its current scale.

### Main cost drivers

- The main costs items for Tembo's SDM are the farmer training costs (field officer salaries, materials, logistics) as well as overhead.
- In 2014 and 2015 Tembo lost money on non-recovered loans to farmer groups.

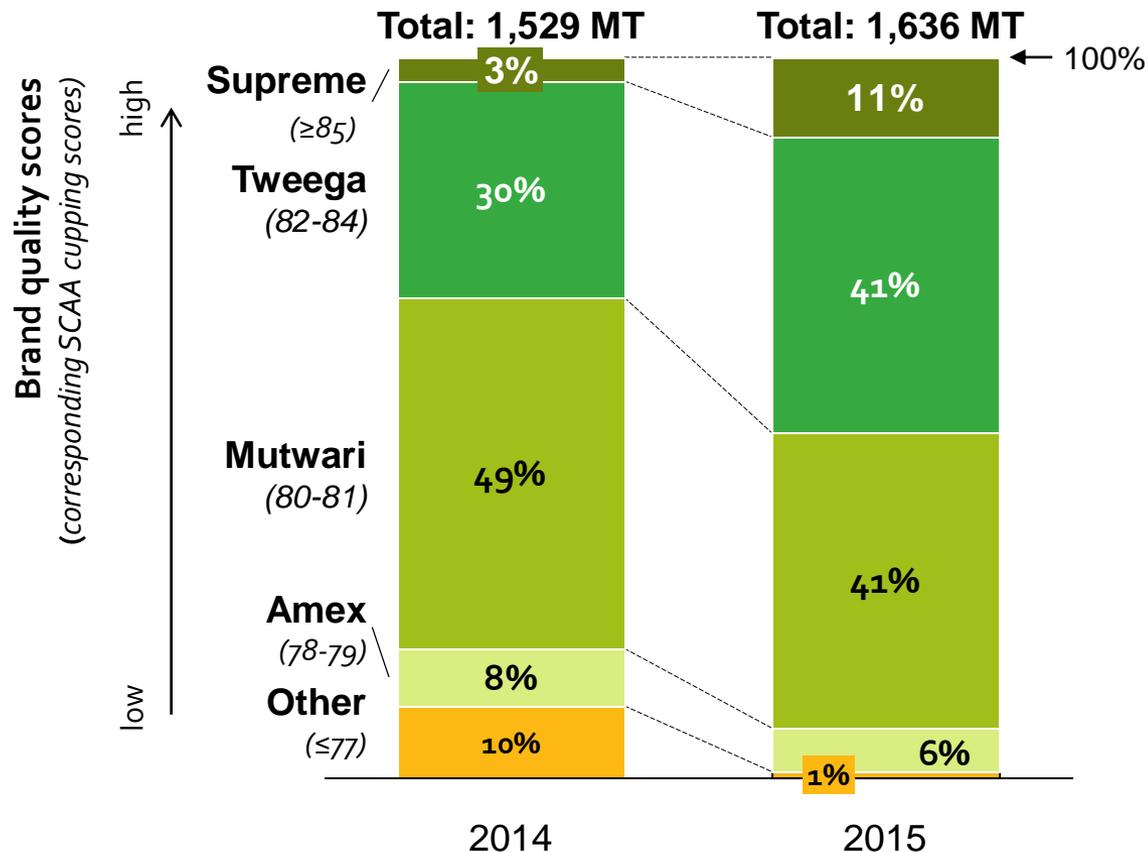
\*Costs and revenues made on agro-input and finance provision apply to the old model (2014-15), from 2016 onward these are not part of the SDM.

\*\* FOB prices as USD/kg of green coffee: 4.35 in 2014; 3.39 in 2015; 3,82 for 2016-2020 (last decade average). 5% profit margin assumed for Tembo.

# The SDM's economic sustainability for Tembo

## Quality improvement

**Change in quality grades of the total volume delivered to Tembo by farmers (% of total annual volume)**



### Quality improvements

- As a trader in high-quality Arabica coffee for the specialty market, Tembo is keen on improving the overall quality of the coffee sourced from its SDM farmers.
- After one year of SDM implementation, the overall quality of coffee delivered by farmers to Tembo has improved significantly, with a much larger share of the higher quality grades (e.g. Supreme and Tweega) in the total volumes received in 2015 compared to 2014.
- It is very likely to the increase in quality is at least partly caused by the training on improved farming and processing practices to farmers. The higher prices that Tembo offers for higher quality coffee compared to its competitors could also partly explain why farmers are more likely to sell at least their high-quality coffee to Tembo.
- Tembo's farm-gate price is based on quality: higher quality grades receive higher farm-gate prices. If Tembo is able to sell the high grades (Tweega and Supreme) for a higher FOB price than anticipated, they will split the additional margin with the farmer in the form of a second payment.

# Conclusions and lessons learned

## Key drivers of success



- By changing its model to directly service to and source from farmers instead of via farmer groups, Tembo is likely to overcome the first year challenges related to weak farmer groups that insufficiently channeled services and price benefits to farmers.
- Most impact at the farm level can be expected from the provision of quality NPK fertilizer, either pre-financed or via saving schemes.
- The focus on quality improvement, linked to a clear price advantage for higher quality coffee offered by Tembo seems to be successful.

## Key risks



- The transition towards Tembo Direct, including a temporary stop or downscaling of fertilizer provision, could negatively affect the relation with farmers and should be carefully yet clearly communicated.
- Though GAP trainings and agro-input provision will increase yields of SDM farmers, their effect will be limited by the generally old tree age.
- Tembo currently has a limited view of the SDM impact on the farm level, making it difficult to verify the true impact of the program. The current migration to a new data management system (Farmer Impact Tool) will make it possible to better track and evaluate these data.

## Key factors in replication of the model



- Tembo decided to change its SDM to directly interact with farmers via village buying post, and no longer work with the overall relatively weak farmer groups in the region. In countries with relatively strong farmer groups and/or cooperative culture, it could actually prove to be more efficient to operate via those strong farmer organizations.

## Impact on objectives



Higher yields & quality



Access to higher-value markets

- Tembo SDM is likely to be successful in realizing its productivity objectives if training and fertilizer are properly adopted
- Tembo data show a clear increase in the average quality profile of coffee sourced from SDM farmers one year after the program start.



Higher income

- The outcomes of the analysis show an expected net income increase for SDM farmers in the long-run when compared to the baseline. However, the actual impact on net income will also highly depend on the coffee market prices.



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