# External Evaluation 2SCALE, 2012-2017

seo amsterdam economics

Amsterdam, 12 June 2018
Commissioned by the Dutch Ministry of Foreign Affairs

# External Evaluation 2SCALE, 2012-2017

## Final Report

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SEO-report nr. 2018-48

# Executive Summary

**2SCALE's 'bottom up' PPP strategy appears to be a successful business incubator model that can serve as an example for private sector development (PSD) programmes targeting value chains in an early stage of development.** The programme has been particularly successful in building relations between farmers and companies and linking them to networks of local actors (agribusiness clusters). 2SCALE itself played an important role in building these partnerships, as opposed to other PSD programmes such as FDOV (now the SDG Partnership Facility), where partnerships need to be established before they can apply through a tendering procedure. In most cases, the 2SCALE partnership strategy appeared to be successful in building strong and potentially sustainable value chain linkages, using local knowledge and local networks.

**On the supply side, most output and short-term outcome targets for smallholder farmers (SHFs) were met, but there is no hard evidence yet that 2SCALE increased agricultural production and incomes.** During the period 2012-2017, a total of 584,939 SHFs were estimated to have directly or indirectly benefited from 2SCALE partnerships, which was well above the target of 500,000. There is qualitative and quantitative evidence that SHF practices improved and that SHFs trained by 2SCALE invested more in innovative activities (despite an unclear impact on access to finance). The quantitative impact assessments did not find strong evidence that 2SCALE increased farmers' production or incomes, but this could be due to the lack of comparable control groups and the fact that there was only two years between baseline and endline surveys.

**In terms of private sector development impact, most PSD output and short-term outcome targets were met, and longer-term outcomes looked promising albeit difficult to measure.** The overall output target of reaching 2,500 SMEs (including POs) was met. 2SCALE also provided more than targeted financial and informational services, and was very successful in strengthening and 'embedding' business support services and improving value chain linkages. Access to finance fell short of targets, possibly due to a measurement problem, but 2SCALE beneficiaries still attracted nearly USD 40 million and were able to meet the target for innovative investments. Survey results suggest that most of the SMEs surveyed observed sizeable increases in revenues and jobs, but these estimates are based on small samples that may not be representative, and they were not compared with a control group or benchmark. While it is still too early to assess the sustainability of partnerships, SCALE implemented many measures that help to ensure sustainability.

**On the demand side, 2SCALE exceeded its output targets with respect to new products and marketing strategies targeted at the Base of the Pyramid (BoP), but its impact on nutritional outcomes remains unclear.** With the assistance of BoPInc, 2SCALE implemented 25 'BoP pilots' that contributed to designing, introducing and testing new products targeted at 'Base of the Pyramid' (BoP) consumers, using innovative marketing strategies and distribution solutions. The impact on consumer access, sales, or consumption was not monitored in a systematic way, and the quantitative impact assessments did not yield statistically significant results in this area, despite serious attempts. Nevertheless, our case studies provide some qualitative evidence that 2SCALE contributed to improving food and nutritional security in a number of cases.

**2SCALE's focus on inclusive partnerships appears to have worked well.** The programme paid particular attention to developing trust between partners, improving the bargaining power of smaller or sometimes ‘excluded’ partners, and generally maintaining a balanced distribution of market power between all actors in the value chain. The share of female SHFs and female-headed SMEs reached was less than the targeted 40%, but exceeded the benchmark in many countries, and the overall gender targets were met in terms of absolute numbers. There are also many examples of where 2SCALE contributed to improving the position of women—an important aspect of inclusive agricultural growth.

**Our case studies suggest that the direct input additionality of 2SCALE was weak, but that its indirect input additionality and development additionality was strong.** While the larger private partners could have obtained alternative sources of funding, 2SCALE may well have induced these private sector partners to contribute more of their own resources and reach more development impact than they otherwise might have. Private sector contributions reached the overall portfolio target of 50%.

**Given the generally positive evaluation results, the evaluation team would recommend MFA to continue with a second phase of 2SCALE.** Recommendations for the second phase include (1) focusing on countries and sectors where the ‘gaps’ are highest; (2) reconstructing the Theory of Change on the basis of impact pathways that more clearly distinguish between demand, supply, and private sector development; (3) streamline the M&E framework; (4) consider paying more attention to the goal of improving nutritional outcomes; (5) consider paying more attention to the business environment; (6) put more value on input additionality as a selection criterion when building new partnerships or exiting from existing partnerships; (7) develop strategies for deepening partnerships; and (8) continue to monitor all 53 partnerships, including those that are phased out.

**Based on this evaluation, the report draws several lessons for MFA’s food security and private sector development agenda.** A first lesson is to develop a common ToC for all food security and PSD programmes, based on the proposed three impact pathways, which would allow for an easier comparison between the different programmes. A second lesson is that a stronger methodology is needed for measuring gender impact and more generally ‘inclusion impact’ (for example, based on EBRD’s inclusion gap methodology). Third, M&E targets should be streamlined, key to the ToC, SMART, and M&E resources should be spent efficiently. Fourth, there is potential to reduce overlap and increase synergies between 2SCALE and FDOV, or its successor SDGP. Finally, MFA could further sharpen the eligibility criteria and better coordinate between different PSD programmes. For example, MFA could usefully suggest a clear sequence through which partnerships in an early stage of development could (a) first apply for funding from 2SCALE to develop and build value chain linkages, (b) then scale up partnerships and linkages with support from SDGP, and (c) eventually—once commercially viable—invest in further growth using market-based (non-concessional) funds such as DGGF.

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# 1 Introduction

*SEO has evaluated the first phase (2012-2017) of the 2SCALE programme supported by the Dutch Ministry of Foreign Affairs. The evaluation results, summarised in this Final Report, are generally positive. On this basis, a second phase for 2SCALE is recommended.*

## 1.1 2SCALE

In June 2012, the Minister for International Cooperation and European Affairs awarded a grant of 41.5 million euros for the implementation of Public Private Partnerships (PPPs) under the programme "Towards Sustainable Clusters in Agribusiness through Learning in Entrepreneurship (2SCALE)". Private sector partners were expected to at least match this amount and thereby contribute at least 50% of the overall programme funding, implying a total available budget of 82 million euros.[1]

The official **goal** of 2SCALE is to "improve rural livelihoods and food and nutrition security in Africa."[2] It does so by promoting entrepreneurship and private sector development through clusters (partnerships) in agricultural value chains. It thereby acts as an agribusiness incubator for inclusive businesses in the agro-food industry, creating opportunities for small scale farmers (SHF) and small and medium-sized enterprises (SMEs). The aim is for SHFs and SMEs to participate in commercial agro-food value chains and to benefit from increased demand for food in local rural, local urban and regional markets. The programme includes a special emphasis on low-income 'Base of the Pyramid' ('BoP')[3] consumers, improved nutrition, and inclusion of female farmers and female-led SMEs. However, 2SCALE is fundamentally a private sector driven program (in which farmers are also considered to be private sector operators) and is therefore not expected to deal with all aspects of the food security agenda.

The **strategic objective** of 2SCALE, since 2015, is to "deepen and scale PPPs in selected high-potential sectors (product groups) in nine focus countries in Africa, which together will offer significant and durable opportunity to at least 500,000 smallholder farmers (of which 40% will be women) to improve their livelihoods and to at least 2,500 SMEs (of which 40% will be female-headed) to improve sales and provide jobs, while sustainably supplying food to regional, national and local markets, of which 40% will be BoP consumers." [4] The nine focus countries have been: Benin, Côte d'Ivoire, Ethiopia, Ghana, Kenya, Mali, Mozambique, Nigeria and Uganda.

In contrast with similar programmes such as FDOV, 2SCALE works from a 'bottom up' approach and the consortium implementing 2SCALE itself plays an important role in bringing the parties of a partnership together. The consortium has local staff present in the field and hence can benefit

1 These private sector contributions could range from in-kind contributions by farmers to larger scale targeted investments by (multinational) companies in support of inclusive business.
2 2SCALE Annual Report 2017, p. 12.
3 The BoP is a demographic term that covers the approximately 4.5 billion people who live on less than 8 U.S. dollars per day.
4 2SCALE Annual Report 2017, p. 12.

from its own local knowledge and local network in developing partnerships. They involve and engage SHFs, who together with other relevant stakeholders (e.g., local SMEs and service providers) can form agri-business clusters (ABCs), linked to local and regional markets through value chains (VCs).

2SCALE PPPs are collaborative agreements between 2SCALE on the one hand and agribusiness clusters and agro-food companies on the other, including farmer cooperatives. These partnerships are expected to create conditions conducive for improved food and nutrition security, by contributing to reducing malnutrition. Partnerships can be formed with local small and medium-sized enterprises (SMEs) and/or with large scale enterprises (LSEs, including some based in the Netherlands) that have inclusive business as a core strategy.

Agribusiness clusters (ABCs) are centered on smallholder farmers (SHFs) and their producer organisations (POs), and aim to strengthen their access to inputs and services through their relationships with local SMEs and other organisations around a specific agricultural commodity. ABCs contribute to "farmer empowerment" by strengthening the capacity and the bargaining positions of SHFs, POs, and local SMEs, and by linking them to markets.[5] By connecting them with providers of Business Support Services (BSSs), agro-input dealers, food product deals, and other 'backward and forward' SMEs, VC actors are connect and linked to local and regional markets.

The programme is implemented by a consortium of three agencies:

- **IFDC** is responsible for the identification of 2SCALE partners during the inception phases of partnership development and provision of technical assistance to partnerships developed under the program. IFDC was originally founded as the International Fertilizer Development Center. Since 1974, it has focused on increasing and sustaining food security and agricultural productivity in over 100 developing countries through the development and transfer of effective and environmentally sound crop nutrient technology and agribusiness expertise. Its main goal today is to alleviate global hunger by introducing improved agricultural practises and fertilizer technologies to farmers and linking farmers to markets. The organisation is currently active in 23 developing countries, and is headquartered in Alabama, USA.
- **BoPInc** supports and implements 2SCALE pilots in target value chains to develop BoP products and improve BoP distribution and marketing models for improved nutrition outcomes. It also addresses specific constraints in partnerships, such as access to finance. BoPInc stands for BoP Innovation Centre and is based in Utrecht, the Netherlands. Its mission is to develop new business activities with entrepreneurs and companies that aim to deliver value to and together with communities in the BoP. In order to achieve this goal, BoPInc focusses on inclusive innovation, marketing and distribution and inclusive business empowerment.
- **ICRA** is mainly involved in capacity building at the 2SCALE agribusiness cluster level. ICRA stands for the International Centre for development-oriented Research in Agriculture and is based in Wageningen, the Netherlands. ICRA's goal is to end poverty and hunger and to promote sustainable resource use. In order to reach this goal, the organisation focusses on

[5] As 2SCALE (2018, p. 27) puts it, "an ABC allows smallholder farmers to coordinate their business among themselves and with other actors, to co-learn, innovate, invest, adjust to evolving business conditions, and to maintain their competitive edge." ABCs help to not only grow agri-business but also to ensure fair terms of inclusion of smallholder farmers in the value chain.

inclusive innovation partnerships at the smallholder farming level and strengthening individual, organisational and institutional capacities to make these partnerships work.

## 1.2 Purpose of the evaluation

The purpose of the evaluation is to serve as a basis for decision making on the part of the client (the Dutch Ministry of Foreign Affairs) with regard to the continuation of the program. In particular, the evaluation is intended to inform the Ministry on whether a second phase is recommended and can be expected to lead to increased participation of small scale farmers and businesses in inclusive agricultural development for food and nutrition security.

The evaluation consisted of three phases:

- Phase I of the evaluation was an assessment of the extent to which 2SCALE had undertaken relevant and effective activities to pursue its goals. The main finding of the Phase I Report was that 2SCALE had overall performed well relative to its targets for outputs and short-term outcomes, but that it was too early to assess medium-term outcomes and long-term impact. In part on the basis of the Phase I report, the Ministry decided on an extension of the programme to the end of 2018.
- Phase II of the evaluation was a comparative desk study of 2SCALE as compared to two similar programs, FDOV and GAFSP. The main finding of the Phase II Report was that there is potential to reduce overlap and increase synergies between 2SCALE and FDOV in terms of targeted countries, sectors and end-beneficiaries.
- Phase III of the evaluation was a review of the impact assessments conducted by RSA (now part of Dalberg) and AIR, based on baseline (2015) and endline (2017) household surveys for six partnerships. Our overall assessment was that the data gathered and methods employed were of good quality, but that the report needed improvements in terms of the structure, depth, and interpretation of the econometric analysis, which often yielded results that did not make sense without a deeper understanding of the partnerships and their context. In addition, the 2SCALE management team noted that (a) two years was too short to achieve impact on income and food security; (b) intermediate outcomes were not always defined properly and differed across partnerships; (c) the selection of treatment and control groups was problematic in a number of cases. A number of improvements were subsequently incorporated in the final AIR/Dalberg report (Bonilla and Rai, 2018). Some of the remaining shortcomings are described in Appendix C.

This Final Report summarises our earlier findings and triangulates all available evidence from several sources: the 2SCALE monitoring and evaluation data (updated through end-2017), the case study projects visited by SEO in the context of our Phase I report, the impact assessments conducted by AIR/Dalberg, and other desk research.

Following the Terms of Reference, this Final Report includes:

1. A qualitative and quantitative assessment of the effectiveness, additionality, and sustainability of the programme, based on 2SCALE monitoring data and our six case studies (described in **Appendix A**).

2. A comparison between 2SCALE and FDOV (see **Appendix B**).
3. A preliminary conclusion on the expected impact of the programme, based on the quantitative impact studies conducted by RSA and AIR/Dalberg for a sample of five partnerships. We refer to these findings throughout Chapter 4, but **Appendix C** describes a number of caveats that should be applied when interpreting these results.
4. Conclusion and recommendations for a second phase of 2SCALE.

# 2 Theory of Change

*This chapter describes the Theory of Change (ToC) developed by 2SCALE, our assessment of this ToC, and a reconstruction of the ToC. We also discuss the reasons why 2SCALE pays special attention to women, and we provide the full list of key indicators used to assess the ToC.*

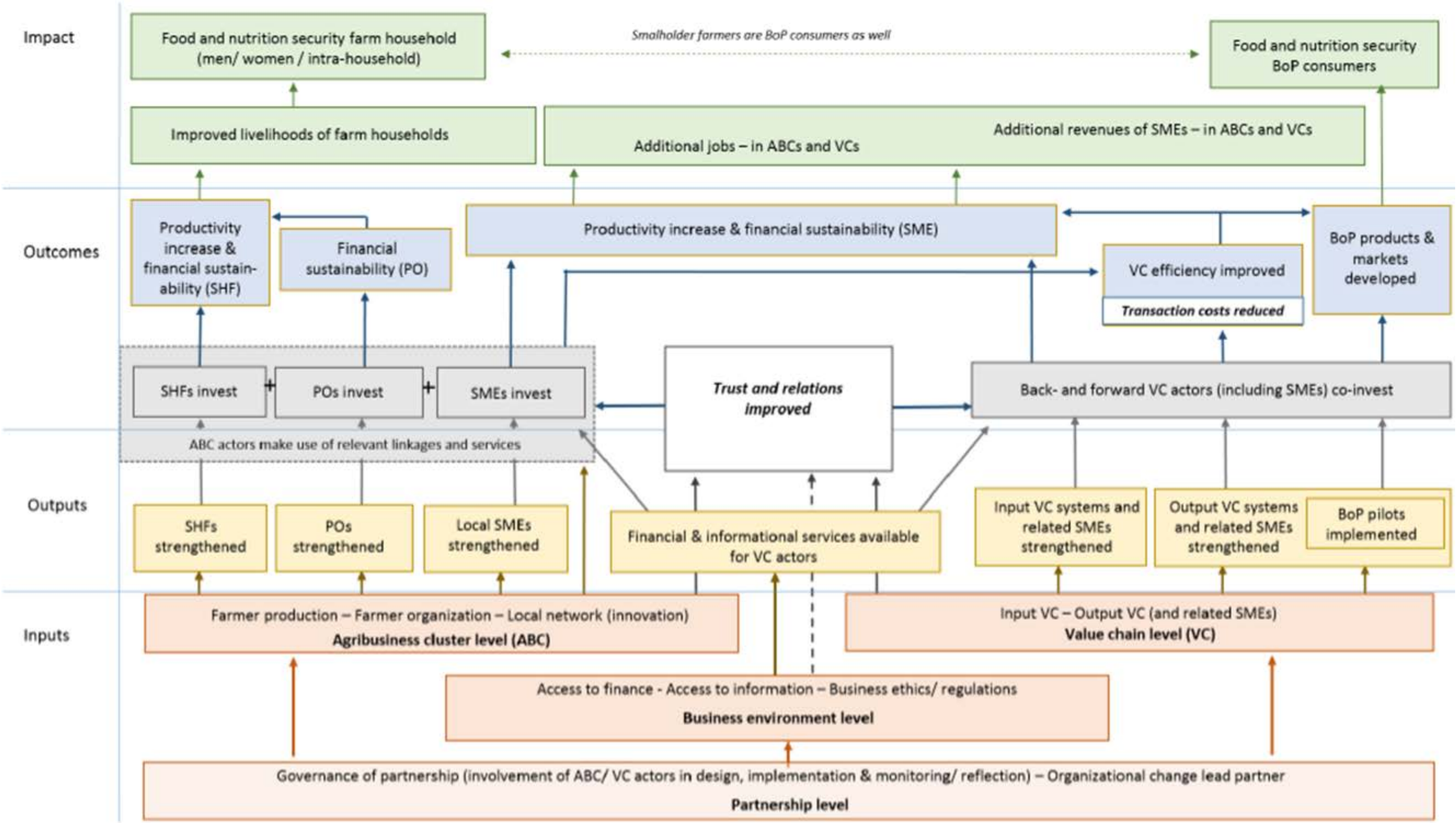
## 2.1 2SCALE ToC

As requested by the ToR, the Phase I report of the evaluation used the Theory of Change (ToC) developed by 2SCALE as a basis for the assessments. This ToC was approved by the Ministry of Foreign Affairs for the period 2015-2017, and is presented in Figure 2-1.

The logic of this ToC was as follows:

- In terms of **inputs**, the impact pathway begins when 2SCALE and the lead partner initiate cooperation at one or more of the following levels; the agribusiness cluster (ABC) level, the value chain (VC) level, or the business environment level. Both financial and human resources are made available at this stage.
- In terms of **output**s, activities are then undertaken and financial and informational services are made available to strengthen smallholder farmers (SHFs) and small and medium-sized enterprises (SMEs). At the ABC level, the focus is on smallholder farmers (SHFs), producer organisations (POs) and local small and medium sized enterprises (SMEs). The VC partnerships focuses on SMEs at the input and the output side of the VC (i.e., suppliers or buyers).
- In terms of **short-term outcomes**, improved financial and informational services via 2SCALE's business environment partnerships are expected to increase access to finance and thereby boost investment within the ABC.
- In terms of **medium-term outcomes**, this should lead to an increase in productivity and financial sustainability for SHFs, POs and SMEs. Increased productivity and financial sustainability at the SME level is in turn expected to translate into additional jobs and revenues.
- In terms of **long-term impact**, the aim is to improve food and nutrition security for SHFs and BoP consumers. This is to be achieved through the following channels:
  - Increased productivity and financial sustainability of SHFs lead to improved livelihood of farm households and thereby indirectly to better food and nutrition security for SHFs.
  - The development and marketing of new BoP products (including via BoP pilots) improves food and nutritional security for BoP consumers.
  - Increased jobs and revenues at the SME level, by raising incomes of workers and SME owners, indirectly improve food and nutritional security for BoP consumers.
  - Increased productivity of SHFs could lead to lower prices, which BoP consumers could benefit from as well.
  - To the extent that SHFs are BoP consumers as well, their food and nutritional security is also improved through indirect channels.

Figure 2.1 2SCALE's own Theory of Change does not have separate impact pathways




Source: 2SCALE

## 2.2 Assessment of 2SCALE's ToC

While 2SCALE's ToC is well designed, the evaluation team has several suggestions for improvement:

1. It would be useful to distinguish more clearly between supply-side and demand-side activities:
   - **Food security supply side:** increase the productivity and production by small scale food producers, particularly women.
   - **Food security demand side**: increase the demand for food due to income growth, and via innovate marketing and distribution channels to reach out to low-income 'Base of the Pyramid' ('BoP')[6] consumers in local rural, local urban and regional markets.
2. It would be useful to more clearly separate the food security goals from the private sector development goals: promoting entrepreneurship and private sector development through clusters in agricultural value chains.
3. The ToC should make it explicit that (a) without demand, supply-side actitvities will not increase farmer incomes; (b) without supply, there cannot be demand-side effects; (c) without a well-functioning private sector, demand and supply will not be matched.
4. The fact that smallholder farmers are also BoP consumers, and that therefore the BoP products and markets are also targeted at them, could be made more clear (visually).
5. Access to finance is treated as part of the enabling environment, while financial services providers are typically part of the private sector. It would therefore be preferable to treat them as part of the private sector, not its environment. For example, an MFI can be a specialised supplier of financial services to a value chain. Similarly, private providers of public services such as telecommunications could also be considered to be part of a value chain. In our view, the definition of 'enabling environment' should be limited to the provision of public goods and services, such as basic infrastructure, education, regulation, rule of law, tax regime, etc.

## 2.3 Reconstructing the ToC with three impact pathways

Figure 2-2 presents a first attempt at incorporating the suggestions for improvement mentioned above into a new ToC. Like the ToC that SEO developed for the evaluation of FDOV (in cooperation with PwC and AIGHD), this ToC clearly shows the three different impact pathways that 2SCALE projects can take in achieving impact on food security (supply side and demand side) and private sector development.

Although each project ToC is different, we can generally distinguish three impact pathways:

**Impact Pathway 1: Food Security – Supply Side**: this pathway starts with supply-side activities that aim to increase the overall supply of a commodity (quantity, quality, or diversity). Key 2SCALE activities in this area are the provision of training, informational services and financial services

[6] The BoP is a demographic term that covers the approximately 4.5 billion people who live on less than 8 U.S. dollars per day.

(such as assistance with writing business plans). These activities are expected to lead to improved SHF practices, including agricultural practices, innovative investments and working conditions, and improved SHF access to inputs, services, and finance. This in turn increases productivity and production. Assuming that increased supply leads to increased sales (which is the case unless demand is inelastic or unless prices are inflexible downwards), this can result in increased incomes (which depends on the price elasticity of demand and any changes in costs). In addition, increased supply and increased incomes can lead to direct and indirect job creation. Jobs and income growth in turn could have further demand side effects (increased consumption of food) and supply side effects (positive demonstration effects that can stimulate further increases in food supply).

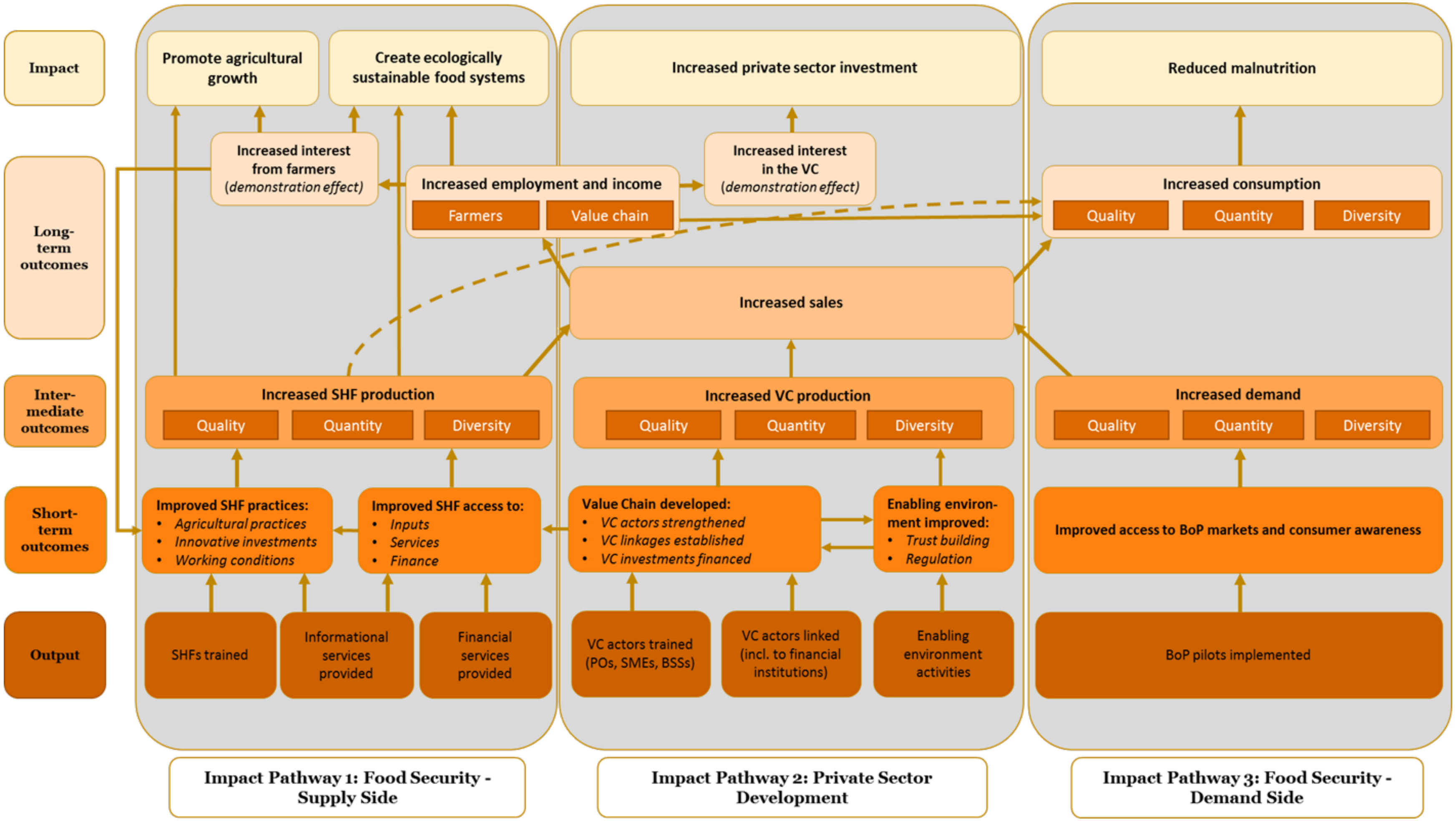
**Impact Pathway 2: Private Sector Development**: this pathway starts with activities that aim at developing the value chain and improving the enabling environment. Key PSD activities are the training of VC actors (POs, SMEs, and BSSs), improving linkages between these actors (including with financial institutions), and activities aimed at building trust and (indirectly) improving regulation in the enabling environment. These activities are expected to increased production at various levels of the value chain (in terms of quantity, quality, and diversity – i.e., product differentiation). Assuming there is demand for the increased or improved products, this then leads to increased sales. The incomes earned by VC actors as a result of these sales (including VC employees) in turn can be spent on consumption of food products and thereby can reduce malnutrition.

**Impact Pathway 3: Food Security – Demand Side**: this pathway starts with demand-side activities that aim to increase the overall demand for a commodity. The key 2SCALE activities in this area are the BoP pilots that are focussed on the consumer side, including designing, introducing and testing of new BoP products, as well as innovative marketing strategies and distribution solutions to deliver these products to BoP markets. Increased access and awareness by consumers leads to increase demand, which in turn is expected to increase sales (under the implicit assumption that supply is elastic and that prices are flexible). As a consequence, the consumption of the targeted food products increases. This in turn would, under certain assumptions, reduce malnutrition.[7]

It is important to note that all pathways are linked, meaning that Food Security (FS) objectives cannot be separated from Private Sector Development (PSD) objectives. If the aim is to only contribute to FS, a food aid programme could be developed that would simply hand out inputs to farmers and/or food to consumers, but such a programme would not be sustainable without integrating this into a local value chain, ensuring that food can be produced locally and can reach consumers through markets. Similarly, if the aim is to only contribute to PSD, there is no guarantee that this would contribute to FS. That is, without interventions on the supply or demand side, an increase in SME revenues or their employees' incomes may not necessarily lead to the consumption of more nutritious food, food diversity, or food stability.

[7] While 'reducing malnutrition' is not an explicit goal of 2SCALE projects, 2SCALE does – according to its own ToC – target direct and indirect improvements in food and nutritional security for SHFs and BoP consumers. The implicit assumption here is that either the targeted food product is used as a substitute for less nutritious food products, or that total consumption increases, e.g. as a result of lower prices or higher incomes. However, the nutrition impact could in theory also be negative, i.e., if increased consumption of the targeted commodity is accompanied by decreased consumption of a more nutritious commodity (substituting more nutritious food with less nutritious food).

Figure 2.2 Reconstructed Theory of Change for 2SCALE, using three impact pathways.




Source: SEO Amsterdam Economics

As Figure 2-2 shows, all three impact pathways are interconnected, and it is clear in which ways PSD can also have food security impact.

The three pathways correspond to some extent to what 2SCALE calls its "activity domains":
- Activity Domain 1 (AD1): Building partnerships
- Activity Domain 2 (AD2): Support to ABC formation
- Activity Domain 3 (AD3): Support to value chain development (including BoP pilots)
- Activity Domain 4 (AD4): Support to enabling business environment

AD 2 roughly corresponds to Pathway 1 (but POs and SMEs are part of Pathway 2), and AD3 and AD4 correspond to Pathway 2. However, the demand-side activities (mostly BoP pilots) do not have a separate activity domain, but are put under 'value chain development' (which to some extent they also are.) Many 2SCALE projects appear to contain elements of all three impact pathways and may benefit from all Activity Domains.

For the purpose of this evaluation, we will assess the indicators for outputs and outcomes that were approved by MFA based on 2SCALE's own ToC. Nevertheless, we believe that it is useful to conceptually separate activities, outputs, outcomes and impact at the level of the **supply side** (increased supplies of food), **demand side** (increased consumption of food), and **private sector development side** (improved VC linkages and markets for food).[8] Chapter 4 on Effectiveness will therefore discuss the results in this order.

We have also indicated in the ToC diagram how this ToC can be linked to the five pillars of the Ministry's food security strategy. This is summarised in the tabel below.

Table 2-1 The five pillars of the MFA food security strategy map wel into the three pathways

| MFA pillar | 1. Reduce malnutrition | 2. Promote agricultural growth | 3. Create ecologically sustainable food systems | 4. Create better and more efficient working conditions | 5. Increase Private Sector Investment |
|---|---|---|---|---|---|
| **MFA classification** | FNS | FNS | FNS, PSD | PSD | PSD |
| **SEO pathway** | 3 | 1 | 1,2 | 1,2 | 2 |

Source: Dutch Ministry of Foreign Affairs and SEO Amsterdam Economics.
FNS = Food & Nutrition Security; PSD = Private Sector Development

## 2.4 Gender impact

While not yet noted explicitly in the Theory of Change, one of the key goals of 2SCALE is to specifically strengthen the position of female farmers and female-headed SMEs. 2SCALE has applied a gender-sensitive approach and explicitly aims to promote gender equality and women's empowerment by setting a target that at least 40% of the beneficiaries should be women. 2SCALE

[8] In all cases, 'increases' refer to quantity, quality, and diversity of food.

understands empowerment as "a process by which those who have been denied the ability to make strategic life choices acquire the ability to do so".[9]

**One obvious reason for specifically targeting women in food security programmes is that women in developing countries tend to be responsible for household food security.** Women in developing countries are estimated to produce 80% of household food and play a key role in household food security.[10] They are heavily involved in growing food, cash crops and caring for livestock or processing. Nearly 80% of economically active women in developing countries report agriculture as their primary activity.[11] In addition, surveys in a wide range of countries have shown that 85-90 percent of the time spent on household food preparation is women's time.[12] Moreover, female farmers have often been reported to pay greater attention to crop quality than men. Finally, one study found that improvements in child health and nutrition brought about by a US$10 increase in women's income would require a US$110 increase in men's income to bring about the same improvements.[13] All of these indicators have led many to conclude that improving food security and nutrition is best done by working with women.[14]

**Another reason for targeting women, particularly in private sector development projects, is that they typically face more economic constraints than men.** Examples of such constraints that affect agricultural production are:

a. *Constraints in terms of access to inputs, land, labour*: Female farmers tend to grow on less acreage than men and have less access to resources such as land. According to Unesco, women produce half the world's food but own only 1% of its farmland[15]. "The evidence illustrating gender inequalities in access to land is overwhelming. Women across all developing regions are consistently less likely to own or operate land; they are less likely to have access to rented land, and the land they do have access to is often of poorer quality and in smaller plots"[16]. Also access of women to improved seeds and other inputs, water, equipment and labour, which they have to hire, is limited, in comparison with that of men.
b. *Barriers to join POs*: Women appear to face more barriers than men to join producer organisations (POs) or other farmer groups. The reasons for this may include: (i) women's lack

9 Kabeer, N. 1999. "Resources, Agency and Achievements: Reflections on the Measure of Empowerment," Development and Change, 30:435-64.

10 2SCALE Thematic Paper on 'Gender Mainstreaming in Agribusiness Partnerships', p. 7, based on World Bank (2014) and Meinzen-Dick et al 2011).

11 Doss C. (2014) If Women Hold Up Half the Sky, How Much of the World's Food Do They Produce?. In: Quisumbing A., Meinzen-Dick R., Raney T., Croppenstedt A., Behrman J., Peterman A. (eds) Gender in Agriculture. Springer, Dordrecht

12 World Food Programme. 2017. "Women and Hunger: 10 facts," http://www.wfp.org/our-work/preventing-hunger/focus-women/women-hunger-facts.

13 World Bank/FAO/IFAD, 2008. *Gender in Ariculture Sourcebook* (Executive Summary: Investing in women as drivers of economic growth.), p. 2. The statement is based on research conducted in Cote d'Ivoire in 2008.

14 However, there is no systematic evidence supporting the claim that women contribute more to agriculture in Africa than men. A recent paper by the World Bank ("How Much of the Labor in African Agriculture Is Provided by Women?" Agriculture in Africa—Telling Facts from Myths project, 2015) estimates the average female labour contribution to agriculture in Africa at 40%, using data from household surveys across six Sub-Saharan African countries. It finds that female labour shares tend to be higher in households where women own a larger share of the land and when they are more educated. However, it questions prevailing statements regarding substantial gains in aggregate crop output as a result of increasing female agricultural productivity.

15 http://www.unesco.org/education/tlsf/mods/theme_c/popups/mod14t04s01.html

16 FAO. 2011. The State of Food and Agriculture 2010-2011: Women in Agriculture – Closing the Gender Gap for Development. Food and Agriculture Organization of the United Nations, Rome.

of information about these groups, (ii) efforts (including by husbands) to prevent women to join, or iii) lack of sufficient (access to) financial resources to pay the member fees. As a result, women may have less access to inputs, services, or capacity building activities offered by POs.[17]

c. *More limited access to finance*. Women's access to financial products (including input credit and trade credit) has often reported to be more limited than that of men. This is often related to the fact that women's ownership of land is also limited, while land is typically used as a collateral for providing credit.

d. *Excluded from market opportunities*: Women in many countries are often reported to have less education, less exposure to networks and information, and lower self-confidence. In addition, African women are predominantly responsible for domestic work, including childcare, next to their productive activities. This dual responsibility implies that they work much longer hours than men, while limiting their time and access to opportunities offered to develop their skills.

**If it is correct that women face more constraints to agricultural production, then the impact of supporting women with alleviating these constraints is potentially (*ex ante*) higher than the impact of supporting men.** In other words, favouring women when improving access to inputs, services, finance, or land (until the point that access is equal) could be expected to have a larger impact on yields, incomes, and nutrition outcomes. The FAO estimates that, if women in developing countries had the same access to productive resources as men, they could increase yields on their farms by 20–30%. This could then increase agricultural production in developing countries by up to 4%, which would in turn reduce the number of hungry people by 100-150 million (12-17%) worldwide.[18]

## 2.5 Indicators

Table 2.1 summarises the key indicators that were developed for 2SCALE, along with their targets and actual values through end-2017. Note that several targets had been adjusted downwards in 2015 following a review of by the Visitation Committee. For example, in order to reflect the focus on deepening existing partnerships rather than brokering new ones, programme targets had been adjusted to reach 500.000 instead of 1.115.000 farmers, and 2500 instead of 4000 SMEs.

As can be seen, 2SCALE typically has an overall target of 40% for gender indicators. This target is at the overall portfolio level and is not a target per country.

The interpretation of the realised values is discussed in Chapter 4 on Effectiveness, separately for each pathway.

[17] Terrillon, Jacqueline. 2014. Brief on Integration of a Gender Perspective to 2SCALE Project in West Africa.

[18] FAO. 2011. The State of Food and Agriculture 2010-2011: Women in Agriculture – Closing the Gender Gap for Development. Food and Agriculture Organization of the United Nations, Rome.

Table 2-2 2SCALE met virtually all of its (adjusted) targets for end-2017

| Level | Indicator | Path-way | | Actuals | *Target* | |
|---|---|---|---|---|---|---|
| Output | # of SHFs (men/ women) reached (i.e., benefitting from the PPP) | 1 | Total | **584,939** | *500,000* | ✓ |
| | | | ♀ | **36%** | *40%* | ✗ |
| Outcome | # of SHFs with increased financing | 1 | Total | **51,488** | *250,000* | ✗ |
| | | | ♀ | **47%** | *40%* | ✓ |
| Outcome | # of SHFs investing in at least one innovative new technology/ activity | 1 | Total | **458,608** | *400,000* | ✓ |
| | | | ♀ | **33%** | *40%* | ✗ |
| Output | # of local SMEs strengthened (trained, coached) | 2 | Total | **1,006** | *1,000* | ✓ |
| | | | ♀ | **30%** | *40%* | ✗ |
| Output | # of POs strengthened (trained, coached) – beyond organizing production | 2 | | **2,083** | *400* | ✓ |
| Output | # of BSSs strengthened, providing professional services to ABCs | 2 | | **165** | *50* | ✓ |
| Output | # of back- and forward SMEs strengthened (trained, coached) | 2 | Total | **500** | *1,000* | ✗ |
| | | | ♀ | **35%** | *40%* | ✗ |
| Output | # of financial services made available within the PPP portfolio | 1+2 | | **118** | *25* | ✓ |
| Output | # of informational services made available within PPP portfolio | 1+2 | | **165** | *15* | ✓ |
| Outcome | USD value of additional financing raised by target ABCs and VCs | 1+2 | | **39.9 mln** | *n.a.* | |
| Outcome | # of SMEs with increased financing | 2 | Total | **27** | *250* | |
| | | | ♀ | n.a. | *100* | |
| Outcome | # of local SMEs investing in at least one innovative new technology/ activity | 2 | Total | 454 | 250 | ✓ |
| | | | ♀ | 147 | 100 | ✓ |
| Outcome | # of POs investing in at least 1 innovative new technology/ activity | 2 | | **1,970** | *400* | ✓ |
| Outcome | # of multi-year contracts between POs and companies (suppliers/ buyers) | 2 | | **114** | *100* | ✓ |
| Outcome | # of BSSs embedded in cost-structure of the value chain | 2 | | **55** | *25* | ✓ |
| Output | # of BoP pilots implemented (ongoing or executed) | 3 | | **25** | *20* | ✓ |
| Outcome | # of new, innovative ways of marketing products to BoP markets (designed and successfully introduced) | 3 | | **43** | *10* | ✓ |

Source: SEO Amsterdam Economics, based on 2SCALE monitoring and evaluation data (2012-2017).

# 3 Partnership selection

*This chapter discusses the ways in which 2SCALE has built up its portfolio of 53 public-private partnership, via an initial brokering process (2012-2014) and a revised strategy (2015-2017).*

## 3.1 Brokering process (2012-2014)

**Brokering process**

At the start of the project in 2012, 2SCALE's main objective was to start brokering public-private partnerships in order to create *"a portfolio of 500 robust and viable agribusiness clusters (ABCs) and value chains (VCs) in nine countries in Sub-Saharan Africa, supplying food to regional, national and local markets and BoP consumers."* The brokering process consisted of roughly five steps (2012 2SCALE annual report):

1. Scout opportunities that fit 2SCALE's portfolio.
2. Asses strategies and stakes of agro-food enterprises.
3. Create awareness and showcase opportunities to engage with potential partners.
4. Matchmaking between Large Scale Enterprises (LSEs), SMEs and Agribusiness Clusters (ABCs).
5. Develop one of the two types of public private partnerships (PPPs). The first type is a value chain PPP (VC PPP) which governs the partnership with a LSE which has no direct physical presence at the grassroots. A VC PPP enables several ABCs to develop. The second type is called Agribusiness Cluster PPPs (ABC PPPs) govern cooperation between local business champions and smallholder farmer groups/cooperatives.

IFDC was selected to coordinate the brokering process abroad. In order to broker new partnerships, IFDC kept close contact with Dutch embassies and development agencies, participated in agro-trade events, upheld a presence at online platforms and used their existing professional network.

BoP Inc was selected to coordinate the brokering process in the Netherlands. Their strategy was threefold, focusing on the government, NGOs, and business. 2SCALE worked with RVO (formerly known as 'Agentschap NL') to develop innovative business strategies in target countries.[19] Social partners included MVO NL and NGOs that raised awareness to accelerate collaboration. Within the private sector, cooperation was sought with platform organisations, such as the Netherlands Africa Business Council (NABC) in 2012 and 2015, and the Confederation of Dutch Industry and Employers (VNO NCW) in 2014. Additionally, BoP Inc. created awareness of 2SCALE by organizing a business meeting in 2013 (that was opened by Minister Ploumen and attended by representatives of 48 companies) and a session at the Africa Works Conference in Leiden. There were also several engagements with the management of the Topsectors Agri-Food

[19] 2SCALE Annual report (2012)

and Horticulture, and meetings with relevant sector organizations such as NAO/NIVAP, Nevedi and Greenport Holland International.

**Challenges and lessons learned during the brokering phase**

On the basis of 2SCALE documentation (annual reports, work plans and presentations) and interviews, the following challenges and lessons were identified:

- **Management.** A constant challenge for 2SCALE was ensuring smooth cooperation between 2SCALE staff in the Netherlands and the various target countries. This includes the collaboration between IFDC, BoP Inc and ICRA, as well as the locally stationed partnership coordinators who played a central role in the success of the partnerships. The division of labour between IFDC and BoP Inc in brokering was not always clear and sometimes proved to be a challenge. In order to improve the brokering process, 2SCALE planned to implement a database, called salesforce, that provided information on potential partners. However, pilots proved this to be unsuccessful in the African context.
- **Fewer partnerships than expected.** The establishment of PPPs was not as successful as was initially expected. This was partly the result of external factors outside 2SCALE's scope, such as changed market conditions, and partly because 2SCALE initially seemed to have targeted the 'wrong' companies (for example, companies that were too small to effectively partner up with African agribusiness stakeholders, or the activities of which were not in line with 2SCALE initiatives). 2SCALE also had to compete with other PPP programs such as FDOV, which were seen by many as "easier to get" (see Appendix B), and 2SCALE did not always clearly explain its value added to private partners.
- **Dutch multinationals.** While it was not a formal goal, a special effort was made to motivate Dutch multinationals to set up partnerships. Through business meetings, a few dozen were initially interested and ultimately four of these set up actual partnerships. These four (Heineken, Friesland Campina, East-West seeds and Agrico) were already active in Africa and were looking for ways to scale up their activities. It appears that 2SCALE was not successful in attracting Dutch multinationals that were not already active in Africa, although it did attract a number of Dutch SMEs at a later stage.
- **Private sector contributions.** During the brokering phase, there was ambiguity in the definition of 'private sector contributions'. When establishing a PPP, the private company had to co-invest in the project. Potential partners and 2SCALE had different views on what qualifies as co-investment, which prolonged negotiations. In addition, developing the PPP protocol took longer than expected, as aligning visions proved difficult, negotiations with potential partners were challenging, and there was a lack of clear guidelines, as PPPs were a relatively new instrument for MFA.
- **Expectations** of partnerships were not always clear to prospective partners. Some expected the programme to function more like a subsidy instrument. Other partnerships were weakened because of side-selling or were unequal in nature because of differences in capacity and commitment by the respective partners.
- **Sectoral focus.** Following the PAC (project advisory committee) recommendations of 2013, 2SCALE screened the commodity sectors in which the project was already active and which offered the best opportunities to achieve scale and impact on household incomes. Four sectors were decided upon in consultation with 2SCALE's staff and with an eye on the established portfolio: (1) staple crops, (2) vegetables and fresh produce, (3) oilseeds and soybeans, and (4) animal related products. However, these sectors were defined relatively broadly, so that it is not

clear to what extent this has in fact narrowed 2SCALE's focus or has enabled it to exploit cross-fertilisation between partnerships in a particular commodity group.

## 3.2 Revised strategy 2015-2017

**Mid-term evaluation**

At the end of the brokering phase, a Visitation Committee[20] evaluated the program. The main recommendations by this committee were as follows:

1. **The need for an overarching strategy.** The visitation committee felt a discrepancy between the goals of 2SCALE and the individual partnerships in practice. At the partnership level it was not always clear in which way livelihood improvements for base of the pyramid stakeholders would be realised from the partnership. The committee advised to review the theory of change and strengthen the basis of partnerships for a more strategic choice of key interventions. Cooperation with the Partnership Resource Center was regarded vital to face this challenge.
2. **Partnerships are a means to an end and 2SCALE should not be the lead partner in each partnership.** Instead the committee advised to transfer ownership from 2SCALE to private partners and develop capacity at the level of the partnerships to facilitate this transfer of ownership. The committee also advised to focus capacity building at the level of the partnership managers. Additionally, possible tensions between partners in the partnerships should be made explicit and 2SCALE was advised to add new partners to the partnership when they are needed for the success of the partnership. For example, by adding financing institutions 2SCALE could play a facilitating role in attracting finance, which is considered an important prerequisite for scaling.
3. **Move from brokering new partnerships to deepening the existing partnerships in order to increase their impact.** Deepening is understood as the process of strengthening the individual and collective capacities of all relevant actors to develop, support and design an inclusive and competitive strategy. After the deepening phase comes the scaling phase. Scaling refers to an increase in the number of smallholder farmers, SMEs and consumers involved. Scaling should be determined by the lead partners (after ownership has been transferred). 2SCALE can facilitate in this but should not be the only one initiating this. Once ownerships have been transferred and private partners have generated scale 2SCALE should have a viable exit strategy in place to exit the partnership.
4. **Reduce operational tensions between the three implementing partners and their respective roles.** BoP Inc was considered to lack the necessary network in Africa to effectively broker partnerships with Dutch companies which might be better left to IFDC. Instead, BoP Inc was recommended to build a stronger presence at the local level and broaden BoP pilots from new products to also include innovations in distribution and marketing. ICRA meanwhile was advised to acquaint itself more with working with the private sector (something it was relatively unfamiliar with), to more actively support partnership managers, and to extend its capacity building activities to other stakeholders in the partnership.
5. **Recognise the differences between partnerships and clarify in which ways each partnership is able to empower farmers and include weaker partners.** Furthermore, the committee considered it important that "individual partnerships decide what measures they

[20] Consisting of Jim Tanburn, Willem Würdemann, Antionette Gosses, Peter Knorringa en Silva Deželan

want to use for monitoring progress and to check whether the partnership moves into the right direction. Identifying two or three smart indicators that will be measured across the programme will in effect set the priorities of each partnership."

**Following the visitation committee report, 2SCALE made the following changes:**

1. The overall strategic goal was revised as follows: "*To deepen and scale at least 50 public-private partnerships in selected high-potential sectors (product groups) in nine (9) focus countries in Africa, which together will offer significant and durable opportunity to at least 500,000 smallholder farmers (of which 40% will be women) to improve their livelihoods and to at least 2,500 SMEs (of which 40% will be female-headed) to improve sales and provide jobs, while sustainably supplying food to regional, national and local markets, of which 40% will be BoP consumers.*"
2. As part of the new strategy, it was decided to provide more support to each individual partnership and focus on making the governance structure of partnerships more inclusive (transfer ownership).
3. The roles of the three implementing partners were redefined:
   - IFDC took the lead in overall management, communications and monitoring and more specifically deepening of partnerships by supporting partnerships with an intensified focus on partnering with financial institutions to ensure more access to finance in the value chain.
   - BoPInc intensified its presence in the field and supported innovation in BoP marketing and distribution models in addition to developing new BoP products. Examples include redesigned low-cost packaging and distribution of pineapple juice to BoP consumers using push bikes and soya enriched maize flour as a high protein product for breastfeeding mothers.
   - ICRA took the lead in local capacity strengthening to promote level playing fields, with more focus on the formation of agribusiness clusters (ABCs) in order to increase farmers' access to services, innovative ability and bargaining opportunities.[21]
   - The Partnership Resource Centre was tasked with leading the action-research programme meant to develop and refine theories of change, analyzing and classifying partnerships based on their business models and develop deepening pathways.
4. 2SCALE kept experiencing challenges in partnership formation. Partnerships typically started with a lead partner initiating a project (together with 2SCALE). Over time more stakeholders are encouraged to join, this often leads to new discussions regarding the direction the partnership is going. The lead partner may experience a loss of control. Different partners may have different or even opposing goals. Strengthening the capacities of farmers will lead to higher productivity but might increase their bargaining position which is not always in the interest of the lead partner buying sourcing produce. Besides paying more attention to the composition and governance of the partnership, issues like these remain a challenge.
5. To reflect the focus on deepening existing partnerships rather than brokering new ones, programme targets were adjusted to reach 500.000 instead of 1,115,000 smallholder farmers (SHFs)[22] and to 2,500 instead of 4,000 SMEs. Efforts to quantify private sector contributions were limited to those that were relatively easy to determine. Additionally, it was decided to remove some targets on SHF and SME productivity increases, as well as quantitative targets

[21] To some extent, this approach was based on the previous project (1000+) and the CASE approach that IFDC developed in the course of 1000+.

[22] The appraisal committee for the new strategy noted that effectively reaching 500.000 SHFs (direct beneficiaries) with the financial resources made available by MFA was already quite an achievement.

on the amount of food products produced and made available to BoP consumers. However, the remaining targets at programme level were not limited to 'two or three smart indicators" as suggested by the Visitation Committee. Instead, a monitoring and evaluation plan with eight output indicators, 18 outcome indicators and four impact indicators was developed and approved by the Ministry of Foreign Affairs.

6. From 2017, 2SCALE focused more on gradually transferring ownership by strengthening partners so as to enable the phasing out of partnerships. It was decided that partnerships for which ownership had been transferred to private sector stakeholders would need to be phased out by 2SCALE in such a way that the partnership could either continue to operate on its own (if successful), or would be disbanded (if unsuccessful). Towards the end of its first phase, 2SCALE assessed all partnerships and identified 15 partnerships that would be continued after 2017, some of which recently developed, versus partnerships that should be phased out in 2017. For partnerships in the latter category, 2SCALE assessed whether they had the potential to either transform by adding new partners, or to replicate the partnership in another country or setting. Chapter 6 further discussing the phasing out strategy.

## 3.3 Portfolio of partnerships

As of end-2017, 2SCALE had established 53 partnerships in nine African countries.[23] While spreading resources equally across the countries was not a target, the partnership portfolio was relatively balanced across the nine countries. Benin and Ghana are best represented with eight partnerships each. Four 2SCALE partnerships are located in Cote d'Ivoire and four in Mozambique, which makes those countries the least represented in the 2SCALE portfolio.[24] However, the final country composition of the portfolio was based on the identification of opportunities at ABC levels and the willingness of companies in ABC-VC partnerships to invest in inclusive business.

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23 During 2012-2014, 2SCALE was also active in Burkina Faso, Niger, Togo, and South Sudan, but had been asked to phase out from the first three as a result of the decision to focus on partner countries. The decision to leave South Sudan had been based on security concerns, and a related lack of progress due to limited capacity private sector. The estimated number of 53 does not include partnerships that were closed – either due to security concerns (e.g. in South Sudan) or because of lack of success (Stevia partnership in Kenya, cassava in Mozambique). See 2SALE Annual report 2017, pg. 5)

24 As the size of the partnerships differ in terms of actors involved, the number of partnerships in a country alone does not provide full information on 2SCALE portfolio.

Table 3-1 In total, 2SCALE supported 53 partnerships during 2012-2017

| Country | Partnerships |
|---|---|
| Benin | 8 |
| Côte d'Ivoire | 4 |
| Ghana | 8 |
| Mali | 6 |
| Nigeria | 7 |
| Kenya | 6 |
| Uganda | 5 |
| Ethiopia | 5 |
| Mozambique | 4 |
| **Total** | **53** |
| ***Target Set*** | **-** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

The distribution of product groups across countries is also reasonably balanced, as at least three product groups are represented in each country. As of mid-2017, there were eight partnerships that focussed on animal production (mainly dairy), 12 on oilseeds (soybeans in particular), 15 on staple crops (sorghum, cassava, rice and others) and 17 on vegetables and fresh produce. In general, about one third of the partnerships fell within the vegetable/fresh produce product group. This is twice as much as for animal production; the product group that is least represented.

The portfolio is also well balanced between partnerships focused at the agribusiness cluster (ABC) level and those that are primarily focused on larger (lead) partners within the value chain (VC). They both account for approximately half the portfolio. Of the VC partnerships, two thirds is focused on the output side, meaning that the lead partners buy output from farmers to process. The other third are so called VC-input partnerships which, for example, supply fertilizer or seeds to farmers as an input for the agricultural production process. Most partnerships focus on the domestic market; only 16% are (partly) aimed at export markets.

The table below lists the partnerships and their summarised characteristics that have been visited as part of this evaluation.

Table 3-2 Six different projects were visited by the SEO evaluation team

| Country | Subsector / partnership | Product group | Lead partner | BoP Pilot | ICRA support | P'ship Model | PSC (€ x1000) |
|---|---|---|---|---|---|---|---|
| Ethiopia | Maize-Dairy/ AKF-FAMILY MILK | Staple-crop related | AKF, FAMILY MILK | ✓ | | VC-OUTPUT | 1,831 |
| Ethiopia | Soya-Maize/ GUTS AGRO | Soy-oilseeds | GUTS AGRO | ✓ | ✓ | VC-OUTPUT | 845 |
| Mali | Rice-parboiled/PO | Staple-crop related | PO | ✓ | | ABC | 29 |
| Mali | East-West Seed International | Fresh and processed vegetables | EWSI | | ✓ | VC-INPUT | 233 |
| Nigeria | Dairy-Milk/ FC WAMCO | Animal prod-related | FC WAMCO | | ✓ | VC-OUTPUT | 4,736 |
| Nigeria | Cassava-syrup/ HEINEKEN | Staple-crop related | HEINEKEN | | ✓ | VC-OUTPUT | 10,568 |

Source: Source: SEO Amsterdam Economics based on 2SCALE monitoring data

This selection of partnerships provides a good mix of different product groups (all four are represented), size of partners (LSE, SME, ABC), BoP pilots and ICRA support. It also gives a good mix in terms of private sector contributions (PSC), covering both partnerships with very limited PSC (at least in terms of monetised contributions) and partnerships with a large PSC, such as FC WAMCO and Heineken. More information on partnership selection is given in the Phase I Report.

The following partnerships were included in the AIR/Dalberg impact studies (see Appendix C):

| Country | Subsector (partnership) | Product group | Partnership type |
|---|---|---|---|
| Kenya | Sorghum (SHALEM) | Staple-crop related | VC-OUTPUT |
| Uganda | Cotton (NYAKATONZI) | Soy-oilseeds | VC-INPUT-OUTPUT |
| Ghana | Soybeans (processed) | Soy-oilseeds | ABC |
| Benin | Vegetables (EWIT) | Fresh and processed vegetables | VC-INPUT |
| Mali | Maize (SONAF) | Staple-crop related | VC-OUTPUT |

# 4 Effectiveness

*This chapter assesses the effectiveness of 2SCALE, using available evidence from four key sources: the 2SCALE monitoring and evaluation data, the impact assessments conducted by AIR/Dalberg, the case study projects visited by SEO in the context of our Phase 1 report, and other desk research. We triangulate these different sources so as to assess step by step, for each impact pathway, the extent to which the posited causal linkages are likely to hold and are likely to be attributable to 2SCALE.*

## 4.1 Supply-side pathway

We assess 2SCALE's work with smallholder farmers (SHFs) under the heading of the supply-side pathway, as it is mostly focused on improving agricultural production and incomes. However, there are many links with the value chain pathway, which is discussed in section 4.2.

Table 4-1 Most but not all supply-side indicators were met.

| Level | Indicator | Path-way | | Actuals | *Target* |
|---|---|---|---|---|---|
| Output | # of SHFs reached (i.e., benefitting from the PPP) | 1 | Total | **584,939** | *500,000* |
| | | | ♀ | **36%** | *40%* |
| Outcome | # of SHFs with increased financing | 1 | Total | **51,488** | *250,000* |
| | | | ♀ | **47%** | *40%* |
| Outcome | # of SHFs investing in at least one innovative new technology/ activity | 1 | Total | **458,608** | *400,000* |
| | | | ♀ | **33%** | *40%* |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017).

### 4.1.1 Supply-side outputs

**SHFs reached**

During the period 2012-2017, an estimated total of 584,939 smallholder farmers were 'reached', which was well above the target of 500,000. The definition of 'reached' used by 2SCALE is 'benefitting from the PPP'. This has been defined slightly differently for the various types of partnerships:

- For partnerships with a clear lead firm (buyer), it means those farmers that are supplying products to this lead partner (either directly or through dedicated agents or brokers).
- For the (input-related) VC partnerships, e.g., with seed houses as lead partner, it mainly measures the number of farmers that are using improved seeds, or at least adopt better practices, and have become part of agribusiness clusters that are supported by 2SCALE.
- For partnerships that start with local/ rural-level processors, or producer organisations, it simply measures the number of farmers that participate in collective activities (as part of the agribusiness clusters supported by 2SCALE, through BSSs/ coaches).

The distribution of SHFs reached across countries was somewhat uneven. 2SCALE was particularly active in Kenya, Ethiopia, Mali, while it was relatively less active in Mozambique Côte d'Ivoire. The latter is logical, as this country was added later.

Table 4-2 2SCALE exceeded the target for total SHFs reached, and nearly met the gender target.

| Country | # of SHFs reached | # of female SHFs reached | % |
|---|---|---|---|
| Benin | 60,781 | 19,907 | 33% |
| Côte d'Ivoire | 7,270 | 4,360 | 60% |
| Ghana | 59,158 | 21,166 | 36% |
| Mali | 93,837 | 31,831 | 34% |
| Nigeria | 76,470 | 26,914 | 35% |
| Kenya | 96,055 | 40,737 | 42% |
| Uganda | 80,140 | 38,939 | 49% |
| Ethiopia | 91,030 | 20,235 | 22% |
| Mozambique | 20,198 | 6055 | 30% |
| **Total** | **584,939** | **210,144** | **36%** |
| ***Target (adjusted)*** | ***500,000*** | ***200,000*** | ***40%*** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### Female SHFs reached

The female SHF target was not met in percentage terms, but was met in nominal terms. Around 36% of SHFs reached were women, which is below the target of 40%. However, more than 200,000 female farmers were reached, which is more than 40% of the targeted 500,000.[25] Note that a 'female farmer' appears to have been defined as a farm household in which women control a commodity. For example, in Nigeria the Fulani men would be considered heads of households but the Fulani women managed dairy production as a commercial enterprise and retained control over the milk revenue. The concept of 'female-headed farmer households' turned out to be too constraining for most African countries, as this was often only the case for households headed by widows.

### Financial and informational services

Financial and informational services made available refer to 2SCALE activities that assessed demand for financial or informational services, or coaching on these topics within ABC clusters or the value chain of the partnership. Since these services were provided to both SHFs and VC actors, the results are discussed in the next section under the PSD pathway. Examples of financial services provided to SHFs are assistance with setting up a savings and loan system at the level of the village, or pilots to combine microcredit with a form of crop insurance. An example of an informational service for SHFs is the DigiCow app used by farmers supplying Feska Dairies in Kenya, can be used to access information and record transactions on milk production and sales. The app runs on an android phone.

25 In addition, 2SCALE notes that "beyond these numbers, 2SCALE reaches many more women: it supports also women who are hardly acknowledged or rewarded for their work, such as unpaid family labour or women farmers registered under the name of their husband." (See the 2SCALE thematic paper on "Gender Mainstreaming in Agribusiness").

### 4.1.2 Short-term supply-side outcomes

**Improved SHF practices**

The impact assessments conducted by AIR/Dalberg reported some positive evidence that 2SCALE improved agricultural practices. The practices that farmers were asked about in baseline and enline surveys included crop rotation, early planting, intercropping, removal of plant residue, planting resistant varieties, use of certified planting material, crop monitoring, and weeding.

Overall, AIR/Dalberg concluded that "some of the 2SCALE partnerships assessed have the potential to change the behaviour of farmers." (Bonilla and Rai 2018, p. 75). The statistical results per country were as follows:

- For the Shalem partnership in Kenya, AIR/Dalberg was able to find statistically significant increases in the use of cultural practices by 2SCALE farmers, which they believed "could be linked" to the training received from the farmer field schools (Bonilla and Rai 2018, p. 30).
- For the EWIT partnership in Benin, AIR/Dalberg found that that beneficiary farmers were more likely to adopt some positive practices presumably as a result of the training received. In both Benin (EWIT) and Uganda (Nyakatonzi), they found an increase in the use of some positive agricultural practices and a decrease in farm-level challenges; specifically, they saw a decrease in the likelihood that a farm was affected by weeds, pests or diseases.
- For the SONAF partnership in Mali, the results show some mixed results with farmers adopting some positive cultural practices, while being subject to a higher likelihood of being affected by insects, fungus, or diseases.
- For the Ghana partnership, a true comparison between treatment and control groups could not be made, since – according to 2SCALE – the programme was active across both treatment and control groups from 2013. In addition, the focus shifted from 2015 towards processing/ marketing of soy-based products through local processors and an SME, not directly related to target ABCs.

**Increased innovative investments by SHFs**

2SCALE collected monitoring data on the number of SHFs that invested in at least one innovative new technology/ activity. Based on their monitoring data, it appears that the target was met, although the share of female SHFs that invested was 33% rather than the targeted 40%.

Table 4-3 The target for innovative investments was met for SHFs, but not for female SHFs.

| **Country** | **# of SHFs investing in at least one innovative new technology/ activity** |
|---|---|
| Benin | 42,666 |
| Côte d'Ivoire | 4,091 |
| Ghana | 46,332 |
| Mali | 83,580 |
| Nigeria | 68,333 |
| Kenya | 71,741 |
| Uganda | 42,527 |
| Ethiopia | 88,522 |
| Mozambique | 10,816 |
| **Total** | **458,608** |
| *Target* | *400,000* |
| **Females** | **151,584** |
| *Target Females* | *160,000* |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### Increased access to finance for SHFs

It is interesting to note that, while the number of SHFs that made innovative investments far exceeded the target, the number of SHFs that obtained access to finance fell short of target.

Table 4-4 Access to finance targets were not met for SHFs

| | **# of SHFs that improved access to finance, and total finance attracted** | | | |
|---|---|---|---|---|
| | **Male SHFs** | **Female SHFs** | **Total** | **Total finance attracted by SHFs (USD)** |
| Benin | 2344 | 346 | 2690 | 2,052,247 |
| Ghana | 2,319 | 1,407 | 3,726 | 243,698 |
| Mali | 3,233 | 2,757 | 5,990 | 850,097 |
| Nigeria | 1,469 | 675 | 2,144 | 1,842,386 |
| Kenya | 8,437 | 9,998 | 18,435 | 2,186,943 |
| Uganda | 7,500 | 8,066 | 15,566 | 274,109 |
| Ethiopia | 1241 | 703 | 1,944 | 1,640,000 |
| Mozambique | 503 | 490 | 993 | 139,807 |
| **Total** | **27,046** | **24,442** | **51,488** | **9,229,286** |
| *Target* | *150,000* | *100,000* | *250,000* | - |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017).

### 4.1.3 Medium-term supply-side outcomes

**Increased SHF production**

While there are various indications and examples that SHF production has increased in many partnerships, it is not possible to rigorously attribute these reported increases to 2SCALE without the ability to compare the results to a control group or benchmark. The impact assessments by AIR/Dalberg aimed to do so by comparing the production and productivity of 2SCALE farmers to those of control groups, but this did not result in clear statistical evidence for the impact of 2SCALE on production and productivity.

Based on comparisons between baseline (2015) and endline (2017) survey estimates for both treatment and control groups, the AIR/Dalberg study found some positive, some insignificant, and some negative effects on the quantity of the total harvest, value of the total harvest, or gross margins:

- In Kenya, sorghum farmers that participated in the 2SCALE partnership with Shalem showed statistically significant increases in sorghum production, even after controlling for other factors. In particular, 2SCALE sorghum farmers reported highly significant increases in the quantity of the total sorghum harvest (90%), but not in the diversity of production.
- In the selected partnerships in Uganda, Benin, and Mali, little evidence was found for statistically significant changes in the key production indicators for 2SCALE farmers.[26]
- In the soybean partnership in Ghana, there were statistically significant *decreases* in the quantity and value of the total harvest and the gross margins. However, this finding needs to be interpreted with caution because of the lack of a true baseline: the program was active across both target and control groups from 2013. Another evaluation conducted by WUR/LEI did not find much evidence of changes at the farm level for Ghana.

Bonilla and Rai (2018, p. 73) mention a range of factors that could explain these mixed results:

1. Two years is a relatively short period for a programme like 2SCALE to start producing effects on production and productivity. Moreover, some of the partnerships had implementation delays, which further shortened the period over which impact could be observed. We agree that more time may therefore be needed before the full impact can be measured.
2. For the Nyakatonzi partnership in Uganda, a key activity (establishment of an oil mill) had been significantly delayed, which could explain the null findings. In particular, it took Nyakatonzi much longer than expected to organise additional finance, and to select, purchase, and install the equipment. As of March 2018, the factory still needed to go through some test-runs and fine-tuning before it would be fully operational. Moreover, the surveys focused entirely on cotton as the target commodity, whereas the intention of the program was to support diversification, by fostering cotton, soybean and sunflower production.
3. For the EWIT partnership in Benin, the lack of change in production values could have been due to the collapse of the Nigerian market in 2016 (to which many 2SCALE farmers appeared to supply), stemming from the devaluation of the Nigerian currency.

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[26] According to 2SCALE management, this can be explained for Uganda by the fact that this partnership focused more on on investment planning, purchase and establishment of the oil mill factory; including training of anticipated management (financial/ business planning). In Mali, the lack of significant findings could be due to the fact that the control group was not a proper control group (growing white maize, a well-established crop, while the treatment group was growing yellow maize, a new crop).

4. For the SONAF partnership in Mali, the lack of evidence for increased production may have been due to the nature of the beneficiary farmers included in the study. The farmers in the SONAF treatment group came from two of the larger producer organizations (PO) that allegedly had difficulty reimbursing the credit for inputs obtained, and also experienced governance challenges.
5. The lack of findings for the selected partnerships in Benin and Mali could be due to the fact that a surprisingly large fraction of treatment farmers reported selling all the crop independently in those countries (Figure 7). This suggests that established relationships with clients is important for programme success.

### 4.1.4 Long-term supply-side impact

There is no strong evidence (yet) for a positive long-term impact of 2SCALE activities on farmer incomes. The monitoring data do not provide sufficiently reliable information on farmer incomes, and the AIR/Dalberg impact assessment did not find statistically significant results on income. Neverthess, Bonilla and Rai (2018, p. 73) conclude that “Despite the mixed results, there is positive evidence that 2SCALE increases income through the various activities the programme supports.” This conclusion is not based on quantitative evidence, but seems to be corroborated through qualitative evidence based on case studies, interviews, and 2SCALE documentation.

Bonilla and Rai (2018) also note that “the study design does not allow us to determine the degree to which each programme intervention contributes to the overall impact” (p. 30). This is in part because two years is too short to observe the full impact, and in part because the sample size was too small to statistically identify the effect of different programme interventions. Nevertheless, we agree with their conclusion that “if these changes in intermediate outcomes are sustained over time, the different partnerships may experience longer-run impacts on key final outcomes such as yields and income.” (p. 75).

The impact on consumption and food security is discussed under the demand-side pathway (Section 4.4).

## 4.2 PSD pathway

| Level | Indicator | Path-way | | Actuals | *Target* |
|---|---|---|---|---|---|
| Output | # of local SMEs strengthened (trained, coached) | 2 | Total | **1,006** | *1,000* |
| | | | ♀ | **30%** | *40%* |
| Output | # of POs strengthened (trained, coached) – beyond organizing production | 2 | | **2,083** | *400* |
| Output | # of BSSs strengthened, providing professional services to ABCs | 2 | | **165** | *50* |
| Output | # of back- and forward SMEs strengthened (trained, coached) | 2 | Total | **500** | *1,000* |
| | | | ♀ | **35%** | *40%* |
| Output | # of financial services made available within the PPP portfolio | 1+2 | | **118** | *25* |
| Output | # of informational services made available within PPP portfolio | 1+2 | | **165** | *15* |
| Outcome | USD value of additional financing raised by target ABCs and VCs | 1+2 | | **39.9 mln** | *n.a.* |
| Outcome | # of SMEs with increased financing | 2 | Total | **27** | *250* |
| | | | ♀ | n.a. | *100* |
| Outcome | # of local SMEs investing in at least one innovative new technology/ activity | 2 | Total | 454 | 250 |
| | | | ♀ | 147 | 100 |
| Outcome | # of POs investing in at least 1 innovative new technology/ activity | 2 | | **1,970** | *400* |
| Outcome | # of multi-year contracts between POs and companies (suppliers/ buyers) | 2 | | **114** | *100* |
| Outcome | # of BSSs embedded in cost-structure of the value chain | 2 | | **55** | *25* |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### 4.2.1 PSD outputs

The key PSD output target was to ‘strengthen’ 2,500 SMEs. The definition of ‘strengthened’ SMEs includes all SMEs (including vertically integrating POs) that were trained (e.g., in organisational strategy, financial or business skills) or had benefitted from consulting or other advisory services (including financial intermediation, business planning, processing techniques) organised by the partnership. Technically, this was therefore an output indicator rather than outcome indicator, as the amount of training or advisory services provided was under the control of the partnership. While some evaluations of training programmes may have been conducted, we did not receive any evidence on whether the entrepeneurs that were trained actually strengthened their skills or performance.

The goal of 2,500 SMEs was sub-divided into three subgoals:

- 1,000 local SMEs (i.e., SMEs in the 'proximity' of the smallholder farmers that are in the partnership, i.e., part of the agribusiness cluster);
- 1,000 non-local SMEs, also called 'backward and forward SMEs' (i.e., SMEs that are further up- or downward in the target value chains, e.g., input distributors further away from the agribusiness clusters, retailers/distributors close to urban markets and not part of any agribusiness cluster);
- 500 vertically integrating producer organisations (POs).

As the summary table below indicates, the overall output target for total SMEs (including POs) was met by the end of 2017. While the sub-target referring to the number of non-local SMEs was not met, this was offset by significant overperformance of the target for POs.

While the total number of local SMEs trained directly (within PPPs) was met, the share of female-headed SMEs among them was 30%, well below the targeted 40%. As discussed below, however, this is still above the benchmark for the region, apart from Benin.

Table 4-5 Nearly all PSD output targets were met, except for back- and forward SMEs.

| Country | # of POs strengthened | # of local SMEs strengthened | # of back- and forward SMEs strengthened | Total # of SMEs and POs streng-thened | # of BSSs streng-thened |
|---|---|---|---|---|---|
| Benin | 141 | 305 | 50 | 496 | 30 |
| Côte d'Ivoire | 162 | 23 | 0 | 185 | 5 |
| Ghana | 273 | 167 | 63 | 503 | 16 |
| Mali | 407 | 150 | 19 | 576 | 34 |
| Nigeria | 211 | 147 | 28 | 386 | 12 |
| Kenya | 535 | 141 | 92 | 768 | 29 |
| Uganda | 138 | 30 | 15 | 183 | 18 |
| Ethiopia | 146 | 15 | 218 | 379 | 15 |
| Mozambique | 70 | 28 | 15 | 113 | 6 |
| **Total** | **2,083** | **1,006** | **500** | **3,589** | **165** |
| ***Target set*** | ***500*** | ***1,000*** | ***1,000*** | ***2,500*** | ***50*** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### Strengthened Producer Organisations (POs)

Over the past years, 2SCALE partners oriented their capacity strengthening activities more towards producer organisations (that are taking up additional roles, e.g., in post-harvest handling, storage, grading/cleaning, collective marketing, and purchases of inputs). The number of POs 'strengthened' therefore far exceeded the target. The term 'strengthening' was defined here as "trained, coached – beyond organising production", so this is technically again an output indicator rather than outcome indicator. While the target had been to 'strengthen' 500 POs, in practice 2SCALE reported that 2,083 producer groups and cooperatives had "improved their technical and business skills and are engaging in collective marketing or purchase." (2SCALE Annual report, p. 2) The latter sounds more like a statement about outcomes rather than output,

**Strengthened SMEs (local and non-local)**

Over the course of the programme, 2SCALE trained or coached a total of 1,006 local SMEs that directly participated in 2SCALE PPPs (as part of agribusiness clusters). This was just above the target of 1,000. An additional 500 'back- and forward SMEs' were 'strengthened indirectly.' This was only half of the 1,000 targeted. According to the 2SCALE management team, the reason for this lower number of non-local SMEs is that SMEs further up- or down in the value chain are often bigger, and thus fewer in number (with the exception of some of the small-scale distributors that 2SCALE has been working with, like Guts Agro in Ethiopia or Promofruits in Benin, which are micro-entrepreneurs that can be numerous). In other words, 2SCALE considers the target to have been set too high, with hindsight.

**Strengthened female-headed SMEs (local and non-local)**

A total of 476 of SME partners that received training or coaching were female-headed or female-owned SMEs. This was above the target of 400, but as a percentage, it was around 32%, so below the target of 40%. For local SMEs, the percentage was 30% and for non-local SMEs, 35% were female-headed.

Table 4-6 2SCALE outperformed gender benchmarks in many, but not all countries

| Country | SMEs trained/coached by 2SCALE | | | World Bank benchmarks | |
|---|---|---|---|---|---|
| | # of SMEs strengthened (local+non-local) | # of female-headed SMEs strengthened (local+non-local) | % | Top manager is female | Female participation in ownership |
| Benin | 355 | 167 | 47% | 48% | 44% |
| Côte d'Ivoire | 23 | 10 | 43% | 14% | 24% |
| Ghana | 230 | 50 | 22% | 17% | 34% |
| Mali | 169 | 51 | 30% | 13% | 13% |
| Nigeria | 175 | 35 | 20% | 16% | 17% |
| Kenya | 233 | 55 | 24% | 18% | 50% |
| Uganda | 45 | 5 | 11% | 17% | 27% |
| Ethiopia | 233 | 94 | 40% | 4% | 33% |
| Mozambique | 43 | 9 | 21% | - | 20% |
| **Total** | **1506** | **476** | **32%** | | |
| ***Target*** | ***2000*** | ***400*** | ***40%*** | | |

Source: SEO Amsterdam Economics, based on 2SCALE M&E data (2012-2017) and the World Bank.

At first sight, Benin appears to have been a success case on the gender front, as it was responsible for 42% of all female-headed SMEs strengthened by 2SCALE. This is shown inTable 4.6, which shows the numbers and percentages of female-headed SMEs (both local and non-local) for each country. In terms of absolute numbers, most female-headed SMEs were strengthened in Benin (167), Ethiopia (94), and Kenya (55). In terms of percentages, the top country was again Benin (47%), followed by Côte d'Ivoire (43%) and Ethiopia (40).

However, whether or not the percentage of female-headed SMEs that were trained was in fact large should be judged not in absolute terms, but relatively to the share of female-headed or female-owned SMEs that generally exist in the country. The right part of the table therefore displays benchmarks from the World Bank. The first column indicates the percentage of small firms (5-19 employees) in which the top manager of the SME is female. This benchmark directly corresponds to the 2SCALE definition of female-headed SMEs. Female ownership refers to the percentage of small firms (5-19 employees) with female participation in ownership.

Judged relative to these benchmarks, it turns out that the high share of female-headed SMEs that 2SCALE worked with in Benin cannot necessarily be considered a success on the gender front, given that it is roughly equal to the average share of female-headed SMEs in the country. Rather, 2SCALE appears to have achieved most in Côte d'Ivoire, Mali, and Ethiopia, where the shares of female-headed SMEs were well above the national benchmark.

This benchmarking exercise shows that using a 40% target for strengthening female-headed SMEs may not be equally ambitious in all countries. It was very ambitious for most countries, but not at all ambitious for Benin. The overall portfolio target of 40% may even have unintentionally encouraged SCALE to work disproportionally with female-headed SMEs in Benin, as these were more prominent and therefore easier to find in Benin. Going forward, we would recommend to use country-specific benchmarks based on the average national, regional, or sectoral share of female-headed SMEs (subject to reliability benchmark data availability). Even partnership-specific targets could be considered.

**Strengthened Business Support Services (BSSs)**
One way in which 2SCALE has strengthened its local presence and coordination of interventions within partnerships has been through BSSs. BSSs provide support services to farmers, processors and other agriculturally linked enterprises. Such services include providing information and advice, assistance in business planning, marketing and negotiation, and facilitation research and business-to-business linkages. The 2SCALE team has experimented with different types of BSSs, varying from ‘external’ support by NGOs, consulting firms or 2SCALE staff to ‘internal’ coaching by producer organisations or the lead partner itself.

As Table 4.7 shows, the number of BSSs strengthened (165) far outpaced the targeted number (50), by more than three times. While these services were typically paid at least in part by 2SCALE, the longer-term goal was to ‘embed’ them in the PPP, i.e., to have their costs eventually incorporated in the PPP cost structure. The monitoring data suggests that this goal was achieved as well, as shown in the table and discussed further under ‘long-term PSD impact’ below.

Table 4-7 2SCALE was successful in strengthening and 'embedding' Business Support Services

| Country | # of BSSs strengthened | # of BSSs embedded |
|---|---|---|
| Benin | 30 | 13 |
| Côte d'Ivoire | 5 | 0 |
| Ghana | 16 | 3 |
| Mali | 34 | 5 |
| Nigeria | 12 | 1 |
| Kenya | 29 | 9 |
| Uganda | 18 | 13 |
| Ethiopia | 15 | 11 |
| Mozambique | 6 | 0 |
| **Total** | **165** | **55** |
| ***Target set*** | ***50*** | ***25*** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

**Financial and informational services provided to VC actors**

It appears that 2SCALE provided financial and informational services both to SHFs (e.g., assistance with writing business plans, access to a mobile phone app) and to other VC actors including POs, SMEs, and financial institutions. In the ToC, we put these under the supply-side pathway, but these activities are part of the PSD pathway as well, as part of "VC actors trained" and "VC actors linked." 2SCALE itself considers its various to improve access to finance as part of 'support to the enabling environment', but we would consider this part of private sector development, since most financial institutions are private sector institutions.

As Table 4.8 shows, 2 SCALE far exceeded the targets on financial and informational services provided, but the distribution across countries was somewhat uneven. In particular, the financial and informational services that were made available were clustered in a few key countries (Benin, Ghana, Nigeria, Kenya, and Uganda). Most services were provided in Benin, which also had mostly partnerships (together with Ghana). Relatively few services were provided in Mozambique, Ethiopia, and Côte d'Ivoire.

Examples of financial services are assistance provided to farmer groups and companies to obtain credit for operations or capital investment, and with brokering linkages with banks and microfinance providers. For both SHFs and SMEs, activities includes financial training and assistance with developing business plans and loan applications. For financial institutions, activities included technical support for registration and governance procedures (fledgling institutions) and assistance to develop new financial products tailored to a cluster's needs (larger, established institutions). 2SCALE also covered informal sources of finance, helping to create savings and loans groups and other financial channels. In 2018, 2SCALE planned to evaluate different strategies to strengthen its capacity in financial intermediation, either by bringing on board a new specialized consortium member, or through specific dedicated consultancies.

Table 4-8 Financial and informational services provided far exceeded targets

| **Country** | **Partnerships** | **# financial services made available** | **# informational services made available** |
|---|---|---|---|
| Benin | 8 | 38 | 34 |
| Côte d'Ivoire | 4 | 3 | 9 |
| Ghana | 8 | 12 | 21 |
| Mali | 6 | 14 | 7 |
| Nigeria | 7 | 2 | 22 |
| Kenya | 6 | 23 | 24 |
| Uganda | 5 | 23 | 27 |
| Ethiopia | 5 | 1 | 18 |
| Mozambique | 4 | 2 | 3 |
| **Total** | **53** | **118** | **165** |
| ***Target Set*** | **-** | ***25*** | ***15*** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### 4.2.2 Short-term PSD outcomes

**Improved value chain linkages**

Regarding value chain linkages or 'network building', there is ample qualitative evidence that 2SCALE helped to establish many linkages between POs and 'backward' SMEs that provided inputs or services to farmers. For example, 2SCALE linked soybean youth cooperatives in Nigeria with the company Hello Tractor that provides tractor services through a collaborative platform. In Ghana, 2SCALE helped to connect about 200 soybean farmers (50% women) to a multipurpose manual planter, through demonstrations and training, as well as through linkages with an equipment distributor, and identified six farmers that were willing to offer planting services to other farmers for a small fee.[27]

The quantitative impact assessment estimates by AIR/Dalberg provided mixed evidence that POs facilitated access to various aspects of production (inputs, machinery, credit, marketing). While 2SCALE farmers at Nyakatonzi in Uganda were significantly more likely to report that their group facilitated access to credit and processing, they were less likely to report that their group facilitated access to machinery, possibly due to a delay in establishing the oil mill. The impact estimates for the soybean partnership in Ghana were more favourable, in that there was an increased likelihood that 2SCALE-supported POs facilitated access to seeds, fertiliser, machinery, professional sprayers, credit, and marketing. However, the opposite effect was documented for EWIT in Benin, where 2SCALE farmers reported a *decrease* in the likelihood of access to various production aspects. The results for these measures were not statistically significant for SONAF in Mali, and producer groups were not relevant for the Shalem partnership surveyed in Kenya. (Bonilla and Rai 2018, p. 74).

Helping farmers to negotiate multi-year contracts is another form of strengthening value chain linkages. According to the 2SCALE Annual Report 2017 (p. 5), 2SCALE activities to improve the

27 2SCALE Annual Report 2018, p. 37.

bargaining power and networks of farmers enabled them to negotiate multi-year contracts with buyers/aggregators on more favorable terms.

However, the quantitative impact assessments conducted by AIR/Dalberg again yielded mixed results with respect to building long-term client relationships. On the one hand, 2SCALE-supported sorghum farmers in Kenya were more likely to report that they would sell to their clients again in the future (presumably to Shalem, or its client East African Breweries Limited). On the other hand, the number of clients to which 2SCALE farmers sold decreased for the EWIT partnership in Benin and was not statistically significant in Mali. With respect to Benin, 2SCALE noted that the term "client" as a buyer of vegetables is confusing, as the PPP started with the organisation of the upward part of vegetable supply chains, and does not (yet) include major buyers as partners (and service providers). Also, vegetable farmers in Benin may have suffered from the the collapse of the Nigerian market due to a significant devaluation of the Nigerian currency in 2016.

Across all five partnerships included in the AIR/Dalberg surveys, more than 70 percent of farmers selling to clients reported to be willing to sell to clients again in the future. Some of the main reasons for doing so were to receive agricultural training, receive higher prices, reduce the risk of not selling, produce a higher quality or healthier crop, and achieve community with other farmers. However, farmers that would not sell to clients in the future commonly reported that they would not sell to get higher prices, which corresponds to the observation that low prices or price fluctuations were a more commonly reported problems in selling to clients. (Bonilla and Rai 2018, p. 74).

**Increased access to finance**

Table 4.8 indicates the number of SMEs and SHFs that managed to attract additional finance as a result of the partnership, as well as the amount of financing attracted. In total, nearly 40 million dollars (around 32 million euros) in additional financing was attracted by end-2017. This is a sizeable amount compared with the 41.5 million euro funding 2SCALE received. In addition to the total of over 50 million in PSC, 2SCALE and its partners thus leveraged additional financing for SMEs and SHFs comparable in size to the direct contributions done.

Over half of all financing attracted was recorded in Kenya. One of the success stories here was the partnership with Shalem, where 2SCALE not only provided assistance with training sorghum farmers, but also with developing a financial package. The impact assessments conducted by AIR/Dalberg reported a statistically significant increase in borrowing and debt by these sorghum farmers, which they interpreted as "farmers being able to have access to credit thanks to the relationship with the programme." (Bonilla and Rai 2018, p. 32).

Despite the large amounts of finance attracted in value (for which there was no target), 2SCALE did not meet its targets in terms of the numbers of SMEs and SHFs that attracted additional finance. While the average financing attracted for each SHF was around €180 per farmer, the average financing attracted for SMEs was over one million euros (30 million euros for 27 SMEs). This is very large compared to the average SME size, and suggest that the finance attracted by SMEs was mainly done large SMEs.

It should be noted that the data from the M&E system (numbers of SHFs and SMEs having additional access to finance) are based on information provided by 2SCALE's two access to finance specialists employed between 2012 and 2017 (one for West Africa, and one for East Africa). According to 2SCALE, the number of SMEs with additional financing is only referring to the numbers that these two specialists were more or less directly working with. To get the full picture, it would have been necessary to carry out surveys, and monitor this number over the years, but this was not done due to the already high costs of the AIR/Dalberg impact evaluation and the WUR/LEI support on measuring trust/ loyalty, and more generally because of the limited budgets per partnership per year for technical assistance.

Table 4-9 The access to finance target for SMEs was far from being met, but in total, 2SCALE beneficiaries attracted nearly USD 40 mln.

| | # of SMEs that attracted additional finance | Financing attracted by SMEs (USD) | Financing attracted by SHFs (USD) | Total financing attracted by SMEs and SHFs (USD) |
|---|---|---|---|---|
| Benin | 7 | 874,173 | 2,052,247 | 2,926,419 |
| Ghana | 0 | 0 | 243,698 | 243,698 |
| Mali | 4 | 4,649,499 | 850,097 | 5,499,596 |
| Nigeria | 5 | 612,686 | 1,842,386 | 2,455,072 |
| Kenya | 8 | 18,946,967 | 2,186,943 | 21,733,910 |
| Uganda | 2 | 4,534,000 | 274,109 | 4,808,109 |
| Ethiopia | 0 | 0 | 1,640,000 | 1,640,000 |
| Mozambique | 1 | 430,500 | 139,807 | 570,307 |
| **Total** | **27** | **30,047,824** | **9,229,286** | **39,877,111** |
| *Target* | *250* | - | - | - |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017).

### Increased innovative investments

Despite the failure to meet the access to finance target, the target for innovative investments was nearly met by SMEs and exceeded by POs. In total, 454 local SMEs invested in at least one innovative new technology/activity, of which 147 female-headed SMEs (32%). According to 2SCALE, the number of SMEs and POs that invested in innovative technologies/activities is more accurate, as it is based on regular survey data collected by BSSs at the local level. In their view, this is therefore a better proxy for the number that increased access to finance (since investments in new technologies/activities almost by definition require access to funds: either through credit, or via own savings/capitalisation strategies). Saving strategies have been explicitly promoted by 2SCALE, in all partnerships, but in particular in countries with high inflation & interest rates. 2SCALE feels that such strategies are often neglected by agribusiness and value chain programs, but play an important role to empower and increase independency of farmers and authentic loyalty and trust relations in agribusiness. We understand this argument, but would still find it important to know whether an SME or PO financed their investments out of their own savings or via improved access to external finance, since only the latter has a potential leverage effect. We would therefore recommend to include questions on the financing of investments into the regular survey conducted by BSSs.

Table 4-10 Targets for innovative investments were nearly met by SMEs, and exceeded by POs.

| **Country** | **# of local SMEs investing in at least one innovative new technology/ activity** | **# of POs investing in at least one innovative new technology/ activity** |
|---|---|---|
| Benin | 84 | 140 |
| Côte d'Ivoire | 23 | 151 |
| Ghana | 66 | 267 |
| Mali | 94 | 406 |
| Nigeria | 25 | 204 |
| Kenya | 112 | 532 |
| Uganda | 7 | 135 |
| Ethiopia | 15 | 66 |
| Mozambique | 28 | 69 |
| **Total** | **454** | **1,970** |
| *Target* | *500* | *400* |
| **Of which: % female-headed SMEs and POs** | **32%** | **-** |
| *Target* | *40%* | - |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

### 4.2.3 Medium-term PSD outcomes

While there are indications that process was made towards reaching medium-term outcome targets, the monitoring data in this area is not sufficient to assess whether targets were met. Medium-term outcomes originally targeted by 2SCALE were an increase in volumes sold by SMEs of 50%, an increase in SME revenues of 50% and the creation of at least 2000 jobs. It is not clear to what extent these were achieved.

**SME revenues**

IN 2015-2016, 2SCALE staff conducted SME surveys among 100 SMEs in East Africa and 100 SMEs in West Africa, ensuring that data was collected for at least 25 SMEs sampled per country. However, in 2017, the progress with phasing out partnerships resulted in some SMEs not actively being involved. 2SCALE removed these SMEs from the previously sampled list of 200 SMEs, since the project can no longer attribute changes in the revenues and employment creation of phased out SMEs to 2SCALE interventions." The sample size was reduced accordingly, to 80 SMEs.

For this sample, data are available on the volume of sales, value of sales (revenues) and jobs created in 2015-2016 and 2016-2017. Volumes of sales were part of the survey but did not provide a meaningful indicator when aggregated over different types of companies.[28]

[28] For example, one SME might sell potatoes, another sells sorting machines and a third SME microfinancing to farmers. Aggregating these into one common denominator that indicates increase in volume does not result in an meaningful indicator.

The surveys give an indication of job growth and revenue increase but cannot be considered to be representative for 2SCALE, and the sample of 80 SMEs per country is much too small for drawing reliable conclusions. The survey guide reveals that SMEs were selected based on specialty (aggregators, input dealers, traders, microfinance institutions and processors) and whether they were male- or female-headed. No effort was made to select SMEs in such a way that both large and small SMEs were represented in the same way as they are in the population. In addition to the selection bias resulting from excluding the phased out partnerships, there might therefore have been a bias towards larger or more successful SMEs (which are easier to find and contact), as well as a small sample bias due to the small sample size.

Another problem is that it is not possible to attribute the reported increases in employment or revenue to 2SCALE without knowing the counterfactual. That is, we need to know what the increases in employment or revenue would have been in the absence of 2SCALE. The impact assessments by AIR/Dalberg made a good attempt at analysing this counterfactual, by comparing the results to those of similar control groups, but this yielded mixed results on most indicators, in part due to methodological design issues (see Section 7.2 and Appendix C).

What complicates the attribution to 2SCALE is that there are often external reasons for the observed changes in revenues and job creation. In the soybean partnership in Ghana, SME revenues did not grow by much as there was reduced supply of soybean to processors, due to reduced production and low yields of farmers recorded in 2017. In Nigeria, the very high increase in SME revenues reported in the survey can likely be explained by the devaluation of the Nigerian currency that resulted from the economic recession. This devaluation caused high inflation and therefore increased revenues in nominal terms, despite a reduction in demand. In Uganda, most agents/aggregators of sorghum and soybean sold more volumes in 2017 than in 2016, but this was due in part to more favourable weather conditions.

Table 4-11 Most SMEs reported substantial increases in revenues and seasonal job creation.

| | Revenue increase | Permanent Job creation 2016/2017 | | Seasonal Job creation 2016/2017 | |
|---|---|---|---|---|---|
| | Average revenue increase 2016/2017 | Males | Females | Males | Females |
| Benin | 30% | 11 | 14 | 2 | 1 |
| Ghana | 11% | 3 | 21 | 3 | 5 |
| Mali | 56% | -16 | 13 | 55 | 70 |
| Nigeria | 430% | 3 | -1 | 16 | 14 |
| Kenya | 86% | 8 | 1 | 128 | 76 |
| Uganda | 157% | -9 | 3 | 103 | 24 |
| Ethiopia | 38% | 2 | 0 | 24 | 8 |
| Mozambique | 33% | 1 | -1 | 2 | 7 |

Source: SEO Amsterdam Economics based on 2SCALE SME survey (N=80).

### 4.2.4 Long-term PSD impact

**SME employment**

The SME survey described above also contained questions on job creation. Based on the surveys for 2015-2016 (to be updated), a total of 294 permanent jobs were created, of which 170 for females, as well as 781 seasonal jobs. It is noteworthy that Ugandan SMEs reported relatively large increases in employment despite the drop in total value sold.

While the survey data still need to be updated with the 2017 results, one should be careful with interpreting or even extrapolating these survey findings, for the reasons discussed above. One recommendation for the future would therefore be to collect these monitoring data for all SMEs that 2SCALE works with (at least the local SMEs that are part of PPPs).

**Embedding BSSs**

Another variable that could be considered a long-term impact variable is the 'embedding of BSSs', as it relates to the sustainability and scalability of the impact. Chapter 6 on Sustainability also provides examples of projects that are already being replicated by other organisations.

Given the large number of 2SCALE projects that needed to be phased out, 2SCALE paid specific attention in 2017 to the 'embedding' of BSSs in ABC partnerships that need to continue coaching and advisory services, ideally through the same BSS. Several alternative methods of 'embedding' coaching services were considered, with the overall aim that costs should be paid by value chain actors rather than by donors. This turned out not to be straightforward as the activities of these coaches had mostly been funded by 2SCALE. Nevertheless, the effort appears to have been successful, as 55 BSSs are claimed to have been embedded by end-2017, compared to a target of 25. (see Table 4.6 above).

Embedding BSSs generally proved to be easier in case the BSS was provided from within the partnership, instead of by consulting firms or NGOs. However, there is still a risk that the lead partner might not have the same development goal of empowerment and thus the focus of the BSS could shift away from empowering weaker stakeholders or topics such as gender. This is something 2SCALE is paying attention to in its phase-out strategies (see section on Sustainability below.)

## 4.3 Demand-side pathway

Table 4-12 The key demand-side indicators were met, but impact was difficult to measure

| **Impact level** | **Indicator** | **Path-way** | **Actual** | ***Target*** |
|---|---|---|---|---|
| Output | # of BoP pilots implemented (ongoing or executed) | 3 | **25** | *20* ✓ |
| Outcome | # of new, innovative ways of marketing products to BoP markets (designed and successfully introduced) | 3 | **43** | *10* ✓ |
| Impact | Improved food and nutrition security (SHF) | 3 | **n.a.** | |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017).

### 4.3.1 Demand-side outputs

The main demand-side activities of the 2SCALE programme are BoP pilots. Through these pilots, 2SCALE (with the assistance of BoPinc) has provided technical support to help develop and market affordable, nutritious food products to low-income (BoP) consumers (e.g. cooking oil, soy milk, fortified porridge). The support involved designing, introducing and testing new products, innovative marketing strategies, and distribution solutions to deliver these products to BoP markets and establish feasibility and commercial viability.[29]

The main indicator in this area was an output indicator called 'number BoP pilots (ongoing or executed).' Through the end of 2017, a total of 25 BoP pilots were implemented, while the target was 20. Some of these 25 pilots were concluded, while others are still in the final phase.

Each pilot included one or several of the following elements:

- profiling potential customers
- identifying target segments
- product development
- design of packaging
- marketing and distribution strategy.

In 2017, BoP pilots were finalised and business plans and specific follow-up steps were presented to partners in order to provide the partner with the information to make sound decisions. Similar to the embedding of BSSs, this means transferring ownership to the partners without the guarantee that the private partner will be able to fully implement the business plans formulated in the pilots. This is something 2SCALE paid close attention to in 2017 and is discussed in Chapter 6 on Sustainability.

Table 4-13 The number of BoP pilots exceeded the target

| Country | Partnerships | # BoP pilots |
|---|---|---|
| Benin | 8 | 5 |
| Côte d'Ivoire | 4 | 0 |
| Ghana | 8 | 4 |
| Mali | 6 | 1 |
| Nigeria | 7 | 2 |
| Kenya | 6 | 3 |
| Uganda | 5 | 2 |
| Ethiopia | 5 | 6 |
| Mozambique | 4 | 2 |
| **Total** | **53** | **25** |
| ***Target Set*** | **-** | ***20*** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)

[29] The broadening of BoP pilots to include also innovations in distribution and marketing was done at the request of the Visitation Committee in late 2014. (See Phase 1 Report

### 4.3.2 Demand-side outcomes

The key outcome indicator for the demand-side pathway was the “number of new, innovative ways of marketing products to BoP markets (designed and successfully introduced).” The reported number of successfully introduced initiatives was 43, well above the targeted 10, although it remains unclear how ‘success’ was defined.

Another outcome target for which no monitoring data appear to have been collected is the goal to “sustainably supply food to regional, national and local markets, of which 40% would be BoP consumers” (Phase I Report, Section 2.2). While sales were tracked to some extent (and reported under pathway 2), no monitoring data appears to have been collected on consumption. Initially, the plan was to monitor the “volume of food products from ABCs and VCs channeled to BoP markets” but, as far as we understand, no monitoring data were collected on this.

### 4.3.3 Demand-side impact

The final impact that is aimed at, not only via demand-side pathway but also via supply-side and PSD pathways, is ‘food and nutrition security’. While 2SCALE did not specifically target nutrition outcomes, the programme’s Theory of Change did assume that increases in productivity would lead to improved livelihoods of farm households, which in turn would strengthen their food and nutrition security. Similarly, 2SCALE’s ToC assumed that the development of BoP products and markets would contribute to improved food and nutrition security for BoP consumers.

The quantitative impact assessments conducted by AIR/Dalberg do not provide strong evidence (yet) for a positive impact on this front, but the authors note optimistically that “there is positive evidence that 2SCALE increases income and food security through the various activities the programme supports.” (Bonilla and Rai 2018, p.73)

As a proxy for food security, the quantitative surveys conducted by AIR/Dalberg used two proxies for food security that were developed by the Food and Nutrition Technical Assistance Project (FANTA):

1. The **Household Dietary Diversity Score**. This proxy is calculated by simply counting the number of food groups consumed by anyone in the household during a reference period (in this case, the last 7 days). Food groups include: grains or cereals; roots or tubers; vegetables; fruits; red meat or poultry; eggs; fish or shellfish; legumes; milk or milk products; oils or fats; sweets, sugar, or honey; and condiments. The more types of food consumed, the more diverse the diet, which is considered a good proxy for food security.
2. The **Food Insecurity Scale.** This is a continuous variable that provides a proxy for the degree of a household’s “food insecurity.” This measure is based on the assumption that being food insecure causes predictable responses that can be captured in a survey and summarised in a scale (Coates, Swindale, & Bilinsky, 2007). Food insecurity is linked here to feelings of uncertainty or anxiety over food, perceptions that the quantity of food available is insufficient, perceptions that food was of insufficient quality, and reductions of food intake for adults and children.

Overall, the impact assessments conducted by AIR/Dalberg provide only mixed evidence that the ‘treatment group’ (households of farmers that benefited from 2SCALE activities) saw more improvement in their food security than the 'control group' (households that did not receive assistance from 2SCALE). However, they did find evidence that some subjective indicators of food security were positive "across most of the countries" (p. 74).

The AIR/Dalberg findings on food security are summarised as follows:

- For the Shalem partnership in Kenya, there was a statistically significant decrease in the food insecurity scale, suggesting that farmers improved their food security. (However, there was no statistically significant change in the FANTA measures of household dietary diversity.) The most promising results were observed for the partnership with Shalem in Kenya.
- For the selected partnership in Uganda and Ghana, neither the food insecurity scale nor the household dietary diversity score had statistically significant changes. In Uganda, there was even some weak evidence of a statistically significant decrease (at the 10% significance level) in the likelihood of eating meat or fish five or more times in last month.
- For the selected partnerships in Benin and Mali, there was some evidence of a *reduction* in food security, as 2SCALE farmers were found to have increases in the food insecurity scales. However, there was no statistically significant change in household dietary diversity scores.

AIR/Dalberg and the 2SCALE management team mention at least four reasons for these mixed results on food security:

1. 2SCALE did not specifically implement activities to help farmers change their behaviours regarding diets and nutritional aspects of their food intake.
2. It may take a long time for consumers to adjust their consumption patterns, so two years may not have been enough to observe a change.[30]
3. Based on the ToC, an improvement in the food security of farmers (or reduction in malnutrition) would come about via an increase in farmer incomes. Since AIR/Dalberg did not find a statistically significant effect on income (for most countries), it is only logical that they also did not find a statistically significant effect on food security among farmers.
4. Changes in food security were only measured for households of '2SCALE farmers' that participated in supply-side activities, which generally focused on increasing production (sometimes for export or for processing) and not on increasing consumption or improving diets or reducing malnutrition. The impact assessments therefore did not include surveys among consumers or (potential) clients of firms that developed and marketed new nutritious food products specifically for BoP markets.

In our case studies, we did find several examples of projects that likely had an impact on reducing malnutrition:

- The AKF / Family Milk partnership in Ethiopia appeared to have improved hygiene standards and the quantity and quality of dairy milk (as measured, e.g., by its average butter fat content). It also participated in a BoP pilot that helped develop and market a new brand of small-sized packaged milk products that was expected to reduce malnutrition among BoP consumers.
- The GUTS Agro partnership in Ethiopia successfully developed and marketed "Supermom", a nutrient-enhanced (fortified) supplementary food for children of 6 months up to 2 years old,

30 As Bonilla and Rai (2018, p. 74) note, "even programmes that produce positive impacts on income may not show positive effects of food security and diversity because consumption patterns may take some time to be modified." In their comments on the AIR/Dalberg study, the 2SCALE management team also noted that "BoP consumers might first look for more tasty food, not necessarily more nutritious food."

targeted at low income households. The business was found to be profitable and expected to be sustainable. It is likely that it increased consumption of fortified baby products by low-income households, as no alternative similar products were said to have existed prior to the partnership.

- The East-West Seed International (EWIT) partnership in Mali appeared to have contributed to improved quantity and quality of onion production in Segou. This likely helped to increase the consumption of (high-quality) onions, which is a basic ingredient to practically all West African dishes. In addition, EWIT increased the supply of a range of fresh vegetables with a well-known contribution to balanced nutrition, but it is not clear to what extent this can be attributed to 2SCALE.

# 5 Additionality

*Our case studies suggest that the additionality of 2SCALE funding was limited for larger private sector partners (limited direct input additionality), but 2SCALE may still have induced them to contribute more of their own resources than they otherwise would have (indirect input additionality). There is also ample qualitative evidence that 2SCALE contributed to changes in development goals that otherwise may not have materialised (development additionality). However, there is potential to reduce overlap and increase synergies between 2SCALE and FDOV.*

## 5.1 Input additionality

Following DCED (2014), a publicly funded development programme is said to have 'input additionality' when "the public input resources are additional to what might anyway be invested or done by the applicant/partner company and other parties, as well as the timing of it".[31]

In order to assess the input additionality of MFA funding for the partnership, one needs to ask the counterfactual question what the partners would have contributed without the MFA funding. In general, we can distinguish between direct and indirect input additionality:

- In cases with **direct** input additionality, the partnership would not have been able to obtain any other sources of funding or may not even have existed without 2SCALE financial support. This appears to be the case particularly for small-scale partnerships.
- In cases with **indirect** input additionality, the partnership did not necessarily need 2SCALE financial support, but 2SCALE may still have induced private sector partners to contribute more of their own resources than they otherwise would have. This appears to be mostly the case for large-scale partnerships, e.g., those involving multinationals.

An important prerequisite of the 2SCALE programme is that total Private Sector Contributions (PSCs) would at least match the €41.5 million provided by the Dutch Ministry of Foreign Affairs. This 50% matching target was defined at the level of the overall portfolio rather than for each partnership separately. Private sector co-investment could be delivered both by lead partners and by grassroots actors, both via direct investments and by providing 'in kind' contributions (own staff time, overhead, travel cost of own staff, etc).

Within the Theory of Change, PSCs are considered vital for the effectiveness, impact and sustainability of 2SCALE. Not only do PSCs increase the amount of funding available but they also ensure that the private sector is committed to ('owns') the partnership and has incentives to further invest in its success.

At the overall portfolio level, the 50% PSC target was met. Table 5.1 displays the amount of PSC recorded in the period 2012-2017, the total amount that was contracted in the partnership agreements, and the share of the contracted amount that has been disbursed to date. With around

[31] DCED (2014), "Demonstrating Additionality in Private Sector Development Initiatives", Donor Committee For Enterprise Development.

€57 million in actually disbursed contributions, the private sector has contributed more than the Ministry.
The majority of PSCs came from lead partners in VC partnerships. About a quarter of the total PSC amount was contributed by ABC-actors, the majority of which were in-kind contributions such as time spent on data collection, training, and coaching. The remaining share was contributed by (lead) partners in VC partnerships, of which only a small share was in kind.[32]

As also noted in the Phase I Report, it is noticeable that the majority of PSC, in nominal terms, came from just a few large partners with very large PSC contributions.[33] The largest PSCs were recorded in Nigeria and Kenya and are related to partnerships in which large Dutch multinationals Heineken and Friesland Campina (both in Nigeria) are involved. For these two partnerships alone, the PSC combined exceed €15 million. These two partnerships are thus responsible for about a third of total PSC.

Table 5-1 PSC contracted was largely disbursed, with some exceptions.

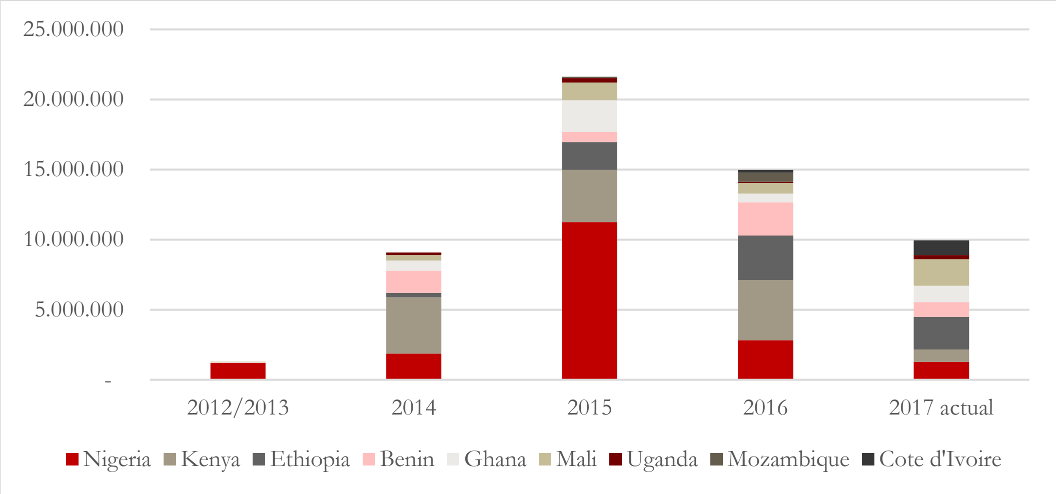
| | **Disbursed 2012-2017 (€)** | **Contracted 2012-2017 (€)** | **Disbursed (%)** |
|---|---|---|---|
| Nigeria | 18,408,749 | 20,997,374 | 88% |
| Kenya | 12,939,169 | 13,645,774 | 95% |
| Ethiopia | 7,785,618 | 8,045,500 | 97% |
| Benin | 5,771,744 | 5,695,260 | 101% |
| Ghana | 4,820,658 | 6,250,260 | 77% |
| Mali | 4,319,695 | 3,907,873 | 111% |
| Uganda | 872,177 | 2,199,220 | 40% |
| Mozambique | 728,290 | 2,491,615 | 29% |
| Cote d'Ivoire | 1,280,161 | 1,979,474 | 65% |
| Other* | 159,253 | 159,253 | 100% |
| **TOTAL** | **57,085,514** | **65,371,603** | **87%** |

Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data (2012-2017)
* Mostly discontinued or phased-out partnerships in South Sudan, Burkina Faso, Niger and Togo.

32 The exact separation between financial and in-kind contributions is difficult to make, as financial contributions can also be used for hiring external staff to install equipment, etc. Whether the financial resources are used to pay for partners' own staff time or for external experts hired and paid by the lead partner appears to be less relevant, although in the case of own staff time the attribution of this time to 2SCALE projects may be even more difficult to validate than in the case of hiring external staff.

33 This was also envisaged to some extent: according to the 2SCALE PPP Protocol (2013, p. 4), the share of PSCs was expected to be at least 60% for large-scale enterprises (LSEs); 40-60% for SMEs, and up to 40% for farmer cooperatives.

Figure 5.1 The largest PSCs have occurred in Nigeria and Kenya and are driven by two large partnerships with Dutch multinationals




Source: SEO Amsterdam Economics based on 2SCALE monitoring and evaluation data. (Early 2SCALE projects in South Sudan, Burkina Faso, Niger and Togo are not included in the chart, but are included in the total estimate of PSC.)

As Figure 5.1 shows, five of the largest partnerships are responsible for almost 60 percent of all PSCs. The Heineken/Psaltry partnership alone is responsible for about 20 percent of total PSCs. The 30 partnerships that have contributed least combined have contributed less than three million euro, or five percent of total PSC. The contrast between partnerships with small PSC and those with large PSC is further increased by the fact that 2SCALE has (in consultation with the Ministry of Foreign Affairs) focussed on measuring those PSCs that are relatively easy to measure, which are typically the PSCs done by larger partners. In 32 partnerships, the share of PSC was less than 50 percent.[34]

The scope for indirect input additionality (raising PSCs) depends on the nature of the partnership and on the size of the partners. 2SCALE has been involved in both small-scale partnerships (mostly ABC-level) and large scale partnerships. The disadvantage of small-scale partnerships is that they generally have limited ability to contribute financially (i.e., high direct input additionality), but the advantage is that the potential development additionality is higher. In contrast, the advantage of larger scale partnerships is that the partners (either local or international companies) tend to more commercially developed, and thus able to contribute more financially to e.g. building collection centres or processing lines. This implies lower direct input additionality as large partners may decide to undertake these activities in any case if there is a business case to be made (e.g., invest in good relationships with local authorities).

It is reassuring to note that the partnerships with the lowest direct input additionality (i.e., the projects with large multinationals) are also the partnerships with the smallest 2SCALE contributions. The largest PSCs were recorded in Nigeria and Kenya were related to partnerships in which large Dutch multinationals Heineken and Friesland Campina (both in Nigeria) are

34 These amounts refer only to project specific contributions and thus don't include the cost 2SCALE incurs for overall management and of the program. The project specific costs incurred by 2SCALE add up to just over 17 million but might be an underestimation. 2SCALE indicates it was not able to correctly register contributions on a partnership basis during much of the brokering phase.

involved. For these two partnerships alone, the PSC combined exceed 15 million euros, but the direct contribution of 2SCALE to these partnerships was limited to just over 2 million euros, making these partnerships almost entirely private sector funded.[35]

Our case studies confirmed that *direct* input additionality was limited in cases involving large (Dutch) multinationals (see Phase 1 Report). Given the sheer size of these companies and their budgets, the amount of the MFA funding provided to them was a relatively small share of their total funding. It seemed more likely that these companies' interest in participating in 2SCALE derived from the fact that they benefited in some ways from the partnerships. For example, for Heineken and FWC, being involved in 'local sourcing' and including local communities appeared to be important for improving their relationships with local authorities. But in that case, there would simply have been a business case for working with local ABCs, and this could therefore have been financed from their own resources.

To the extent that 2SCALE convinced these multinationals to contribute resources they otherwise would not have contributed, the *indirect* input additionality of 2SCALE was high.

- In case of Friesland Campina WAMCO (FCW), FCW's work with the Fulani was already underway since 2010, two years before 2SCALE came along. This suggest that 2SCALE was not responsible for building the partnership in the first case, but it was claimed to have been instrumental in "cementing" the partnership.
- Similarly, the partnership of East-West Seed International in Mali was based on a pre-existing relationship with a vegetable seed dealer of EWSI in Bamako, supplying a distributor in Segou.
- In the case of Heineken, the partners Nigerian Breweries and Psaltry already knew each other, and Nigerian Breweries itself approached 2SCALE, but both IFDC and Heineken claim that it was 2SCALE that helped to design the partnership. Without 2SCALE, Heineken claims that its local sourcing efforts would likely have been thwarted by their lack of expertise in dealing with field level conditions and small-scale farmers. (See the Phase I Report for more detail.) But this suggests that Heineken was already interested in 'local sourcing' and that the main additionality of 2SCALE was the provision of expertise, rather than financial additionality or convincing Heineken to engage in local sourcing.

Other cases of limited input additionality are cases where it appears that similar support services could have been obtained either from the government or from other development agencies. This appeared to have been the case, for example, for Mali's parboiled rice partnerships, as donors turned out to have a long relationship with the same Sélingué group and many development agencies in the Sahel turned out to provide similar support services for parboiling. At East-West Seed International, it appeared that the seed dealer may have largely conducted the same activities without 2SCALE, but 2 SCALE made a contribution to the training of farmers, boosting sales and productivity.

[35] These amounts refer only to project specific contributions and thus don't include the cost 2SCALE incurs for overall management and of the program. The project specific costs incurred by 2SCALE between 2012 and 2016 add up to just over 17 million but might be an underestimation. 2SCALE indicates it was not able to correctly register contributions on a partnership basis during much of the brokering phase.

## 5.2 Development additionality

Following DCED (2014), development additionality is the extent to which public resources contribute to changes in development-relevant results that otherwise would not have been achieved. Development additionality can occur regardless of whether there is input additionality.

Just as with input additionality, development additionality can also be direct or indirect:
- In projects with **direct** development additionality, the Dutch government itself directly contributed to the achievement of development goals that otherwise would not have been achieved.
- In projects with **indirect** input additionality, the Dutch government had an impact on encouraging other institutions (e.g., NGOS or knowledge institutes) to contribute to development goals that otherwise would not have been achieved.

Based on our fieldwork, we conclude that there are many sources of development additionality, which are both direct and indirect, and are often related to (a) the strengthening of SHF capacities, (b) strengthening the bargaining position of female and other 'excluded' producers, and (c) the development and introduction of new products and processes aimed at BoP consumers. (See Table 5-2.)

Table 5-2 The fieldwork revealed numerous sources of development additionality

| Country | Sub-sector / partnership | 2SCALE contributions to development goals otherwise not achieved |
|---|---|---|
| Ethiopia | Maize-Dairy/ AKF-FAMILY MILK | + Linking feed supply and demand, facilitating payment for inputs through "milk cheque deductions", making connections with farmers; diversifying production (e.g. produce mozzarella cheese); recruit more staff |
| Ethiopia | Soya-Maize/ GUTS AGRO | + Introduction of a new product (fortified babyfood "Supermom"); innovative micro-franchise model; 90 women engaged in selling Supermom products; better quality maize; increased farmer capacity |
| Mali, Sélingué | Rice-parboiled/PO | - Several key technical challenges had not been resolved at the site visited (Sélingué), hence development additionality of the project could not be assessed. |
| Mali, Bamako | East-West Seed International | + The provision of demo plots and training to new producers helped to increase yields, quality, prices, and sales. |
| Nigeria | Dairy-Milk/ FC WAMCO | + Establishing the principle that women's revenue generation activities have a strong beneficial effect at the household and community levels; outsourcing milk deliveries (to collection rural centres) to young motor bike riders (which created jobs and built enterprise skills for youth); expansion of SHF milk production to settled farmers under FDOV funding; ethnic inclusiveness of Fulani milking development (contrary to popular assumptions that the Fulani would reject modern dairy techniques); replication by USAID of the 2SCALE Fulani model in the Northern states Kaduna and Kano. |
| Nigeria | Cassava-syrup/ HEINEKEN | + The household income improvements through cassava yield increases and the strengthening and equipment upgrade of Psaltry would likely not have taken place without 2SCALE; the stringent quality and supply management requirements of the brewing industry helped to anchor modern practices in the traditionally low-input/low-output cassava value chain; Heineken helped to ensure that Nigerian Breweries remained committed to the partnership and maintained purchases of the high-cost/ low yield cassava syrup, despite the greater availability of cheaper alternatives, thus ensuring a market for SHF producers of the raw material. |

Source: SEO Amsterdam Economics (based on field work summarised in Appendix B)

There was some evidence of direct and indirect development additionality for partnerships with large Dutch firms (Heineken/Nigerian Breweries, Friesland Campina WAMCO (FWC), and East West Seeds international), despite these partnerships not scoring well in terms of (direct) input additionality. For example, even though a partnership between FWC and the Fulani appeared to have already been underway two years before 2SCALE came along, an MFA official was told that FCW probably would have given up on the Fulani if 2SCALE had not provided support. This programme in turn was claimed to have been "instrumental" in cementing long-term linkages between partners, achieving scale and consolidating the fresh milk supply chain from remote farms to the processing factory in Lagos.

## 5.3 Comparison with FDOV

As described in Appendix B, 2SCALE bears resemblances to the FDOV programme implemented by RVO (now called SDGP), but also has a few important differences with this programme.

The key similarities between 2SCALE and FDOV are as follows:

1. **Overall objectives.** Both 2SCALE and FDOV are aimed at food security (FS) and private sector development (PSD).
2. **Public-private partnership (PPP) model.** Both 2SCALE and FDOV use a PPP model, and Dutch companies play an important role in both programmes.
3. **Geographic coverage.** There is a high degree of overlap in terms of eligible countries, as FDOV's long list of eligible countries includes virtually all nine 2SCALE countries (except Côte d'Ivoire), and both programmes have many partnerships in Ethiopia and Kenya.
4. **Sectoral focus**. In terms of agricultural commodities, both FDOV and 2SCALE have a broad focus. While 2SCALE works with 'only' four commodity groups, these groups together appear to cover most agricultural commodities.

The key differences between 2SCALE and FDOV are as follows:

1. **Selection process:** 2SCALE builds partnerships and value chain linkages from the 'bottom up', while FDOV takes existing linkages as given and is more focused on deepening existing relationships.
2. **Inclusive focus**. Generally speaking, 2SCALE has a more inclusive focus than FDOV in that it supports value chain actors at an earlier stage of development. On the supply side, 2SCALE works more often than FDOV with smaller and poorer smallholder farmers and semi-commercial farmers. On the PSD side, 2SCALE is, more than FDOV, involved in strengthening the bargaining positions of smaller or marginalised players. On the demand side, 2SCALE puts more focus than FDOV on reaching out to low-income consumers.
3. **Gender focus.** Another aspect of inclusion is that 2SCALE has a more elaborate gender strategy and a more explicit focus on gender targets than FDOV. For example, FDOV has not had an overall portfolio target for the share of female SHFs or the share of female-headed SMEs.

# 6 Sustainability

2SCALE is seen as an agribusiness incubator, helping start-ups to grow. It aims to support start-ups that would not be supported by the private sector. This support is expected to last for 2-3 years, during which period the support aims at developing and growing the start-ups so that they are able to sustain themselves. Sustainability in this sense is defined as 'the ability to successfully pursue its objectives once 2SCALE withdraws its support.'

While it is too early to assess the actual (ex post) sustainability of partnerships, 2SCALE has implemented many measures that help to ensure sustainability. While some start-ups are still far from being financially or institutionally sustainable, 2SCALE notes (in its Annual Report 2017) that there are quite a few examples of partnerships with significant progress towards achieving sustainability, and some are already being replicated by other organisations.

## 6.1 Support measures per pathway

### 6.1.1 Measures to ensure sustainability of results

To its credit, 2SCALE has implemented many measures that help to ensure sustainability:

**Measures to ensure the sustainability of capacity building**

- Measures to 'embed' coaching services within farmer organisations: coaches recover their training costs by providing other goods or services to the PO. For example, dairy coaches in Nigeria and sorghum coaches in Kenya are agents for the lead firm, and also provide transportation or farm inputs. In some partnerships (e.g. pineapple-Benin, cassava-Nigeria) training is managed by the lead firm or farmer organization; farmers pay the costs through sales levies. (2SCALE Annual Report 2017, p. 27)
- Measures to replace external (project-funded) coaches gradually by internal coaches from within the partnership. Of the 423 coaches, 369 are internal. Since they are part of the community, skills acquired during 2SCALE stay within the cluster even after the project phases out. (2SCALE Annual Report 2017, p. 27-28)
- Measures to 'embed' BSSs by building the cost of training into the value chain cost structure. While 2SCALE still funds a significant – although progressively smaller – share of the costs, throughout 2017 2SCALE worked to strengthen the ability of BSSs to continue providing these services without 2SCALE support.
- Measures to ensure 'training of trainers.' For example, in Ethiopia, a program for the maize and soybean sectors involved eight coaches from three unions, which in turn supported 33 cooperatives that produced maize and soybeans for sale to another partner, food processing firm GUTS Agro. The coaches are now working with leaders (and especially finance officers) from the union's constituent primary cooperatives. This 'cascade' approach ensures that financial and enterprise management innovations reach very large numbers of farmers while keeping training costs low. This was one of the reasons why the Ethiopian Ministry of

Agriculture and Natural Resources and the Federal Cooperative Agency last year recognised 2SCALE as "Best Capacity Builder/Project of the Year."

**Measures to ensure the sustainability of value chain linkages**

- Efforts to establish long-term client relationships between VC actors, including with financial institutions, built on mutual trust, commitment and transparency.
- Measures to increase the "ownership" of partnership actors.
- For some partnerships (e.g. maize in Mali, cassava and vegetables in Nigeria), the emphasis in 2017 shifted from ABC formation to the formation of 'innovation platforms', linking the various ABCs involved in a partnership. These platforms aim to ensure the sustainability of partnerships by strengthening both horizontal and vertical relations; the platforms also take the lead for further out-scaling and ABC formation.

**Measures to ensure the sustainability of BoP pilots**

BoP pilots appeared to have good sustainability. According to 2SCALE (Annual Report 2017, p. 6), most pilots, having proved successful, were "taken over" and expanded by the private sector partner, without further 2SCALE support. However, they acknowledged that the next stage – handing over to the lead firm – is still a "work in progress". Two challenges were noted in particular: (1) the lead firm may be reluctant to increase its investment in the BoP segment; (2) last-mile distribution may be difficult or expensive. Both factors have been taken into account in the design of 2018 BoP pilots. As a measure to encourage sustainability, 2SCALE, through BoPInc, plans to continue limited support (guidance and technical advice) to phased-out pilots.

## 6.1.2 Measures to ensure financial sustainability

2SCALE has also been applying various measures to ensure that partnerships will be financially sustainable:

- **Measures to gradually let the partnership take over project costs.** These costs can include overhead, training and coaching costs, and even the cost of technical 2SCALE staff (like in GUTS Agro and Sidama Elto Cooperatives).
- **Measures to convince private partners to pay better prices.** This includes the attention paid by 2SCALE to strengthening the bargaining position of farmers. For example, a cassava farmer that had obtained coaching from 2SCALE managed to convince Nigerian Breweries (jointly with Heineken) to increase its target price for cassava starch and tubers.[36] Another example is the assistance provided to 10 cooperatives in Ethiopia with building a new warehouse for aggregating produce harvested by their members. This increased their bargaining power with buyers.
- **Measures to remove price subsidies.** For example, at Family Milk, farmers are now able to work almost without subsidies.

[36] "When Nigerian Breweries repeated their (very low) price target for cassava starch and tubers, a woman farmer representing a cassava cluster stood up and used her skills (strengthened during 2SCALE's coaching programs) to explain the competitive environment of cassava markets, the different market channel choices of farmers, why they continue selling tubers to Psaltry despite the lower price offered by the company, and thus how unrealistic Nigerian Breweries' request to further squeeze prices was. Ultimately, Heineken asked Nigerian Breweries to increase its target price, based on updated cost analyses taking into account the factors highlighted by the farmer representative." (2SCALE Annual Report 2017, p. 19).

- **Measures to attract additional sources of finance.** This is done in various ways: brokering linkages with financial institutions, training farmers and SMEs in writing business plans and loan applications, and helping financial partners to develop new financial products. For example, the vegetable seed BSS Amassa Afrique Verte has helped secure a $50,000 investment from the US Africa Development Foundation (US-ADF) in a sorting and 30t onion storage facility near Segou.
- **Other general measures involving good commercial business practices.** These all contribute to sustainability, as it is plain that a commercial partnership has more possibilities to sustain itself and scale up if the market is profitable, if the companies work efficiently without subsidies and with competent staff, and the partnership actors trust each other.

## 6.2 Systemic impact

The sustainability of 2SCALE outcomes and impact also depends on the extent to which 2SCALE can have a broader, systemic impact on the sector or the country through policy dialogue or replication by others (demonstration effects). These demonstration effects are more likely to take place when 2SCALE itself is seen to be successful, 'owned' by stakeholders, and to have positive external effects on the sector. Empirical evidence from the field suggests that this is largely achieved due to the programme's engagement with local actors, open and sustained dialogue between all VC actors, equitable partnerships, minimal use of subsidies or other market distortions (avoidance of 'crowding out'), and strong market linkages.

There are a number of specific examples of cases where the success of 2SCALE is already being replicated. In Mali 2SCALE helped secure significant US-ADF support for onion producers. In Nigeria, other organisations such as FDOV, IFC and USAID have expressed interest in adopting or emulating the 2SCALE approach. In Ethiopia, the quality of Family Milk products has attracted attention in 2SCALE's model from other milk processors in the area.

Nevertheless, achieving a broader impact (beyond the individual partnerships) is currently restrained by the fact that most of these partnerships are quite young (the brokering phase took longer than expected, or VC conditions were unfavourable the outset) and that the enabling environment is not fully conducive. Among the challenges that 2SCALE faces in achieving a broader impact are:

- Weaknesses in physical rural infrastructure (e.g. roads, irrigation, facilities for produce handling, storage and marketing; also for health and education for local populations, and environmental management, etc.)
- A general lack of social services and support for economic activities due to weak public institutions in the field of agricultural support services, credit, research and development, market intelligence, connectivity, etc.
- Weak public private dialogue systems at the local level and lack of clear agendas for policy and institutional reform beneficial to rural enterprise growth and private sector development
- General lack of access to finance, which is needed to scale up partnerships, exploit economies of scale, and have a more systemic impact.
- Patchy legislation on contract farming in agriculture, exposing both the buyers and the sellers to some risks.

- Governance issues at public agencies and potentially also at the PO level can hinder sustainable growth by SHFs.

## 6.3 Phasing-out strategies

In consultation with MFA, 2SCALE has conducted its own assessment of which partnerships to continue and which to phase out. Phase-out strategies were agreed upon and validated in 2017.

The majority of partnerships were phased out in 2017; some in mid-year but most in December. Of the 53 partnerships, only 15 will continue into 2018.

The partnerships that were selected to be continued are of three types:[37]
1. Partnerships that started relatively recently (as in Côte d'Ivoire) and require more time to become self-sustaining.
2. Well-established, successful partnerships that would normally have concluded (e.g. sorghum in Kenya, maize in Mali), but are being extended because they have evolved in new, innovative directions.
3. 'In-between' partnerships (e.g. cassava in Nigeria) that have grown substantially but require more time to reach full potential in terms of inclusivity, competitiveness and scalability.

The partnerships that were not continued were of three types:
1. Partnerships with insufficient impact, or potential to have impact ('lack of success').
2. Partnerships that lacked the potential to be scalable through replication in other contexts.
3. Partnerships that were successful and achieved significant results, and for which project support was no longer needed to achieve scale.

The "majority" of phased-out partnerships are claimed to be in the latter category.[38]

In 2017, phasing-out strategies were developed for all partnerships that concluded in 2017, with multi-year business plans and mechanisms to ensure post-project sustainability. While phasing-out strategies were different for each PPP, some elements were common to many partnerships:
- Continued sensitisation of ABC and VC actors on 2SCALE's disengagement.
- Self-evaluation of clusters and value chain enterprises, especially regarding their competitive position.
- Review & capitalisation - learning and sharing lessons.
- Mobilisation of financial resources, including the design of levy/ dues mechanisms to fund some activities (e.g. coaching, governance meetings).
- Expansion of networks beyond local scale, with relevant knowledge and information holders, for continued innovation.
- Progressive decrease in intensity and number of activities supported by 2SCALE.
- Strategic multi-year planning for the post-project period, including clarification on the roles and financing of agribusiness coaches.
- Production and sharing of public relations documents (posters, leaflets, videos, etc).

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[37] 2SCALE Annual Report 2017, p. 10.
[38] 2SCALE Annual Report 2017, p. 21.

In addition, 2SCALE paid specific attention to:

- **The sustainability of BSSs coaching services**. These are typically provided by BSSs that are contracted or cost-shared by 2SCALE. In its Annual Report 2017, 2SCALE states that, *for all phase-out partnerships*, they discussed with local actors how best to ensure continuation of this support. For example, soybean clusters in Ghana decided to select 20 new coaches (10 men, 10 women) among PO members, to work with the five 'external' coaches from BSSs and develop skills to progressively take over coaching services in the future.
- **The sustainability of financing of training and other inputs**. For example, the soybean partnership in Benin established levies that will generate about 12.3 million FCFA in 2018, sufficient to cover training and other costs.

2SCALE plans to follow phased-out partnerships in order to understand whether sustainability plans developed in 2017 have been successfully implemented.

# 7 Conclusions and Recommendations

*This chapter concludes with a summary of the key findings. Given the generally positive evaluation results, we recommend a second phase, for which we suggest several modifications. We also draw some lessons for MFA's food security and private sector development agenda, including the need to further improve and clarify the linkages between 2SCALE and other private sector development programmes funded by the Dutch government.*

## 7.1 Summary of key findings

**2SCALE's 'bottom up' PPP strategy appears to generally be a successful business incubator model that can serve as an example for private sector development programmes targeting value chains in an early stage of development.** The programme has been particularly successful in building relations between farmers and companies and linking them to networks of local actors (agribusiness clusters). In contrast with some other PSD programmes such as FDOV, where partnerships need to be established before they can apply through a tendering procedure, 2SCALE itself played an important role in building these partnerships, and allowed the partnerships to evolve over time to include new partners. In most of our case studies, this partnership strategy appeared to be successful in building stronger and more sustainable value chain linkages, using local knowledge and local networks.

**In terms of outputs and short-term outcomes achieved, 2SCALE has generally performed well relative to targets**. This is especially the case when taking into account that most partnerships only took off in recent years and it might therefore be too early for all outcomes to have materialised and for BSSs to have become embedded in partnerships. For those output or outcome targets that were not met, there was usually an understandable reason.

**With regard to medium-term outcomes and long-term impact, the results are mixed, but promising.** The quantitative impact assessments by AIR/Dalberg yielded mixed results on most indicators, but this was in part due to methodological design issues (see Section 7.2 and Appendix C). Nevertheless, there is ample qualitative evidence that 2SCALE is on the right track to contributing to higher farmer incomes, SME revenues, and food and nutrition security.

### 7.1.1 Supply-side effectiveness

**On the supply side, most output and short-term outcome targets were met.** During the period 2012-2017, a total of 584,939 smallholder farmers (SHFs) were estimated to have directly or indirectly benefited from 2SCALE partnerships, which was well above the target of 500,000. There is qualitative and quantitative evidence that SHF practices improved and that SHFs trained by 2SCALE invested more in innovative activities (despite an unclear impact on access to finance).

**There is no hard evidence yet that 2SCALE increased agricultural production and incomes.** The AIR/Dalberg impact assessments tested this hypothesis by comparing 2SCALE farmers with a 'control group', but could not find clear quantitative evidence that 2SCALE farmers had higher production (in terms of volume or value) or higher farmer incomes. According to the 2SCALE management team, this is partly because the control groups chosen were not strictly comparable and partly because more than two years would be needed for the full impact to materialise. While we believe that these are valid points, these are design issues that should have been known up front, and therefore should have been taken into account in the design of the impact asssements.

### 7.1.2 PSD effectiveness

**In terms of private sector development impact, five out of six of the key PSD output targets were met by the end of 2017.** The overall output target of reaching 2,500 SMEs (including POs) was met. While the sub-target referring to the number of non-local SMEs was not met, due to the larger size of such SMEs, this was offset by significant overperformance of the target for POs, due to the fact that partners themselves oriented their capacity strengthening activities more towards POs. 2SCALE also provided more than targeted financial and informational services, and was very successful in strengthening and 'embedding' Business Support Services.

**With regard to short-term PSD outcomes, 2SCALE was particularly successful in improving value chain linkages.** While the quantitative impact assessments conducted by AIR/Dalberg yielded mixed results with respect to building long-term client relationships, there is ample qualitative evidence that 2SCALE successfully built and strengthened value chain linkages, especially in relation to local SMEs that would otherwise not have been able to 'survive' (agribusiness incubation).

**Access to finance was improved on a number of occasions, but fell short of targets.** While this appears to be partly a measurement problem, a number of partnership stakeholders that we visited in our case studies did reveal that access to finance is still an important constraint to growth and sustainability of the partnership. In total, 2SCALE beneficiaries attracted nearly USD 40 million, which is a sizeable amount compared to the overall size of the programme. It is likely in part because of this additional finance that SMEs were able to meet the target for innovative investments, and POs even exceeded this target.

**With regard to medium-term outcomes and long-term impact, the results are mixed.** The SME survey results suggest that most of the SMEs surveyed have seen sizeable increases in revenues and jobs, but these estimates are based on small samples that may not be representative. Moreover, it is not possible to attribute these changes to 2SCALE without the ability to compare the results to a control group or benchmark (or without an in-depth contribution analysis).

### 7.1.3 Demand-side effectiveness

**In terms of its demand-side activities, 2SCALE was active and exceeded its output targets.** With the assistance of BoPInc, as many as 25 'BoP pilots' were conducted that exceeded the targeted number of 20. These pilots focused on the consumer side and contributed to designing, introducing and testing new BoP products, as well as innovative marketing strategies and distribution solutions to deliver these products to BoP markets. Within these pilots, 43 new, innovative ways of marketing products to BoP markets were 'successfully introduced,' well above the targeted 10, although it remains somewhat unclear how success was defined.

**No systematic data was collected on demand-side outcomes.** While there is anecdotal evidence that 2SCALE contributed to increasing BoP consumer access, awareness, demand, sales, and consumption, the impact of the BoP pilots on such variables was not monitored in a systematic way.

**While reducing malnutrition was not an explicit goal of 2SCALE, it is likely that 2SCALE contributed to improving food and nutritional security in many cases.** The quantitative impact assessments did not yield statistically significant results in this regard, but in all our case studies except Heineken/Nigerian Breweries, the partnership appeared to have contributed to reducing malnutrition. For example, in several instances 2SCALE contributed to increasing the availability and the hygiene of fresh dairy products and vegetables, and it developed a nutritious babyfood product target at BoP households.

### 7.1.4 Inclusion impact

**2SCALE's focus on 'inclusive agribusiness' appears to have worked well.** The programme paid particular attention to developing trust between partners and improving the bargaining power of smaller and sometimes 'excluded' value chain actors, such as smallholder farmers, smaller SMEs, and women. Compared to other PSD programmes, 2SCALE paid more attention to the organisation and governance of value chains, actively aiming to maintain a balanced distribution of market power between all value chain actors. However, in some cases – for example our two case studies in Mali - there was still some way to go towards achieving a balanced distribution of market power.

**The share of female SHFs and female-headed SMEs reached was less than the targeted 40%, but gender targets were met in terms of absolute numbers.** Moreover, 2SCALE exceeded the gender benchmark in many countries, and was particularly successful in strengthening female farmers and female-led SMEs in a number of countries where gender gaps are large, such as Mali and Ethiopia. The female SHF target was not met in percentage terms (36% instead of 40%), but was met in nominal terms (more than 200,000 SHFs were female). Similarly, the share of female-headed SMEs was 32%, but their total number was still above the target of 400, and the country-specific share often remained above the gender benchmark for the country. With hindsight, the 40% target for strengthening female-headed SMEs was likely not realistic in countries such as Mali, Nigeria and especially Ethiopia. The use of country-specific targets would therefore have been preferable, in order to take into account that there are countries with more severe structural or cultural constraints to gender parity and female empowerment.

**There are many other examples of where 2SCALE contributed to improving the position of women**. In virtually all partnerships reviewed, 2SCALE appeared to have increased to some extent the skills, employment, entrepreneurship, productivity and incomes of women – thereby contributing to their financial independence. In a possible second phase, 2SCALE's gender strategy could be made even more explicit.

### 7.1.5 Additionality

**Our case studies suggest that the direct input additionality of 2SCALE was weak, but that its indirect input additionality was strong.** Direct input additionality occurs when a partnership would not have been able to obtain other sources of funding. This appears to be the case particularly for partnerships involving smaller or newer companies, but less so for cases involving large established (Dutch or foreign) multinationals such as Friesland Campina, East West Seed International, or Heineken. It is reassuring to note that these are also the partnerships with the smallest 2SCALE contributions, as was already envisaged in the PPP Protocol. However, even if such partnerships may not necessarily have needed 2SCALE financial support, 2SCALE appears to have had some indirect input additionality in that it possibly induced these private sector partners to contribute more of their own resources than they otherwise might have. (This hypothesis remains to be tested further in future evaluations.) Private sector contributions reached the overall portfolio target of 50%, although this was driven by just a few cases involving large multinationals with large PSC contributions.

**There is ample qualitative evidence that 2SCALE has had (both direct and indirect) development additionality.** Development additionality is the extent to which public resources contribute towards a development goal that otherwise would not have been achieved**.** In cases with direct development additionality, MFA itself directly contributed to the achievement of a development goal that otherwise would not have been achieved. In cases with indirect development additionality, MFA had an impact on encouraging others (e.g., NGOs or knowledge institutes) to contribute to a development goal that otherwise would not have been achieved. Based on our case studies and desk review, we found evidence for both types of development additionality, particularly with respect to the strengthening of the position of (female) SHFs, the establishment of value chain linkages, and the introduction of new products aimed at BoP consumers.

### 7.1.6 Sustainability

**While it is still too early to assess the sustainability of partnerships, SCALE implemented many measures that help to ensure their sustainability.** Partnership facilitators appear to have played a vital role in many 2SCALE projects, particularly with respect to ensuring trust and ownership, which in turn is important for stability and also potentially sustainability. While some projects are still far from being financially or institutionally sustainable, there are quite a few examples of projects with significant progress towards achieving sustainability, and some are already being replicated by other organisations. Nevertheless, achieving a broader impact beyond the individual partnerships is currently still restrained by the fact that most of these partnerships are quite young (most were started in 2012, 2013 or 2014) and that the enabling environment is not fully conducive.

## 7.2 Recommendations for a second phase of 2SCALE

1. **Given the generally positive evaluation results, the evaluation team would recommend MFA to continue with a second phase of 2SCALE.** In line with the goal to refocus and streamline 2SCALE activities, criteria should be developed for selecting countries and sectors

where the 'gaps' are highest so that the final impact on food security is expected to be the highest. [39] Some possible criteria to use for country selection are: [40]

- gaps in agricultural sector development and SHF needs
- gaps in private sector development, including gaps in access to finance
- gaps in food security indicators (e.g., ' food insecurity')
- additionality relative to other programs that fund food security activities in this country/region (e.g., FDOV, GAFSP, DGGF, as well as other bilateral and multilateral donor programmes).[41]

2. **Reconstruct the Theory of Change on the basis of Impact Pathways.** While the ToC of 2SCALE was already quite strong, we believe that it would be useful to more clearly distinguish between demand, supply, and private sector development pathways. Using the general ToC framework with the three pathways will also allow for a better comparison of 2SCALE to other PSD and food security programmes supported by the Ministry.

3. **Streamline the M&E framework.** A strong monitoring and evaluation framework is important for learning and is needed to foster trust and accountability, but the combination of 9 countries, 53 partnerships, and the broad scope of activities has limited what can be monitored, measured, and targeted. 2SCALE's M&E staff has been struggling to collect sufficient information, as per the requirements of the M&E framework, through the BSSs, the partnership facilitators and the cross-cutting staff. The M&E framework was revised and extended several times, following recommendations of the project advisory committee, an appraisal committee, and IOB/ DGIS. Organising the tender for the impact evaluation and working with WUR/ LEI and PrC (while providing very useful support in the field) added new work and new indicators (e.g., the PrC's 'markers for change'). For a possible second phase, we would therefore recommend a more streamlined, coherent and consistent M&E framework with fewer targets. Such a framework could make a more efficient distinction between programme-level and partnership-specific M&E systems (with simpler performance monitoring for partners). For example, it may not be useful to have programme-wide targets on outcome and impact indicators that cannot be easily measured for all partnerships (e.g., volumes sold, productivity growth, revenue growth, income growth). Some of these outcome and impact indicators might be better assessed on a case study basis. However, since job creation is one of the main result areas for MFA, particularly for women and youth, we would

[39] In line with the EBRD's 'transition gaps', these development gaps can be defined as the 'distance' to the best performing benchmarking country (like the 'distance to the frontier' in World Bank Doing Business Indicators). It is generally the case that the larger a gap, the higher the potential impact. However, there also needs to be a minimum level of e.g. agricultural development or private sector development in order for the programme to be effective. Therefore, the relationship between gaps and potential impact is non-linear.

[40] When using these critera for country selection, it is important to take into account not only the average level in the country but also the regional/sectoral gaps, as a country may generally be quite developed (e.g. Nigeria) but may have regions (or even villages) with large agricultural gaps or food security gaps. It is also important to take into account regional economies of scale (e.g., if 2SCALE is already present in one country then it is relatively less expensive to have another partnership in the same or in a neighbouring country), or sectoral economies of scale (e.g., if 2SCALE already has a dairy programme in one country, it is relatively less expensive to also have a dairy programme in another country, as staff will already be experienced, training programmes will have already been developed, etc.)

[41] The additionality of 2SCALE relative to FDOV is discussed in Appendix B.

recommend to improve the monitoring system for measuring the quantity and quality of jobs created (by gender and age, and ideally relative to a benchmark).

4. **Consider paying more attention to the goal of improving nutritional outcomes.** One of the reasons for the lack of a positive impact on food security among smallholder farmers could be that supply-side activities with ABC clusters have mostly focused on increasing production (sometimes for commodities that are meant for export or for processing, or commodities like beer, the local consumption of which may not contribute to reducing malnutrition). When working with smallholder farmers, more attention could be paid to activities that improve their nutrition awareness and importance of e.g., diet diversity. In addition, BoP pilots could also more systematically report their impact in terms of their likely contribution to reducing malnutrition.

5. **Consider paying more attention to the business environment.** In our case studies, 2SCALE's potential for achieving a broader, systemic impact (beyond the individual partnerships) was often found to be constrained by non-conducive enabling environments. For example, partnerships were often found to suffer from weaknesses in physical rural infrastructure, public institutions, financial sector development, or the legal framework. In a second phase, 2SCALE could therefore consider to do more to improve the business climate through active policy dialogue. While MFA already provides broader support to sector development and the broader business environment, such policy dialogue would likely have more leverage when linked with private sector development programmes through PPPs and other financial instruments.

6. **Put more value on input additionality as a selection criterion when building new partnerships or exiting from existing partnerships.** If a partnership is led by a large (Dutch or foreign) multinational which simply has a business case to work with specific groups (e.g., to satisfy local content requirements) or reach out to the BoP, the input additionality of 2SCALE is limited. There may still be important development additionality, but if this derives from the expertise of 2SCALE/IFDC, it might be preferable to ask multinationals to pay in full for this expertise. 2SCALE should only be providing funding to a partnership if the private sector and public sector contributions are clearly complementary—if not, then public resources will simply 'crowd out' the private resources that would otherwise have been spent on reaching the envisaged development goals.

7. **Develop strategies for deepening partnerships.** While there are strategies for scaling up partnerships and ensuring their sustainability, no specific criteria or indicators seem to have been developed by 2SCALE. Given 2SCALE's commitment to deepening as well as scaling partnerships, we believes it behoves the programme to develop a deepening strategy based around cluster development, i.e. the programme would deliberately foster the emergence of a network of service providers and goods manufacturers that share a common economic or physical space, consume a similar range of services and share common values of commitment to quality, innovation and competitiveness.

8. **Continue to monitor all 53 partnerships.** The fact that many partnerships were phased out in 2017 constitutes a unique learning and evaluation opportunity. In practice, many

partnerships and start-up businesses fail in practice, so it will be useful to assess whether 2SCALE has played a positive role in making agribusinesses more successful and sustainable in the target countries. For this portfolio of phased out partnerships, it will be very interesting to assess the extent to which (a) the 'successful' phased-out partnerships were correctly deemed sustainable and scalable, and (b) 'unsuccessful' or 'unscalable' phased-out partnerships were indeed not sustainable or scalable (or whether another source of financing was found). 2SCALE already has plans to follow phased-out partnerships "in order to understand whether sustainability plans developed in 2017 have been successfully implemented." We would recommend to extend these plans and systematically monitor all 53 (both continued and phased-out) partnerships for several more years. MFA might consider reserving additional resources for this purpose and conduct a systematic endline evaluation of the 53 partnerships in a couple of years, so as to assess their sustainability and longer-term impact on food and nutrition security (e.g., the extent to which the program contributed towards making 'a healthy meal' more accessible for BoP consumers.) For that purpose it will be important to maintain the continuity of monitoring data collected for these phased-out partnerships.

## 7.3 Lessons learned for MFA's food security and private sector development agenda

1. **Use a common Theory of Change for all Food Security and Private Sector Development programmes, based on the proposed three impact pathways**. Each of these programmes could then be more easily compared in terms of their activities and results at the level of the three impact pathways (supply-side, PSD, and demand-side). A common ToC could also more clearly indicate the synergies and links between private sector development and food security impact, and should be linked to a streamlined M&E framework.

2. **Develop a stronger methodology for measuring 'inclusion impact'**, e.g. based on the framework used by EBRD. One element of this should be to use country-specific gender targets, based on national benchmarks, rather than (or in addition to) a target for the overall portfolio. The same could be done for youth employment or other inclusion indicators in case more inclusion targets are added in the future.

3. **When setting M&E targets, ensure that they are streamlined, measurable, and key to the ToC.** Indicators should be SMART (Specific, Measurable, Assignable, Relevant, and Timely), should not overburden the implementing agency, and should not change too often. Also, an indicator should be targeted only if there are sufficient resources available for monitoring. (In 2SCALE, this was not the case for e.g. access to finance or SME revenues). Finally, when commissioning expensive quasi-experimental impact assessments, stakeholders should be involved from the beginning in the design and setup of such assessments.

4. **There is potential to reduce overlap and increase synergies between 2SCALE and FDOV, the successor of which is now called the SDG Partnership Facility (SDGP).** In particular, 2SCALE seems better suited to reach smaller SHFs and incubate 'startup' SMEs from the 'bottom up', helping them to form value chain linkages in the process on an inclusive

basis. FDOV/SDGP appears better suited to work with established partnerships between large (Dutch) companies that work with local, more commercial SMEs. This is because 2SCALE, via IFDC, has a stronger local network and local presence on the ground, while FDOV, through RVO, has more connections with Dutch companies and Dutch embassies. RVO seems to be too 'far removed' from the field to substantially influence partnership formation or value chain linkages, although this could be done to some extent by local partners. In a second phase, 2SCALE seems best suited to continue focusing on smallholder farmers and 'startup' SMEs that are not yet commercially viable, while FDOV/SDGP may be better suited for partnerships involving established linkages between larger farmers, more established producer organisations, and larger, but not yet fully commercially viable firms.

5. **MFA could further sharpen the eligibility criteria and better coordinate between 2SCALE and other private sector development programmes funded by the Dutch government.** For example, MFA could usefully suggest a clear sequence through which private partners can first apply for funding from 2SCALE, later upgrade to SDGP, and eventually to non-concessional funding such as DGGF. One option would be to support small and not yet commercially viable partnerships (with high potential to become commercially viable) first through 2SCALE and then upscale them to SDGP as they grow and form established value chain linkages. This could then eventually prepare them for non-concessional investment finance, for example, from DGGF. Similarly, more linkages could potentially be made with embassy programmes and other MFA-supported programmes that provide technical support to cooperatives and farmer organisations, such as Agriterra.

# Appendix A Case studies

## Case study selection

In phase I of this evaluation, SEO conducted 6 case studies in 3 countries. In order to ensure a representative sample of countries and partnerships for the 2SCALE evaluation, the following sampling procedure was used:

1. Select a representative sample of 3 countries, based on a set of sample selection criteria agreed during the kickoff meeting.
2. Within each country, select a representative sample of 2 partnerships.

**Step 1: Country Case Selection**

For the selection of 3 out of the 9 2SCALE countries, the evaluation team used the following set of sample selection criteria to 'rank' countries:

- At least 1 country with a strong staple food focus
- At least 1 country with a developed horticulture sector
- At least 1 landlocked country (e.g., Mali, Uganda)
- At least 1 English and at least 1 French speaking country
- At least 1 West African and at least 1 East African country
- At least one country with partnership contributions >€1.5M
- A representative mix in terms of the country's size of the agricultural sector (as measured by agricultural value added in % of GDP)
- A representative mix across income levels (as measured by GDP per capita)
- A representative mix of access to finance gaps (as measured by the World Bank)

Table A.1 Overview of countries and selection criteria

| Country | Staple food focus | Developed horticulture sector | Agricultural value added in % of GDP | CAADP score (% of pub. Exp. on agriculture) | Access to finance gap | GDP per capita (2015) | Language | Part of Africa |
|---|---|---|---|---|---|---|---|---|
| **Ethiopia** | ✓ | ✓ | **41%** | **12%** | **M** | **$619** | **English** | **East** |
| **Nigeria** | ✓ | | **21%** | **3%** | **M** | **$2.640** | **English** | **West** |
| Uganda | ✓ | | 26% | 4% | S | $705 | English | East |
| Kenya | | ✓ | 33% | 4% | S | $1.377 | English | East |
| Ghana | | ✓ | 21% | 3% | XL | $1.370 | English | West |
| Mozambique | | | 25% | 7% | M | $529 | Portuguese | East |
| **Mali** | ✓ | | **41%** | **5%** | **L** | **$724** | **French** | **West** |
| Benin | | | 25% | 2% | L | $762 | French | West |
| Côte d'Ivoire | ✓ | | 20% | 3% | XL | $1.399 | French | West |

Source: Source:SEO Amsterdam Economics based on 2SCALE monitoring data

The table above ranks each of the 9 2SCALE countries according to these criteria. On the basis of this table, the evaluation team selected Ethiopia, Nigeria and Mali as the three case study countries.

**Step 2: Partnership Selection**

For the selection of representative partnerships within each of the case study countries, the evaluation team used the following key sample selection criteria:

- A representative mix across product groups (veg/fresh produce, soy-oilseeds, animal-prod related, staple-crop related)
- A representative mix across partnership types (VC-input, VC-output, ABC PPP)
- A representative mix in terms of the level of private sector contributions (PSC)
- At least 3 BoP pilot cases

As required by the ToR for this evaluation, the following minimum requirements were imposed:

- At least two partnerships with Large-Scale Enterprises (LSEs)
- At least two partnerships with local SMEs
- At least two partnerships at the ABC level

The table below lists the partnerships and their summarised characteristics for each of the proposed three countries: Ethiopia, Nigeria and Mali.

Table A.2 Selected projects and summary characteristics

| Country | Sub-sector / partnership | Product group | Lead partner | BoP Pilot | ICRA support | Pship Model | PSC (€ x1000) |
|---|---|---|---|---|---|---|---|
| Ethiopia | Maize-Dairy/ AKF-FAMILY MILK | Staple-crop related | AKF, FAMILY MILK | ✓ | | VC-OUTP | 1,831 |
| Ethiopia | Soya-Maize/ GUTS AGRO | Soy-oilseeds | GUTS AGRO | ✓ | ✓ | VC-OUTP | 845 |
| Mali | Rice-parboiled/PO | Staple-crop related | PO | ✓ | | ABC | 29 |
| Mali | East-West Seed International | Fresh and processed vegetables | EWSI | | ✓ | VC INPUT | 233 |
| Nigeria | Dairy-Milk/ FC WAMCO | Animal prod-related | FC WAMCO | | ✓ | VC-OUTP | 4,736 |
| Nigeria | Cassava-syrup/ HEINEKEN | Staple-crop related | HEINEKEN | | ✓ | VC-OUTP | 10,568 |

Source: Source:SEO Amsterdam Economics based on 2SCALE monitoring data

This selection of projects can be considered reasonably representative in that it provides a good mix of different product groups (all four are represented), size of partners (LSE, SME, ABC), BoP pilots and ICRA support. It also gives a good mix in terms of private sector contributions (PSC), covering both partnerships with very limited PSC (at least in terms of monetised contributions) and partnerships with a large PSC, such as FCW and Heineken.

# Case Study 1: AKF – Family Milk (Ethiopia)

Contact between AKF and 2SCALE was initiated in November 2014. An MoU was signed with AKF and Family Milk in May 2015 then a partnership agreement was signed in July 2015. The intervention started after the signing of the service contract/sub grant agreement with Family Milk late October 2015. Until the end of 2016 the focus was on input distribution to small-scale dairy farmers. At the beginning of 2017, 2SCALE and Family Milk began targeting the BoP market with small packaging milk products.

**Key Stakeholders**

- AKF
- Family Milk
- Milk supplying farmers
- Transporters
- Government extension offices.

**Goals**

The partnership aims to support 10,000 Ethiopian milk producers, to improve production/ productivity, through investment (on credit) in improved nutrition of animals, backed by contracts with dairy industries. It also wants to involve 10 SMEs.

**Input Additionality**

2SCALE has played a critical role in establishing the partnership. Partners did not know each other before 2SCALE. The hands-on support by 2SCALE at the start of the project helped the partnership to take off.

**Development Additionality**

The partnership would likely not have achieved its results without 2SCALE's contributions to partnership facilitation, coordination and capacity development. The development additionality of 2SCALE appears to have lied mostly in its efforts to facilitate market linkages and focus on innovation and capacity enhancements. The subsequent improvements in revenues, food and nutrition, and sustainable job creation would likely not have occurred in the absence of 2SCALE.

**Sustainability**

Farmers are now able to work almost without subsidy and the quality of the milk makes it attractive not only to Family Milk but also to other milk processors in the area. As a measure to ensure sustainability the Family Milk Manager said that they are thinking to establish a commercial partnership with another dairy firm ETETE DAIRY to sustain what is being done and possibly scale up market operations. Family Milk is also opening a new plant in Kera – Addis Ababa by reinvesting part of his profit.

The factors that have most contributed to enhancing the sustainability of the partnership are:

- Quality raw milk is in high demand hence relevance was high.
- The capacity of AKF in producing and delivering improved feed coupled with the ability of the smallholder farmers to improve the quality and quantity of the raw milk makes this partnership sustainable
- The mutual trust created by Family Milk and AKF paved the way for a viable and sustainable business model.

- The subsidy policy introduced to draw farmers in the business model have ben already almost completely removed while the overall turnover has increased.

Currently, the concerns of these two partners are more about scaling up than sustainability. AKF boasts that due to its economic potential scaling up should not become a major challenge. Improved access to credit, possible in the form of a guarantee fund from Family Milk, could help trigger growth in their operations.

Despite the potential for self-sufficiency, the Family Milk manager would like 2SCALE support to continue for some more time, in order to enlarge their platform of milk supply and continue to improve the quality of the milk by training; hence being able to further diversify their production and address even more market niches.

**Food and Nutritional Security**

a. Likely contribution to reducing malnutrition:
   - The AKF Family Milk partnership has increased the availability and hygiene of dairy milk, thereby contributing to improved food and nutritional security at the farm household and target market levels. For instance, milk yield per cow increased between 3 and 7 litres per day and the average butter fat content increased from 2.7% to 3.2% within 6 months.
   - Use of improved dairy feed has reached 310 tonnes, thus improving animal nutrition.
   - In 2017, AKF and 2SCALE plan to extend to Etete Dairy in another milk catchment area, which could further increase the contributions to reducing malnutrition. Further scaling however requires improved access to finance.
   - AKF also has a BoP Pilot, targeting the BoP market with a new brand of small size packaged milk products that could contribute to reduce malnutrition for BoP consumers.

b. Likely contribution to inclusive agricultural growth
   - The partnership increased the productivity and incomes of nearly 1500 smallholder farmers, many of whom are women. The supply of raw milk to Family Milk by smallholder farmers increased by 40% within 6 months. By the fourth quarter of 2016, smallholder farmers were supplying 10,000 liters per day from 1,495 dairy units.
   - Women also benefited particularly from job creation in the form of an expansion of cheese production to include mozzarella cheese to be sold to foreign supermarkets.
   - Special training and support was provided to selected women dairy farmers. A women-only training programme was introduced for the first time, with timings and venues carefully selected to encourage participation.
   - The gender strategy could be made more explicit and the monitoring of female inclusiveness activities could be strengthened.

c. Likely contribution to ecologically sustainable food systems
   - Dairy intensification through the wider use of nutritionally balanced dairy feeds reduces the impact of roaming cattle on pasture resources and discriminate browsing of scarce vegetation, while ensuring that more manure is collected and made available for application as an organic fertiliser to food and fodder crop fields.
   - Better-informed and supported dairy producers face fewer disease challenges in their herds and are able to reduce their reliance on veterinary pharmaceuticals, which when used in excess have a negative impact on the natural environment and human health.

**Private sector impact**

The integration of AKF and Family Milk's operations within the partnership has demonstrated the potential in the dairy and livestock sectors for increased efficiency and profitability of linked supply chains within food value chains. It facilitates the development of new products and methodologies, expanding into new markets on the basis of increased revenues, higher effective demand and unit cost reduction. No instances of crowding out other feed suppliers or milk producers were observed, although the partnership does plan to challenge the market leader in Ethiopia - MAMA DAIRY - which will face new and potentially more efficient competition.

### Strengths and weaknesses

| Strengths | Weaknesses |
|---|---|
| • The lines of responsibility between Family Milk and AFK appear to be clear and effective. After an inception period in which the roles looked rather confusing, each partnership now has clear boundaries of operations allowing the joint farmers' training to be undertaken in a coordinated fashion. | • No evidence of an agreed and owned risk assessment and mitigation strategy for Family Milk and AFK. Given inherent risks related to animal health and human hygiene this could be a serious omission |
| • Family Milk has incorporated the Theory of Change principles in its intervention logic, especially the issue of additionality. | • There is no official and agreed exit strategy for Family Milk and AKF. |
| • The two partners Family Milk and AFK are working with good ownership of the process. AKF have already included 2SCALE in their overall operations. | • There is no explicit gender strategy or methodology in place. |
| • Financial sustainability is already at an advanced stage for Family Milk and AKF. The two companies already absorb some project costs, for example staff and training. There is an intention to continue the financing of farmers' training as a key for sustainability. | |
| • Managerial accountability is evident and is well structured at AKF. | |
| • Family Milk's capacity to diversify dairy production was successfully enhanced. Family Milk is also gaining marketing skills to penetrate new markets. AKF does not show substantial gaps in productive capacity while for farmers training benefits of the experience of Family Milk. Both companies are developing their own distinct brands. | |
| • Family Milk is diversifying their dairy production to enter urban cheese and yoghurt markets. The focus for this is wide and it does not necessarily include BoP consumers, but appears to be very profitable. | |

# Case Study 2: GUTS Agro (Ethiopia)

2SCALE started negotiating the partnership from July 2013 with GUTS Agro Industry and conducted a due diligence assessment. The partnership agreement was signed in November 2014. The partnership aimed to facilitate increased access to seeds and fertilizer, increased quality and built capacity in stakeholders as wells as improved post-harvest warehouse facilities and processing.

Two BoP pilots were implemented. The first is a corn soybean blend based product named 'Supermom' which was developed and launched. 2SCALE assisted with the technical product development, packaging and other marketing related activities. The product is a fortified baby food that provides a 70% price advantage to BoP consumers over similar alternative products. The other BoP pilot is a micro franchise distribution model 'Likie' customised to the Ethiopian context. It was initially piloted in 5 towns and is now operational with a distribution system in 4 towns

**Key Stakeholders**
- Guts Agro Industry
- Sidama Elto, Hunde Chewaka and Anger Abeya Farmer's Cooperative Unions
- Menagesha Biotechnologies
- District offices of agriculture and cooperative agency.
- Bako and Jimma Agricultural Research Institutes
- Hawasa University
- N2Africa

**Goals**
Involve 21,000 smallholder farmers and 34 small and medium enterprises (20 female-headed). The lead partner's target in terms of volumes equals 7,200MT of maize, and 1,890MTs of soybean over a period of three years.

**Input additionality**
IFDC approached Guts Agro with the proposal of forming a partnership. Earlier attempts to formalise commercial relations were unsuccessful. The partnership model and additional resources for capacity development and product design would likely not have been developed without 2SCALE involvement.

**Development additionality**
All stakeholders agree that 2SCALE contributed critically to the development impact reached by this partnership. Jobs were created, especially for women, new products and methodologies were introduced, food security and nutrition improved, revenues increased and costs reduced. Both partnership managers and other stakeholders agree that these results would not have been achieved in the absence of 2SCALE. The two critical development additionalities were:
- The creation of new product Supermom by Guts Agro, able to penetrate markets for children meeting also a demand for nutrition in the area.
- The distribution system of Supermom that provides sustainable jobs to more than 100 women in a fast-rising market.

**Sustainability**
The are several indications that the partnership is both financially and institutionally sustainable:
- Profits are positive and increasing due to increasing demand.

- The new brand product for babies and the constant supply of quality grain from the cooperatives to GUTS AGRO is sustainable and unlikely to be discontinued.
- The 2SCALE farmers, by getting a premium price for quality, have understood the importance of engaging in quality process.
- Quite critically, both GUTS AGRO and Sidama Elto cooperatives have retained 2SCALE technical staff and put them on their payrolls.
- The women working at the Likie sale and distribution of the Supermom baby product are making profits. The business is sustainable and has possibilities to expand to other women in other towns of the country.

**Private sector impact**

- Good agricultural practices for maize and soya, stabilisation of production areas and significant yield increases in both crops, have facilitated productivity and quality improvements in the processing industries.
- No instances of crowding out of other producers were observed, since the Supermom product and Likie distribution system were unique innovations from the partnership – no alternative similar products existed prior to the partnership. Given Supermom's current success, some crowding in can be expected in future years.
- To satisfy the growing raw material requirements to produce the Supermom soy-maize blend GUTS Agro brought an additional partner into the partnership: Sidama Elto Cooperative Union, a big Union with more than 100 primary cooperatives. Primary production capacity increased along with diversification of the supplier and beneficiary base, providing an early example of up-scaling.

**Food and Nutritional Security**

a. <u>Likely contribution to reducing malnutrition:</u>
   - Improving child nutrition is one of the main points of focus of this partnership. Supermom is a supplementary food targeting children of 6 months up to 2 years old, coming essentially from low income households. The new product is enriched with important nutrients to support the healthy growth of children.
   - Supermom's benefits to child nutrition generate positive impacts on mothers through a reduction in nutrition-related health concerns and improved quality of life for the families that consume the product.

b. <u>Likely contribution to inclusive agricultural growth</u>
   - The GUTS Agro partnership contributes substantially to increasing female employment, entrepreneurship, incomes and thereby greater financial independence for women. This principally occurs through the LIKIE distribution service of the nutritious Supermom BoP product for children. 400 less-skilled women were trained in door-to-door and marketplace direct sales. Now over 100 women are making a profit and have sustainable jobs in the business. 90 of these women are selling Supermom in 4 towns from their bicycles. One has opened a small shop selling Supermom and other food items in Dessie town. The business is sustainable and with possibilities of expansion to other women in other towns of the country.
   - Supermom addresses the needs of both children and mothers in the low-income segments of the market. Its custom-made, market-ready food production and distribution system is specifically tailored to low income consumers. Most of the baby foods in Ethiopia are mainly imported, resulting in high prices, unaffordable to the poorest segments of the population.

- Despite this remarkable success story, a comprehensive and effective gender strategy is still mainly lacking in the partnership. For instance, employment, BDS and income targets are not disaggregated by gender.
- Maize and soybean productivity and importantly grain and seed quality of smallholder farmers increased significantly, benefitting over 22,000 farms and allowing quality/quantity supply contracts at fairer prices to be established between the processors and the SHFs, building trust, enhancing sustainability and stabilizing farm incomes.

c. Likely contribution to ecologically sustainable food systems

- In order to improve maize and soy yields across many small farms, the partnership embarked on a broad programme of farmer sensitisation and training in improved farming techniques. These techniques involved improved soil management practices to reduce erosion and capture and conserve natural soil nutrients (a renowned speciality of IFDC), better pest management and lower use of pesticides, improved seeds and lower units of labour (male female and youth) per unit of output.
- The use of soy bean, a legume with nitrogen fixing rotations qualities, in a maize rotation prevents the disease build-up and nutrient depletion associated with intensive mono-cropping and the widespread adoption of innoculants for soy beans boosts yields and also reduces fertiliser use by improving uptake of soil nutrients, endogenous and exogenous.
- Higher grain yields are associated with increased maize stover and soy bean straw, which provide either soil cover against erosion or animal fodder for household consumption, which increases availability of manure and organic fertilisers.

### Strengths and weaknesses

| Strengths | Weaknesses |
|---|---|
| Since the PAC assessment, the intervention logic is improved and the partners are attaining the objectives of relevance, additionality and sustainability; finance is also embedded in the Theory of Change. | Risk assessment and mitigation are not a priority for the partners and need to be integrated into the business strategy. |
| The roles and responsibilities of the partners are well defined; partnership configuration enabled the development of a new product and an innovative franchising mechanism. | The project lacks a clear exit strategy, even though all partners are aware that the project may end soon and they are thinking and discussing on how to continue the 2SCALE approach. They know that market facilitation and training will be handed over fully to them. |
| The company has more than hundred staff with a capacity of producing 50 tons a day. It is led by a dynamic and visionary executive director. Their productive capacity is only partially exploited and GUTS AGRO is constantly looking for market opportunities. | Although the number of women benefiting is constantly rising, a clear gender strategy is needed that is more systematic and inclusive. |
| This process of transfer of ownership to partners is very well advanced. No signs of tensions were observed. Governance and accountability are high. | The exit strategy was not yet clearly formalised and agreed upon. |
| Sustainability measures were put in place at a very early stage of the project; it is fostered by the practice of project costs being assumed by the partners and staff, which is counter to the common trend of donor dependency. | The M&E system should reinforce its role as a management tool. Economic impact appraisal should be enhanced through simple tools like return on investment and gross margin analysis. The approach of selecting only one partnership by country and then assess it in depth could be replaced by a more effective M&E system able to regularly track financial and economic progress at all levels of the marketing chain. |
| Capacity development has been made a priority. The partners improve the quality of maize and reduce postharvest losses. The process is private-led as it reinforces profitability, inclusiveness and builds synergies between partners with benefits throughout the partnership. | The enabling environment is not fully conducive to growth and broader impacts are still elusive, due to flaws in the policy environment, regulations on financing and contract farming. |
| Effectiveness in operations especially in capacity development e.g. training and market linkages development. Cost-effective use of resources. | The monitoring and evaluation system is only partially meeting the demand of timely information per country, especially with regard to information on the economic status of the partnerships. |

# Case Study 3: Parboiled Rice (Mali)

The partnership aims to contribute to both the competitiveness and inclusiveness of the rice industry in Mali. It supports a significant number of SHFs to improve rice production and productivity, as well as local processors to further develop local processing and marketing of rice. The target is to supply the domestic market with 2,000 tons of improved parboiled rice by 2017.

**Key interventions by 2SCALE**

- Strengthen local networks and improve coordination
- Empower women parboilers, through improved access to paddy rice and parboiling equipment, and marketing & negotiation skills
- Facilitate access to quality agro-inputs for rice farmers
- Strengthen marketing strategies

**Goals**

Involve 5,000 smallholder farmers, of which 2,000 women, and 15 SMEs, of which 8 female-headed, by 2017.

**Key Stakeholders**

- MPC, Toguna (input suppliers)
- ODRS (parastatal/extension services)
- public extension services
- Kafo Jiginew (finance)
- Traders
- WAAP (development program, subsidizing processing equipment).

**Input Additionality**

Input additionality is limited as he rice parboiling sector in Mali is well served by a range of donors, NGOs and GOs. Many examples of good practices already exist, the application of which in the cases reviewed is limited.

**Development Additionality**

Development additionality is limited as well, as the development goals claimed could have been achieved without 2SCALE as well. Development additionality would have been larger if 2SCALE had showcased effective partnership as a conducive framework for technology, enterprise, association strengthening and quality upgrades. If this had been done, the broader impact would also have been larger, as other projects could have replicated across their own beneficiary-base, perhaps entering as technical services partners to complement 2SCALE's more social and enterprise organisation focus.

**Effectiveness**

Despite the main benefits of the business accruing primarily to a women's group that is part of a broad national network of rural cooperatives, we found little conclusive evidence of scaling up through the partnership. Support was concentrated on the grouping of women steamers to improve processing practices and quality management of parboiled rice, while the supply chain for quality paddy rice was not developed and the parboiled rice distribution system is still unstable. Also, the articulation of the steamer group – upstream with other producers' organisations and downstream with trader groups - was not sufficient to ensure a supply of good quality paddy for processing on the one hand and on the other hand a sufficient quantity and regular quality of milled rice, likely to interest customers with a view to contracting a business partnership.

**Sustainability**
For the group as a whole, the sustainability of this partnership is not obvious. However, the capacity building achieved with the support of 2SCALE might benefit the individual development of each separate member. Improvement in individual income from the production of parboiled rice could be sustainable for those who continue to apply the techniques. For the group to position itself as a company with a vision for developing its business, organisational and institutional reinforcement is essential. It will also be necessary to work on upstream and downstream development to ensure a quality supply chain for rice and ensure a marketing circuit for the finished product.

**Food and Nutritional Security**

a. Likely contribution to reducing malnutrition
  - Parboiled rice is higher in nutrients and fiber than polished rice and the local product will tend to be new season – therefore fresher and more palatable – than imported Asian 'white' rice which can be several years old, originating from stores in Thailand, Vietnam or India.
  - Since local rice still contains significant concentration of extraneous matter (dust, dirt, other seeds, even small stones and grit) its natural nutritional advantages are lost.
  - An area for exploration is the recovery of the rice bran from the husk, as the bran contains a nutritious – and commercially valuable – rice bran oil. As occurs in the partnership, most village millers are not able to separate the bran from the husk (nor the stones from the rice) due to the cost of the specialized equipment, and the bran is lost. The husks are often left in piles to rot, though are also a source of fuel for the parboiling process, a potential area for cost saving.

b. Likely contribution to inclusive agricultural growth
  - Given that the evaluation team was not able to determine the extent of any improvements in paddy and milled rice yields and quality, the contribution to productivity and incomes is deemed to be confined to the members of the cooperatives and in particular its management team.

c. Likely contribution to ecologically sustainable food systems
  - The partnerships contribute to a growing awareness of the economic potential of closer integration of sustainable crop production, processing and distribution and potentially render them more entrepreneurial, competitive and sustainable.
  - Rice also plays a role in crop rotations that can be quite profitable, with swamp rice crops making way in the same calendar year for another crop of vegetables, cereals or tubers.
  - The partnerships have established the foundations for a more systematic approach to parboiling development that can directly strengthen inclusive and profitable diversified and climate resilient food systems.

**Private sector impact**
Parboilers trained in business management, value chain linkage strengthening, quality management and equipment / productivity upgrades

**Strengths and Weaknesses of the Partnerships**

| Strengths | Weaknesses |
|---|---|
| • Increased awareness by coop members of the required measures to improve quality and volume of processed rice, including strengthening linkages with paddy producers and traders | • The parboiled rice partnership was not effective enough because the delivery of the first BSS was not up to the expectations. In spite of the efforts of the second BSS engaged, who worked only one year with the PEA, the achievements are recorded only within the group. |
| • Increased access to better processing techniques and equipment, business management practices and organisational development needs of the cooperative | • Good steaming practices are controlled by the steamers, but the framework for exercising the activity in the family courtyard of the group president does not lend itself well to mastery of quality in the process of transformation. We have seen that the know-how acquired by the steamers is sustainable, but they lack the materials and work environment. |
| • Strengthening the network of the three processor groups that make up the partnership, providing a foundation of common goals from which to build more sustainable businesses | • The choice of steamed parboiled rice may not have been the most relevant one in terms of achieving the highest end-beneficiary impact. The interventions have remained concentrated on the PEA without working on the articulation with other groups of Processors of parboiled rice in order to achieve a critical supply of quality product. |

# Case Study 4: East-West Seed International (Mali)

EWIT provides technology and training to smallholder farmers in Mali. The partnership is driven by linkages between women wholesale traders in Kati and Bamako, a trading company and a large-scale processor. The aim is for smallholders to use improved farming methods, sell collectively, and coordinate their production schedules to optimize profits and to switch to new EWIT varieties of onions, tomatoes, pepper, greens and pawpaw.

**Key interventions by 2SCALE**

- Network of seed providers
- Teach farmers how to use new seeds

**Goals**

Involve 15,000 smallholder farmers, of which 9,000 women, and 10 SMEs, of which 80 female-headed, by 2017.

**Key Stakeholders**

- EWIT
- Other partners
- Women wholesale traders,
- Madougou (trader),
- Eléphant Vert (organic fertilizers),
- US-ADF (development program, focusing on rural infrastructures)

**Input Additionality**

Input additionality is limited as the partnership is based on a pre-existing vegetable seed dealership of EWSI in Bamako supplying a distributor in Segou. However, the same support services may not have been provided by other donors.

**Development Additionality**

Improved productivity in onion production, improved product quality and better prices on the market improved the income of the members of the producer groups supported in the commune of Sébougou. According to our interviews, the villages concerned by the support of the programme also recorded less out-migration.

**Food and Nutritional Security**

a. Likely contribution to reducing malnutrition
   - By providing a wide range of fresh vegetables with their well-known contribution to balanced nutrition, the partnership does pay a role in facilitating the reduction of malnutrition.
   - The onion producers in Segou area contribute directly to food and nutritional security through their large production volumes, thereby helping reduce malnutrition by ensuring an adequate supply of this basic ingredient to practically all West African dishes. There is some diversification into other vegetable crops by onion producers which has similar benefits to that in Bamako.

b. Inclusive agricultural growth
   - The peri-urban vegetable producers of Bamako, one of the 2 EWS sites visited, provides homes, street-markets and supermarkets with year-round fresh vegetables, but at prices beyond the reach of most consumers, so tends to focus on middle and high income groups. There is some street hawking too that reaches lower-end markets.
   - The female onion producers have a close-knit organisation and can access valuable irrigated land with support from tribal leader and town council.
   - The women's coop has adopted the ICRA – Benin CASE approach, embracing farmer field schools, improved governance, business management, advocacy, reduced cost.
   - Women's conditions have improved: same surface area under production but double or triple yields. Previously they stored the onions in their bedrooms before selling, now they have communal storage for 20 tons of buffer stock.

c. Private Sector Impact
   - Women's onion cooperatives provide a prosperous example of effective technology and organisational development and transition to formal status, through local government business environment support and probable access to finance through local MFIs.
   - 2SCALE's BSS Amassa played a key role, operating on a fee-basis with an umbrella organisation to which coops belong. This could be a model for perfomance-based service provision that encourages transparency and accountability, generates trust, efficiency and credibility.
   - The 2SCALE activities have led a farmer group to initiate the construction of a packaging and storage centre with a value five times higher than the two-year 2SCALE subsidy.
   - The peri-urban vegetable producers of Bamako demonstrates good practice in production and marketing.
   - In the case of onions in North (Ségou), pre market seed supply becomes post-harvest expansion and ingress of new DPs but raises question of market distortion through narrow

focus on EWSI to exclusion of competitors. E.g. other potential suppliers include Rijk zwaan semences (https://www.rijkzwaan.com).

- Public agencies can see how private sector development benefits communities and the region. Potential for other PPP models to take root where local, province and national governments provide support and stability.

**Strengths and Weaknesses of the partnership**

| Strengths | Weaknesses |
|---|---|
| Increased in investment in onion production, which is typically done by women, and offered employment opportunities for both young boys and girls of the locality.<br><br>Improved product quality.<br><br>Reduction in out-migration | 2SCALE does not directly support access to finance<br><br>Partners' needs for training and guidance in financial issues is not attended to<br><br>Low internal capacity of farmer organisations needs addressing<br><br>2SCALE's package of services is incomplete<br><br>Banks / MFIs need to provide non-financial services to their potential clients to improve their technical and financial viability – would render the artnerships more sustainable in the long run |

# Case Study 5: Friesland Campina WAMCO (Nigeria)

Friesland Campina WAMCO (FCW) sells evaporated milk and powder, and locally processes milk powder which is largely imported from the Netherlands. With the support of 2SCALE, it is expanding local sourcing of fresh milk, particularly from Fulani pastoralists. The partnership aims to develop a viable business model for local sourcing of milk from smallholder farmers and pastoralists. It involves a limited number of producers but aims to have scaling and spillover effects to other dairy firms in Nigeria and elsewhere.

The partnership began in July 2012 with an awareness campaign, targeting 3,500 milk producers across 43 locations in Nigeria. Collaborations were built with existing dairy cooperatives, veterinary service providers, government livestock experts, extension agents and local NGOs. Technologies for animal nutrition and milk processing were identified and scaled out.

Fulani dairy cooperatives now deliver over 7,000 litres of milk every day to two milk collection centers in Bale and Alaga. There, the milk is tested for quality and purity, pasteurized, chilled and trucked to Lagos for processing. 2SCALE field staff aim to visit every community at least twice a month to monitor progress, provide technical advice, and build confidence in this new way of doing business.

**Key interventions by 2SCALE**

- Mobilise and train milk producers on production technologies (milk quality, animal health and nutrition) and enterprise management (cost-benefit analysis, business planning, contract negotiation)
- Invest in milk collection centers and supply chain logistics (partnership with Mueller)
- Set up milk quality control systems and efficient payment systems
- Roll out a tsetse control program
- Ensure maintenance/improvement of feeder roads linked to collection centers
- Develop pasture reserves for Fulani pastoralists, improve access to water for cattle
- Facilitate coordination among local actors (milk suppliers, vet services, feed distributors, banks) and other stakeholders including companies and local government.

**Goals**

Involve 2,000 Fulani (pastoralist) milk producers, mostly women; and 15 small and medium enterprises (5 of which women-led) by 2017.

**Key Stakeholders**

- Nigerian Federal Ministry of Agriculture, local governments
- Nigerian Tripanosomiasis Research Institute (tsetse fly)
- Mueller (cooling logistics)
- Barenbrug (forage)
- CDI Lines (hygiene)
- Festula Feeds, Terra Tiga (concentrate feed), Ceva Sante (vet drugs), Animal Care Konsult (vet drugs and premixed feeds)

**Input Additionality**

Given that the partnership between FC Wamco and farmers was already established in 2010, at least 2 years before 2SCALE got involved, it cannot be claimed that 2SCALE was intrinsically additional to the partnership. Indeed, it was FC Wamco that sought out 2SCALE because of its

BoP expertise in relation to human nutrition elements, which FCW lacked but which was important for the FCW brand PEAK milk.

There are a number of activities that may not have taken place to the same degree or at the same pace without 2SCALE, but they probably would have taken place even without 2SCALE support (as these activities are relatively standard for Friesland Campina and applied in their other development geographies, e.g. in Vietnam):

- Technical assistance to herders in veterinary services, herd management, dairy hygiene, training in milking techniques.
- Setting up a milk delivery network to the new milk collection centres that were established in the different production zones, with daily collection of milk from the centres;
- Establishment of a bulk collection centre to facilitate collections and reduce wear and tear on vehicles and rural roads.

**Development Additionality**

The partnership has contributed towards a number of development goals that otherwise would likely not have been achieved:

- Growth in milk yields has been significant (albeit from a low level).
- Fulani milk is now an important component of the FWC supply chain and is sold in the national capital, an outcome that would have been inconceivable a few years ago.
- Other development goals reached are: hygiene improvements; household income growth; women empowerment and improved economic conditions of the participating Fulani families.

In addition, the partnership has the following (potential) catalytic and demonstration effects:

- It has established beyond doubt that the Fulani herders can adopt improved dairy techniques, engage in the market for hygienic fresh milk, and transition from seminomadic, subsistence pastoralism to a more intensive from of livestock production, with greater potential for revenue generation and employment.
- It has also shown that, contrary to popular belief, the Fulani men are able to empower their wives to manage dairy production as a commercial enterprise, retaining control of the milk revenue for their own and their family's use. This is an important form of 'inclusion impact' that could be replicated by others.
- The principle of local sourcing of fresh milk from SHF herds has now been well-established. With funding expected from FDOV, FWC is planning to expand its SHF operations over the next 3-5 years, using a settled farmer model, while continuing to maintain sourcing from Fulani herds.
- Due to its novelty, the 2SCALE model potential demonstration effects and therefore potential systemic effects on the dairy sector in Nigeria. There are already signs that the model is being replicated, e.g. USAID is planning to adopt the 2SCALE/ Fulani model in Fulani heartlands in Kaduna and Kano in the north of the country.

**Sustainability**

Since the partnership is now well established and the technical issues of nomadic herds' milk production and rural enterprise development have mostly been resolved, the partners now believe that they no longer depend on 2SCALE and can continue without it. However, they do see a continuing role for 2SCALE in advising the board.

**Food and Nutritional Security**

a. <u>Likely contribution to reducing malnutrition</u>

- The partnership has increased the availability and hygiene of dairy milk in remote rural areas and among semi-nomadic, marginalised tribes lacking access to basic social services. This has contributed to improved food and nutritional security at the farm household level.
- Through the daily sale of milk under transparent market conditions, the Fulani communities have increased their integration into the local market systems for food and other necessities, including health care and nutrition services, as well as their ability to fund purchases of food and medicine.
- Wara cheese production for local sale and home consumption has been sustained, along with its contribution to family nutrition and direct benefits to the infant and child population
- Increased domestic dairy production at the national level, in FCW's target markets.

b. Likely contribution to inclusive agricultural growth

- The key contribution has been the central role of women in the production of milk, the management of the dairy enterprise and the resultant growth of a stable dairy industry.
- The partnership has been instrumental in bringing about a cultural change in the participating Fulani communities that could have impact for all Fulani herders, a case of direct increase in women empowerment
- In order to fully benefit from the partnership and its technical and commercial support, especially milk collection and sale, the Fulani cattlemen have transferred to their spouses the management of their dairy production as a commercial enterprise.
- Although the men may still actually milk the cows in some instances, and are named on the bank accounts that are credited with the milk revenue, the women are given control of the actual cash from the milk sales for their own and their family's use.
- Income growth in dairy families has facilitated access to food and nutrition, especially since the women in the households are the ones who receive and manage the income and are therefore more likely to attend to the food needs of those in their care than when the men controlled the cash. In this way the partnership also contributes to inclusive agricultural growth.

c. Likely contribution to ecologically sustainable food systems

- Daily milking and the improved herd management that this requires favours settlement of nomadic herds and reduces the impact of roaming cattle on pasture resources and indiscriminate browsing of scarce vegetation, while ensuring that more manure is collected and made available for application as an organic fertiliser to food and fodder crop fields.
- Through greater awareness of improved herd management practices, the supported transhumant Fulani dairy producers face fewer disease and animal nutrition challenges in their herds and make more sustainable use of available resources of vegetation and water
- Due to desertification and climate change, the Fulani are tending to graze their herds for longer periods in the more humid southern zones of their traditional grazing areas, competing with the settled populations of each zone for land-rights, fodder and water resources, creating many opportunities for inter-tribal conflict. By demonstrating a viable economic model for a more settled Fulani way-of-life, the partnership is opening up opportunities for a more ecologically sustainable production system, better able to face more critical future challenges, and giving time for the Fulani to adapt to the new conditions. The role of settled dairy farmers under FDOV will be key to this transition.

**Private sector impact**

The partnership has demonstrated the potential in the SHF dairy sectors for increased efficiency and profitability and integration into urban, monetised supply chains. It has spurred donor-, government- and above all private sector interest in dairy, with its strong value addition potential.

No instances of crowding out of other milk producers were observed, due to the very small scale of the Fulani and proposed settled farmer operations.

**Strengths and Weaknesses**

| Strengths | Weaknesses |
|---|---|
| • Clear areas of responsibility for each partner: 2SCALE does grouping and training, Wamco does milk collection and processing, Goverment was meant to do infrastructure – bore holes and roads but is not really an active partner like FCW, farmers and 2SCALE. | • Government is slow or unwilling to deliver its planned infrastructure contributions and provide the required research and support for extending the model to settled farmers and converting Fulani to settled dairy farming |
| • Detailed planning of activities has led to efficiency in execution. 2SCALE provides FCW access to local partners. As a private buyer of milk FCW needs a hands-off relationship with farmers so it can remain within its essential role of off-taker. | • Low production, below <50% of target (4M kgs p.a. vs 10M kgs p.a). The reasons found for this low performance are cultural (Fulanis unwilling to change deeply engrained traditional practices) and institutional (government did not ensure required water and feed/ fodder resources were always available). The new FDOV programme targets the process of transition to settled farming but does not set not specific output goals. |
| • Success in bringing improved incomes to nomadic groups (man owns and milks the cows, women retain the income from the milk sales). | • Limitations of nomadic farmers as milk suppliers; they resist working on non-traditional lines, although tribal leaders can be effective in bringing herders on board with new approaches. |
| • Guaranteed market for milk, daily cash sales, men only get money selling cows, women sell milk daily. | • The partnership needs to go beyond 2SCALE to scale further, moving on from pastoralists to settled farmers. The new FDOV programme might be able to fulfil this role. This will require new resources, e.g. a specialised feed company, a dairy consultancy, fodder research and a supply of new dairy cows (in-calf heifers). |

# Case Study 6: Heineken / Nigerian Breweries / Psaltry (Nigeria)

The partnership between Heineken/ Nigerian Breweries and Psaltry is a collaboration to improve the productivity of smallholder cassava farmers in Nigeria and consequently support economic development and promote inclusive growth. The partnership aims to enhance farmers' cassava yields and increase the supply of high-quality cassava roots to Psaltry which will, in turn, provide industrial quality cassava starch for Nigerian Breweries to extract maltose syrup for use in the brewing process.

**Key interventions**

- Mobilise smallholder cassava farmers
- Provide technical assistance to increase productivity
- Build linkages among value chain actors and supporters
- Improve access to farm equipment and agro-inputs
- Expand Psaltry's factory, enabling them to absorb the additional production resulting from farmer mobilisation and training

**Goals**

Involve 1,500 smallholder farmers (375 women) and 35 small and medium enterprises (7 women-led) by 2017. Expand production to 100,000 tons per year of cassava tubers, to be processed into 24,000 tons of starch.

**Key Stakeholders**

- Notore, TAK Agro (fertilizers)
- IITA (cassava cuttings)
- First City Monument Bank, Excel Micro Finance Bank, and Bank of Agriculture
- Local transporters
- BAT Nigeria Foundation, DFID-UK.

**Input additionality**

Heineken/Nigerian Breweries were already aware of Psaltry but prior to 2SCALE they had not identified a clear pathway of their own to develop local sourcing, in the face of unfavourable cost ratios for cassava starch vis-à-vis alternative sources of maltose. 2SCALE's hands-on field-level approach and the financial support provided Heineken with a cost reduction incentive and a technical road map for full engagement with Psaltry that enabled Heineken/Nigerian Breweries to fulfil local the sourcing commitments desired by the national authorities. There may have been a business case for doing so, but Heineken / Nigerian Breweries's level of involvement at the field level would have likely been lower without 2SCALE (according to both IFDC and Heineken). They helped design the partnership 'from the bottom up,' including equipment design, procurement and commissioning at the Psaltry plant, with co-funding, and contractual commitments to purchase the starch produced at sustainable prices.

**Development Additionality**

2SCALE supported the out-grower scheme establishment and management with their extensive prior experience. It also piloted FarmForce software for harvesting and logistics management. Under the partnership a new starch line at Psaltry was designed and equipped with Heineken / Nigerian Breweries' financial and technical input. Without it, the market for tubers and starch would have been heavily constrained and the field development and farmer involvement as well.

Given the poor financials of cassava starch production, Heineken / Nigerian Breweries would unlikely have taken local sourcing to anywhere near its current levels. Cassava starch supplied to Nigerian Breweries is now used in the production of many brands of alcoholic and non-alcoholic drinks for Nigerian markets.

**Sustainability**

- 2SCALE's role in the development of local sourcing appears to be criticial, providing technical staff on the ground, with hands-on support. Psaltry cannot currently continue on its own; it needs more time to learn how to build its capacity and become more profitable.
- Cassava root has more than doubled in price due to rampant cost and price inflation as the economy suffers the loss of oil revenue due to collapsing international prices and competition from buyers/consumers of cassava as a food product has bid up the price farmers can get for their crop. This undermines the sustainability of the partnership as Psaltry is unable to obtain sufficient root to operate at the 70-75% capacity required for equilibrium or profitability.
- The processor currently runs at 45% capacity, which is unsustainable. Heineken aims to keep Nigerian Breweries committed to cassava starch procurement despite higher costs and lower than expected volumes.
- The support from the Dutch government lends legitimacy to the partnership and ensures longer-term commitment than most PPP programmes, which normally run for only 3 years instead of 2SCALE's 5 years. Heineken intends to expand the 2SCALE programme into Cote d'Ivoire for the broken rice value chain with partnership at two of three new rice mills.
- The partnership has not had enough time to become sustainable. Given Heineken's late start, the end of 2017 is too soon to achieve sustainability, but a full 5 years is normally sufficient for the required knowledge transfer to take place.

**Food and Nutritional Security**

a. Likely contribution to reducing malnutrition
   - While this partnership contributes to inclusive agricultural growth, it does not specifically reduce malnutrition. Any impact on nutritional security occurs indirectly and mostly unintended through the increases in production and availability of cassava tuber for human consumption, as a result of shortfalls in off-take by Psaltry, the "leakage" of Psaltry-supported production by farmers selling direct to non-starch buyers (as a result of strong prices for tubers as food), replication of better techniques by non-participating cassava growers and wider availability of high-yielding, low-cyanide, more disease-resistant varieties and the agro-inputs required to boost yields.
   - Psaltry provides a "floor price" for tubers that are an inducement to farmers to engage in improved cassava production, boosting the supply of cassava for food as well as for starch.

b. Likely contribution to inclusive agricultural growth
   - Add value through local processing (e.g. "wara" cheese by Fulani women). Psaltry, located in Iseyin in southwest Nigeria, buys fresh cassava tubers from 1,500 farmers (375 women) and processes it into starch and syrup for sale to the brewery.

c. Likely contribution to ecologically sustainable food systems
   - Improved agronomic practices, especially tillage and reducing the exposure to erosion. These improved practices are carried over to other crops and farms through demonstration and replication.
   - Technically correct use of agrochemicals for cassava is beneficial to soil and plant health and the resilience of the ecosystems to intensive cultivation.

- Once established, cassava provides a dense protective canopy of foliage that protects the soil from the intense rain and wind erosion of the humid tropical conditions of Iseyin.
- Farmers' exposure to extension messages raises farmers' and rural communities awareness of the impact of farming on the environment and the importance (and short-term economic benefits) of adopting more sustainable practices.

**Private sector impact**

- At least 35 local businesses are involved in various ways – transportation, finance, production of cuttings. Psaltry's farmers have been formally organised into a cooperative, and membership has increased from 640 to 1300. Most members have been linked to a bank or microfinance provider for credit.
- In 2016, Psaltry purchased 28,375 tons from 2SCALE clusters at a pre-agreed price that was 20% above the market price. This enabled the firm to triple its starch production, and to further expand sourcing plans for 2017.
- No cases of crowding out have been observed. Crowding in is more apparent, given DFID's role in developing new nucleus farms[42] and greater interest by SHFs farmers in producing cassava more intensively and profitably.
- Over 600 farmers have been mobilized and trained, and are using new high-yielding varieties, specialised fertilizers, improved production methods, and low-cost harvesting and planting equipment to reduce time and labour costs.
- The partnership has created an enabling business environment for cassava farmers in Iseyin, They now have assured sales and a strong farmer cooperative which provides them with the opportunity to access finance to expand and improve their businesses.

[42] The UK's Department for International Development (DFID) is co-funding 2000 hectares of nucleus farms that Psaltry will manage as production and farmer-training centers.

## Strengths and weaknesses

| Strengths | Weaknesses |
|---|---|
| The partnership has been a moderate success due to an initially sound business case for substituting cassava starch for sugar or sorghum as a source of maltose in beer production. Compared to the start of the project, the economic conditions for the cassava sector and the wider economy of Nigeria became much less favourable, in part to a significant currency devaluation. However, NB backed by Heineken remains committed to the partnership, as does Psaltry. | At the time of the field visit, the partnership was under serious strain due to poor profitability in both the cassava starch and beer markets, but Heineken intended to continue its engagement as long as possible. |
| 2SCALE systems fast-tracked the PPP with Heineken / Nigerian Breweries; the partnership was put in place within 6 months from the first phone call – this was seen as an easier process than for FDOV. The partnership has acceptable coordination mechanisms and committed management, especially at Psaltry. Nigerian Breweries plays a less active role but Heineken follows the partnership as closely as the schedule of its NL-based local sourcing manager allows. | Sorghum, the main locally sourced alternative, also suffers from volatility and price spikes of over 100%. The Nigerian economy is a chaotic operating environment in most sectors with substantial government interventions creating additional distortions. Cassava root has more than doubled in price due to rampant cost and price inflation as the economy suffers the loss of oil revenue due to collapsing international prices and competition from buyers / consumers of cassava as a food product has bid up the price farmers can get for their crop. This undermines the sustainability of the partnership as Psaltry, the cassava processor, is unable to obtain sufficient root to operate at the 70-75% capacity required for equilibrium or profitability. The processor currently runs at 45% capacity, which is unsustainable. |
| 2SCALE provides embedded services and TA to Psaltry and works as a team with the firm, transferring much-needed skills in process management and agronomy. Psaltry is enthusiastic and committed but needs to become more professional. As a result, 2SCALE has been able to build trust among the key stakeholders in both value chains and in turn build a good relationship with the suppliers and get through to them when the companies are unable to do so. Nestlé is also Psaltry's commercial partner, providing additional reassurance to lenders. | 2SCALE visibility was low; Heineken only found out about them through a chance meeting with BoP, but once the contact was made the process of PPP set-up was fast and efficient, like working with a private sector operator The partnership's performance can be improved by speeding up flagging of any major issues affecting the partnership or the business. These can often be held back for the 6-monthly meetings. Bi-monthly discussions needed instead. Nigerian Breweries needs to be sympathetic to the partnership's difficulties in the challenging operating environment. It will buy what Psaltry has to offer, on convenient payment terms. Heineken's role as business partner facilitates Psaltry's access to finance through First Monument Bank, |
| The partnership already receives substantial support from NB and Heineken. Psaltry has strengthened its management with partnership support (implementation of Total Process Management and general staff training at Heineken / NB's Management Training Centre). | The adverse business climate in Nigeria and the difficult operating conditions in the beer and cassava sectors – high costs of inputs and high unit prices of processed products in a low-price, low consumption beer market. Consequently, the programme capped cassava starch purchases at 5,000 tonnes p.a. for the foreseeable future (was 3500 t in 2016). Earlier plans to make annual increments of 5000 tonnes in starch procurement have been shelved. |
| The fact that funds come from the Dutch government is important, lends legitimacy to the partnership and ensures longer-term commitment than most PPP programmes. These normally run for only 3 years instead of 2SCALE's 5 years (although Heineken did not come at the start so is not ready to stand alone yet). | Need to reduce "leakage" of cassava root to the market for the tuber as a food ("side-selling" of Psaltry-supported crop) and expansion of area under "estate farms", 300 ha units directly operated by Psaltry, which have the potential to show-case higher output methods and economies of scale. |
| The Nigerian government, through its Anchor Borrower Scheme, will distribute loans of 130 million Naira (€ 380,000) to more than 250 farmers linked to Psaltry. Disbursements are expected in the second quarter of 2017. UK's Department for International Development is co-funding 2000 hectares of nucleus farms that Psaltry will manage as production and farmer-training centers. | The partnership has not had enough time to become sustainable. Given Heineken's late start, the end of 2017 is too soon to achieve sustainability, but a full 5 years is normally sufficient for the required knowledge transfer to take place. |

# Appendix B 2SCALE-FDOV comparison

*As part of this evaluation, SEO carried out a Comparative Study between 2SCALE and two other food security and private sector development (PSD) programmes supported by the Dutch government: FDOV and GAFSP. This appendix summarises and updates the key conclusions of that study with respect to the similarities and differences between 2SCALE and FDOV.*

## The FDOV programme

The Facility for Sustainable Entrepreneurship and Food Security (FDOV) is – like 2SCALE – a Dutch government funded PPP programme that "encourages public-private partnerships in the field of food security and private sector development in developing countries."[43] The overall objective is "to improve the food security situation and to strengthen the private sector in developing countries, in the best interests of the overall population".[44]

Public-private partnerships under FDOV should consist of "government bodies, the industry and Non-Governmental Organisations (NGOs) or knowledge institutions".[45] These are expected to form a collaborative venture with the Ministry of Foreign Affairs. In return they can be eligible for a subsidy.

The public sector finances up to 50% of individual FDOV project budgets. The remaining share must be financed by private parties. At least 25% should come from private companies and the remainder may come from NGOs or local public agencies.[46]

The programme is administered by RVO (Netherlands Enterprise Agency) at the request of the Ministry of Foreign Affairs. Partnerships can apply for subsidy during an open call for tenders.

Following two calls for tenders, one in 2012 and the second in 2014, a total of 46 projects had been approved as of end-2016, of which 26 during the first call (including 8 subprojects) and 20 during the second call.[47] The total subsidy awarded for these projects was EUR 128.8 million. A third call for tenders is currently underway.

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43 http://english.rvo.nl/subsidies-programmes/facility-sustainable-entrepreneurship-and-food-security-fdov
44 https://aiddata.rvo.nl/programmes/NL-KVK-27378529-23877/?tab=summary
45 http://english.rvo.nl/subsidies-programmes/facility-sustainable-entrepreneurship-and-food-security-fdov
46 KIT (2016), Mid-Term Review of the Facility for Sustainable Entrepreneurship and Food Security (FDOV), page 84.
47 However, five of the projects selected during the first call have stopped implementation (either completed or finished prematurely) and one of the 20 projects awarded in the 2014 call never started, due to local context problems.

# Key similarities between 2SCALE and FDOV

Based on existing evaluations, desk research and stakeholder interviews, we have identified four key similarities between 2SCALE and FDOV, discussed in more detail below:

1. **Overall objectives.** Both 2SCALE and FDOV are aimed at food security and private sector development.
2. **Public-private partnership (PPP) model.** Both 2SCALE and FDOV use a PPP model, and Dutch companies play an important role in both programmes.
3. **Geographic coverage.** FDOV's list of eligible countries includes 8 out of 9 2SCALE countries, and both programmes are very active in Kenya and Ethiopia.
4. **Sectoral focus**. In terms of agricultural commodities, both FDOV and 2SCALE have a broad focus.

## Overall objectives

Both 2SCALE and FDOV are aimed at food security (FS) and private sector development (PSD). Within FDOV, 60% of the subsidy budget was to be awarded to projects focusing on FS and 40% to PSD projects. This rule was applied in both the 2012 and 2014 calls. Out of the 42 currently active FDOV projects, 29 (69%) designated themselves as 'Food Security' (FS) projects while 13 (31%) applied for the theme 'Private Sector Development' (PSD).

In practice, virtually all 2SCALE and FDOV projects or partnerships have both an FS component and a PSD component. The FS component often focusses on the 'supply side' (increasing food supply, e.g. through training of farmers) but in some cases the 'demand side' is addressed as well (increasing food consumption or utilisation, and reducing malnutrition – discussed further below). As RVO acknowledges, an FDOV project that is classified as a PSD project may also contribute to FS, and an FS project can contribute to PSD.[48] This is more clearly explained in Chapter 2 on the Theory of Change, which shows that both 2SCALE partnerships and FDOV projects can be classified in terms of a similar ToC with three interlinked impact pathways (FS supply side, PSD, and FS demand side).

## Public-private partnership model

Both 2SCALE and FDOV are based on a public-private partnership (PPP) model. FDOV requires that the PPP consists of at least (a) 1 private party; (b) 1 public body, and (c) 1 NGO and/or knowledge institute. The partnership also needs to have at least 1 partner based in the Netherlands and at least 1 partner based in the country of implementation.[49]

In 2SCALE partnerships, most partners are private and a local public partner is not required, but the key public partner for both programmes is often the Dutch MFA that provides the public

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48 RVO (2017), 'Terms of Reference – Impact Evaluation FDOV', p. 6.

49 KIT (2016), p. 27. This refers to the second call, i.e., FDOV II. According to one interviewee, FDOV I did not require a public partner because this was not considered feasible or desirable in every country, among other reasons due to governance concerns.

funds.[50] In FDOV, the public body can be either a Dutch public body (e.g. the Ministry of Foreign Affairs, or a Dutch embassy) or a local public entity, including central or local government bodies (state, county, municipal, or local variant of it) or semi-government parties. A knowledge institution is not considered as a public institution.

Neither 2SCALE nor FDOV partnerships strictly require the participation of a Dutch private partner, but in practice Dutch companies play an important role in both programmes. In 2SCALE, some of the largest partnerships involve Dutch multinationals (e.g. Heineken, Friesland Campina, East West Seed International). In fact, the partnerships with the largest private sector contributions are related to partnerships in which large Dutch multinationals are involved. Two of these partnerships (Heineken and Friesland Campina) are responsible for about a third of total PSC. Most FDOV partnerships do involve Dutch companies, and in some cases the same Dutch company (e.g. Agrico) is involved in both FDOV and 2SCALE programmes. Similarly, there are NGOs (e.g., BoPInc) that are involved both FDOV and 2SCALE.

## Geographic coverage

While 60 countries are potentially eligible for FDOV partnerships,[51] thus far FDOV partnerships were funded in 28 countries.[52] From the perspective of 2SCALE, there is a high degree of overlap in terms of eligible countries. As Table B-1 shows, FDOV is active in virtually all 2SCALE countries (except Côte d'Ivoire), and there are particularly many partnerships in Ethiopia and Kenya.

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50 In contrast with FDOV, Dutch embassies do not play an active rol, if any, in 2SCALE projects. The 2SCALE consortium has local staff and hence can benefit from its own network. There has been some criticism however that there sometimes has been too little coordination with Dutch embassy programmes (e.g., in Uganda).

51 Based on http://www.agriment.com/files/programs/fdov_country_list.pdf as of 7 July 2017. Other sources may quote a different number, as the country list for FDOV has changed frequently.

52 https://aiddata.rvo.nl/programmes/NL-KVK-27378529-23877/?tab=countries

Table B-1 There is significant overlap between the eligible countries under 2SCALE and the other two programmes.

| Eligible countries 2SCALE[53] | FDOV # of projects[54] | FDOV in EUR mln[55] |
|---|---|---|
| Benin | 1 | 2.90 |
| Ghana | 3 | 2.96 |
| Mozambique | 1 | 1.00 |
| Côte d'Ivoire | 0 | 0.00 |
| Ethiopia | 9 | 17.54 |
| Kenya | 9 | 26.99 |
| Mali | 1 | 0.01 |
| Nigeria | 1 | 1.08 |
| Uganda | 2 | 2.33 |

Source: SEO Amsterdam Economics, based on programme documents (see footnotes).

### Sectoral focus

In terms of agricultural commodities, both FDOV and 2SCALE seem to have a broad focus, although in theory 2SCALE's focus is more narrow. While FDOV includes all agricultural products (except for non-food commodities), 2SCALE works with four commodity groups: (1) staple crops; (2) vegetables, potatoes and fresh produce; (3) soy and other oilseeds; and (4) animal production related (poultry, dairy, and related feed/fodder supply chains).[56] However, these four sectors together appear to cover most agricultural commodities.

## Key differences between 2SCALE and FDOV

As part of our comparative study, we a identified three key differences between 2SCALE and FDOV:

1. **Selection process:** 2SCALE builds partnerships and value chain linkages, while FDOV takes existing linkages as given and is more focused on deepening existing relationships.
2. **Inclusive focus**. 2SCALE has a more inclusive focus than FDOV in that it supports value chain actors at an earlier stage of development.
3. **Gender focus.** 2SCALE has a more elaborate gender strategy and a more explicit focus on gender targets than FDOV.

53 http://2scale.org/countries-and-commodities
54 https://aiddata.rvo.nl/programmes/NL-KVK-27378529-23877/?tab=countries
55 https://aiddata.rvo.nl/programmes/NL-KVK-27378529-23877/?tab=countries
56 2SCALE's focus on these specific sectors followed the PAC (project advisory committee) report of 2013, which had recommended 2SCALE to screen the commodity sectors in which 2SCALE was already active and that offered the best opportunities to achieve scale and impact on household incomes. These sectors were decided upon in consultation with 2SCALE's staff and with an eye on the established portfolio.

## Selection process

A first important difference in the designs of 2SCALE and FDOV is the partnership selection process.

**2SCALE selection process**

In 2SCALE, a brokering period of three years was used to develop a portfolio of 53 partnerships. IFDC is responsible for the identification of 2SCALE partners during the inception phases of partnership development and provision of technical assistance to partnerships developed under the program. IFDC staff, which are all locally based, therefore play an active role in partnership design from the "bottom up", actively bringing partners together. In many cases pilot activities were undertaken before a full agreement was reached.

This 2SCALE selection procedure has several advantages. First, since partnerships emerge from the "bottom up", the process is more inclusive, more demand-driven and therefore potentially also more effective. Other advantages are that there are no long and bureaucratic tendering procedures, like for FDOV, and that the process is flexible in that partnerships can be adjusted along the way, which thus far was more difficult for FDOV.

The absence of a formal tender procedure, however, could also be considered as a disadvantage for 2SCALE. First, the selection and brokering process of 2SCALE is far less transparent. Since EU regulations on 'state aid' and 'market conformity' do not apply, this does carry some reputational risk to MFA. Without a tender procedure, it is not easily possible to explain to the public why certain partnerships were chosen over others, or why one private company was invited to participate in the partnership rather than another private company. Questions could then arise as to why, for example, certain large Dutch multinationals were selected for support through 2SCALE (sometimes even through more than one 2SCALE parternship), and why these Dutch multinationals themselves could not have provided all the resources in case there is a business case for them to strengthen the value chain.

The 2SCALE management team countered that 2SCALE does conduct a serious screening process, as stipulated in the various versions of the PPP partnership protocol that was developed by 2SCALE and approved by MFA. Business ideas (and partnership proposals by larger companies) are being reviewed by different members of the 2SCALE team, and involve several steps (common cause or "what makes this an inclusive business proposal", what justifies support from 2SCALE – including additionality principles/ leverage and co-investment, social benefits/ potential impact, sustainability, scalability etc.). Partnership agreements with larger companies, and in particular with Dutch multinationals, also need approval from MFA.

The 2SCALE management team also noted that the majority of selected business ideas come from the African grassroots, i.e., African SMEs and POs. Moreover, in 2SCALE's partnerships with Dutch and other multinationals or large companies, the contribution of 2SCALE focuses on the local intermediary agents and on grassroots innovation. Finally, it is important to stress that these private sector partners do not receive any direct funding from 2SCALE.

**FDOV selection process**

Unlike 2SCALE, FDOV is subject to Dutch state aid rules, given that Dutch companies are supported (subsidised) directly. FDOV projects therefore need to be selected through calls for proposals as part of a formal tender procedure. This is managed by RVO (the Netherlands Enterprise Agency), which closely monitors the selection procedure as well as the approved projects.

There are several advantages of having this formal tender procedure. First, the selection process is transparent: all calls for proposals are published in the Dutch 'Staatscourant' and in principle anyone can apply (although in practice this may be difficult for foreign companies as the calls for proposals are in Dutch). A second advantage is that stakeholders (including the Dutch government) can be held accountable for selecting a particular partnership over another one. Third, there is potentially stronger 'ownership' by participating partners, as they themselves have designed the project and have applied for FDOV funding.

Because FDOV funding is ODA funding (Official development assistance), certain criteria should be met. One of them is that all requests for funding are treated equally, and every applicant should have the same chance of receiving funding (other conditions being equal). A tender procedure is therefore the most convenient way of selecting projects. During the selection procedure, RVO is assisted by an independent advisory committee. On the website https://aiddata.rvo.nl/ they publish all projects that received funding and by doing so, provide transparency.

However, there are also several important disadvantages associated with this tender process. First, it is seen as imposing a high administrative burden on all parties. The tender and approval procedure is seen as complicated, cumbersome, and time consuming, both for MFA/RVO and for (potential) partners. There are several formal criteria that need to be fulfilled in order for partners to be able to receive FDOV funding. Fulfilling these criteria and the associated administrative activities are experienced as burdensome processes by partners.[57] Following a lengthy prequalification process, partnerships have 3 months to submit a proposal, after which MFA/RVO has 3 months to rate proposals and make a selection.[58]

A second disadvantage is that the process length is fixed and there does not seem to be room for a slower or faster process. Yet a slower process can be needed, especially in the agricultural sector, e.g., when there are too few inputs because of drought. A faster process can be needed if a partnership want to step into a new business opportunity. The inception phase for each partnership is scheduled to last at most one year, but none of the partnerships selected under the first call for proposals in practice made this deadline.

A third disadvantage of the RVO tender procedure is that there is not much room to adjust partnership proposals or to influence the portfolio distribution. Partners need to be very precise about what they are planning to do already during the selection process stage. While RVO does

57 Based on KIT (2016) and stakeholder interviews. A number of partners allegedly withdrew within the first year due to the high level of administrative burden, apparently without any consequences.

58 One interviewee involved in this selection process is "not convinced that this procedure leads to the best quality proposals", as some companies "simply know how to write proposals and can write a very good proposal based on nothing."

provide advice in the pre-qualification stage (e.g. about roles of the various partners), the partnership is (according to one interviewee) "set in stone" once approved, and it is only possible to make very small changes to its design afterwards (otherwise it is not considered fair for competing parties).

A final disadvantage noted by one of our interviewees is that, even with a formal tender procedure, there is still a reputational risk to MFA from supporting development projects that indirectly benefit Dutch companies. First, a claim could be made that the tender procedure was unfairly applied. Second, a claim could be made that some of the larger Dutch companies involved would have been able to finance the entire project themselves, and would have had a business case to do so, e.g. in order to establish better relations with local authorities. More attention to input and development additionality as strict criteria for justifying support may therefore be important to reduce such potential reputational risks.

## Inclusive focus

A second important difference between 2SCALE and FDOV is that 2SCALE is more focussed more on the inclusion of 'excluded groups' into agro-food value chains. This focus on inclusivity plays a role in all three pathways (supply, PSD and demand). 2SCALE's gender focus is another form of inclusion and is also prevalent in all three pathways (as discusssed in the next subsection).

Compared with FDOV, 2SCALE appears to have a more explicit focus on *inclusive* agricultural development. The explicit aim of 2SCALE is to act as an incubator for inclusive business in the food industry, thereby creating opportunities for smallholder farmers (SHFs) and small-scale SMEs. Private partners are also expected to have 'inclusive business' as a core strategy.

**Supply side inclusion**

On the supply side, 2SCALE works more often than FDOV with smaller and poorer smallholder farmers and semi-commercial farmers. The midterm FDOV evaluation noted that primary FDOV beneficiaries are not subsistence farmers or low-income wage labourers. Rather, the primary beneficiaries of FDOV are those farmers that can be considered commercially viable in terms of land size and market orientation (i.e. semi-commercial and commercial farmers).

**PSD side inclusion**

On the PSD side, 2SCALE is, more than FDOV, involved in strengthening the bargaining positions of smaller or marginalised players. For example, 2SCALE aims to strengthen the position of farmer cooperatives or small SMEs within the value chain, and to increase their participation in commercial agro-food value chains. With the help of its partnership facilitators, SCALE also often aims to improve the bargaining position of smaller, local partners vis-à-vis the larger international partner, for example by ensuring that smallholder farmers get paid a better price (e.g. in the case of Psaltry's negotations with Nigerian Breweries) or obtain training to enhance productivity improvements.

**Demand side inclusion**

On the demand side, 2SCALE puts more focus on low-income consumers. Through special pilots designed by BoPInc, 2SCALE includes a special emphasis on low-income 'Base of the Pyramid'

(BoP) consumers.[59] It has now mainstreamed BoP strategies into those partnerships dealing with BoP consumers (25 out of 53 partnerships). The original aim of the programme was that 40% of consumers would be BoP consumers, but this turned out not to be measurable.

While some FDOV partnerships do address low-income groups,[60] the midterm evaluation noted that the primary FDOV beneficiaries are not low-income consumers and that FDOV partnerships have a "rather restricted view of food security" (KIT 2016, p. 63). They mostly focus on increasing food availability and affordability, but pay much less attention to 'nutrition security', which refers to access to, utilisation (consumption) and absorption of essential nutrients in food, and stability in its provision. According to KIT (2016, p. 63) many FDOV partnerships "do not add a nutrition dimension to their focus on agriculture", and "most PPPs are not 'nutrition sensitive" i.e. do not integrate nutritional considerations through specifically targeting (access to) improved nutrition for women, girls and children, or enhanced purchasing power of women."[61]

As suggested by KIT (2016), the lack of FDOV's focus on lower income groups could be due to FDOV's emphasis on the 'business case' in PPPs and FDOV as a whole, the high perceived risk by FDOV partners of working with very small subsistence farmers, and the technology gap between participating Dutch and local companies and subsistence farmers.[62]

In this regard, the midterm evaluation (KIT 2016) recommended to had two key recommendations for FDOV:

- **Supply side:** FDOV should make PPPs more inclusive and pro-poor by increasing the focus on subsistence farmers rather than exclusively on semi-commercial and commercial farmers.
- **PSD side:** FDOV should increase its focus on local SMEs by promoting them as lead applicants instead of multinational corporations, due to higher levels of local embeddedness, commitment to inclusive development and (input) additionality.
- **Demand side:** FDOV should be enhanced by including the broader aim of realising the full potential of "food and nutrition security", and not only food availability and affordability.

If the aim is to reduce overlap and increase synergies between FDOV and 2SCALE, then these recommendations may not necessarily be optimal for FDOV. Interviews with stakeholders also suggest that RVO and MFA do not necessarily agree with these recommendation. In their view, FDOV is designed to work with larger, more established, and more commercial players, who already have established value chain linkages. To more clearly distinguish the scopes of 2SCALE and FDOV, it may then be preferable to let 2SCALE focus more on the less commercial players that still need assistance with forming partnerships and building sustainable value chain linkages.

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59 The BoP is a demographic term that covers the approximately 4.5 billion people who live on less than 8 U.S. dollars per day.

60 We are aware of only three such examples: Flying Food, SMASH/SMART, and Amsterdam Initiative against Malnutrition (workstreams B5 and BX).

61 Only the partnerships under the AIM umbrella were found to work on the nutritional aspects of quality and diversity of food; for instance, by introducing fortified food products, producing micronutrient powders, promoting nutrition-rich vegetable production or enhancing the availability and affordability of fresh vegetables in local retail stores. (KIT 2016, p. 63)

62 At the same time, KIT (2016, p. 8) notes that FDOV's focus on "high potential" small-scale farmers may explain the bias towards male farmers (who often formally own the resources) and the limited attention to gender.

## Gender Focus

Another aspect of 2SCALE's larger focus on inclusion is its stronger emphasis on gender. 2SCALE appears to have a more developed gender strategy than FODV, and unlike FDOV, 2SCALE explicitly has gender targets embedded in its goals: 40% of SHFs reached should be women (or farms headed by women), and 40% of SMEs should be female-headed.[63]

As discussed in the main part of this report, we believe that gender targets should ideally be country-specific, and the 40% target may at present be too high for certain countries. In addition, it is generally difficult to identify who leads or owns a farm. Farms are typically managed by households, in which both men and women have specific tasks. The women might sell the crops at the market, or may have exclusive rights over income from the sale of e.g. milk, but the farm or livestock would still be considered to be owned by their husbands. We therefore recommend further monitoring on the basis of who (male or female) controls the revenues from the commodity, as this is an important indicator of women's empowerment. Moreover, it may make an important difference for food security impact as it may affect how farmer revenues are spent.

While FDOV does consider gender an important 'cross-cutting issue' that need to be addressed (along with other cross-cutting issues such as climate change, good governance and the environment), the FDOV midterm evaluation found that FDOV pays limited attention to gender, and that "gender" as a concept is not very well developed in FDOV. While gender statistics are being kept on output indicators (e.g., on the number of women trained), none of the proposals reviewed by KIT (2016) were found to have comprehensive gender-specific activity strategies or plans, nor did they seem to have been developed during the inception phases.

One of the possible reasons for the lack of gender focus in FDOV, according to the midterm evaluation, is the focus of FDOV on "high potential" small-scale farmers, which may imply a bias towards male farmers (who often formally own the resources). KIT (2016, p. 41) noted that some entrepreneurs and managers do realise the importance of gender issues in society and the impact they may have on the goals of PPPs. However, they found that this was translated very practically, and not often in a pro-active sense which would attribute a gender-transformative role to PPPs. The midterm review recommended, therefore, to enhance the impact of FDOV partnerships on gender (and youth) through structural adjustments in PPP requirements and objectives, so as to use "gender as both a means and an end".

# Recommendations

- **There is potential to reduce overlap and increase synergies between the two programmes in terms of targeted countries, sectors and end-beneficiaries**. One important difference is that 2SCALE is a business incubator programme that builds inclusive partnerships and value chain linkages from the bottom up, while FDOV largely takes partnerships and value chain linkages as given. This makes sense in part because of 2SCALE's stronger local presence on the ground, which enables them to build partnerships and establish

[63] The official goal of 2SCALE is "To deepen and scale at least 50 public-private partnerships in selected high-potential sectors (product groups) in 9 focus countries in Africa, which together will offer significant and durable opportunity to at least 500,000 smallholder farmers (*of which 40% will be women*) to improve their livelihoods and to at least 2,500 SMEs (*of which 40% will be female-headed*) to improve sales and provide jobs, while sustainably supplying food to regional, national and local markets (*of which 40% will be BoP consumers*)."

value chain linkages from the bottom up. RVO seems to be too ‘far removed’ from the field to substantially influence partnership formation or value chain linkages, although this could be done to some extent by local partners. In a second phase, 2SCALE seems best suited to continue focusing on smallholder farmers and ‘startup’ SMEs that are not yet commercially viable, while FDOV may be better suited for partnerships involving established linkages between larger farmers, more established producer organisations, and larger, but not yet fully commercially viable firms.

- **Both FDOV and 2SCALE would benefit from clearer eligibility requirements.** In deciding between the future eligibility criteria for FDOV and 2SCALE funding, it is important to realise that there are trade-offs between risk, input additionality, and leverage. The higher the market risk, the less likely the market is willing to finance it, hence the higher the (ex ante) input additionality, but the lower the leverage in attracting private sector investment. These trade-offs can potentially be overcome by using advisory services more productively to reduce market risks, which in the short run may make a partnership commercially viable for the donor that provides the advisory services, but not necessarily to others (due to information asymmetries). In the long run, the project may become commercially viable for other investors as well.

- **A clear sequence should be developed through which private partners can first apply for funding from 2SCALE, later upgrade to FDOV, and eventually to non-concessional funding such as DGGF**. One possibility would be for MFA to support small and non-commercially viable partnerships (but with high potential to become commercially viable) first through 2SCALE and then let them ‘graduate’ and upscale to FDOV as they grow and can increase their private sector contributions. As local SMEs become more commercially viable as a result of 2SCALE support, they could therefore then ‘graduate’ to FDOV at some point. This could then eventually prepare them for non-concessional investment finance, for example, from funds such as DGGF.[64] As such, DGGF could be complementary to 2SCALE and FDOV for commercially viable ventures.

[64] This is similar to the model used by FMO, where FMO clients that are not yet ready for commercial rates can first apply for (partly subsidized) FMO-MASSIF funding, with the aim of later become eligible for commercial FMO-A investment finance.

# Appendix C AIR/Dalberg impact evaluation

In 2015, 2SCALE subcontracted RSA (now part of Dalberg) and AIR to conduct rigorous impact assessments for six 2SCALE partnerships. Baseline data were collected at the farm household level in October/November 2015, and endline data were collected in a similar period in 2017.

The evaluation focused on the impact of one of 2SCALE's partnerships in five of the countries in which it operates: Kenya, Uganda, Ghana, Benin, and Mali. The baseline assessment also covered Ethiopia, but this country was removed from the final impact evaluation because of external circumstances.

The partnerships were selected with the aim of being representative for the types of partnerships in the overall portfolio, so as to give an indication of the overall impact. The following partnerships were included in the AIR/Dalberg impact studies:

| Crop (partnership) | Country | Product group | Partnership type |
|---|---|---|---|
| Sorghum (SHALEM) | Kenya | Staple related | Value chain (output) |
| Cotton (NYAKATONZI) | Uganda | Cottonseed oil | Value chain (input/output) |
| Soybeans (processed) | Ghana | Soybean oil seeds | Agribusiness cluster |
| Vegetables (EWIT) | Benin | Vegetables/fresh | Value chain (input) |
| Maize (SONAF) | Mali | Staple related | Value chain (output) |

## Research questions

The AIR/Dalberg evaluation was based on the following three key research questions:

1. What is the impact of the 2SCALE programme on farmers' income?
2. What is the impact of the 2SCALE programme on food security, including nutritional quality and diet diversity measures?
3. What is the mechanism (e.g., improved technology, organisational capacity, market access, credit, and/or extension advice) through which 2SCALE affects the outcomes of interest?
   a. What is the impact of the 2SCALE programme on commercialization methods and social networks?
   b. Of which component(s) of the 2SCALE programme are farmers aware?
   c. Which component(s) of the 2SCALE programme have farmers used?
   d. Which component(s) of the 2SCALE programme do farmers prefer?

To examine the impact on farmer's income, AIR/Dalberg considered outcomes that could contribute to increased income. Specifically, they examined investments in crop production (for the target crop specifically and all crops); crop production quantities, revenues, and gross margins (for the target crop specifically and all crops); measures of nonfarm business and credit; and household income sources and, specifically, the past year's noncontract and contract farming income.

## Method

To answer the research questions, AIR/Dalberg used a quasi-experimental approach relying on primary data collection by means of farm-level surveys. For each selected partnership, the treatment group was composed of farmers from areas in which 2SCALE was currently operating. Treatment farmers were randomly sampled from farmer lists provided by 2SCALE's country representatives. The control group was composed of farmers from areas that 2SCALE representatives identified as similar to the treatment areas. Comparison farmers were sampled using field-based random sampling methods from the identified areas.

A multisite longitudinal study was then designed to measure outcomes and impact at the farm level. Statistical power calculations were made to determine a sufficient sample size for the study that would enable the detection of meaningful programme effects. The power analysis indicated a need for approximately 800 household farms for each country, after accounting for attrition. Through the longitudinal design, the same farmers were surveyed in 2017 as in 2015. AIR/Dalberg then performed a difference-in-difference analysis to examine the impact of 2SCALE by comparing changes in outcomes across time between 'treated' farmers and 'control' farmers. For more information on the methodology, see Bonilla and Rai (2018), Chapter 3.

## Caveats

When interpreting the results of the AIR/Dalberg studies, the following should be taken into account:

- Two years may be too short to observe significant changes in income and food security at the level of the farm households (particularly if some of the interventions were delayed). In particular, changes in consumption patterns may take some time to take place.
- In many cases the identification of treatment and control groups was not well done according to 2SCALE. For example, the treatment group for the SONAF partnership in Mali consisted of farmers that were members of one of two large producer organisations that were "less well-organized, much less efficient, and partly defaulting", according to 2SCALE. Moreover, the control group farmers were growing white maize (a well-established crop) while the treatment group was growing yellow maize (less well-known and recently introduced in the target region). For the soybean partnership in Uganda, a control group was selected in an area that was heavily supported by other NGOs, and where soybean growing was already mainstream practice. For the Ghana partnership, the comparison between treatment and control groups may also be flawed, since the programme was active across both treatment and control groups from 2013.
- The impact assessments focus on several specific intermediate outcomes that are meant to be comparable across, but in practice intermediate outcomes differ a lot from one case to another, as each partnership differed in terms of objectives, intervention areas (treatments), and focus. According to the 2SCALE management team, in their comments on the AIR/Dalberg studies, there is a "total absence of effort to differentiate between the various PPPs" and the evaluation mistakenly assumed that all PPPs revolved around "contract farming".[65]

[65] For evaluations at the intermediate outcome level, they feel that "the specifics of the PPP seem to be of critical importance; when the programme (partnership!) aims to diversify cropping systems, this would be a target; in other partnerships, where farmers already have a diversified, complex farming system, the PPP might focus on one specific commodity, related commercial relations, and access to credit or services; in some PPPs the focus could be on local networks, empowerment (and NOT one company "locking" farmers in a specific target value chain, etc.)"

- The evaluation does not account for more complex intermediate outcomes, such as partnership governance (how decisions are being made), business models of the lead firm, access to finance, timely payment, adoption of (technical/ organizational/ institutional) innovations, involvement/engagement of women, youth employment (including in providing services to target value chains), access to markets,.
- As AIR/Dalberg acknowledge, "the study design did not allow to determine the degree to which each programme intervention contributed to the overall impact" (Bonilla and Rai 2018, p. 2.)
- 2SCALE did not specifically target nutrition outcomes. For example, they did not implement activities to help farmers change their behaviours regarding diets and nutritional aspects of their food intake.
- The nutrition impact is measured only at the level of farm households, not at the level of other BoP consumers (who may simply be purchasing a new or improved food product, without being part of a treatment or control group.)

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