

How do scaling and inclusion work and combine?

Invitation to compose a knowledge agenda



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How do scaling and inclusion work and combine?

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Sietze Vellema (Wageningen University and Research Centre)

Markets and agri-food chains have increasingly become contexts and targets of development-oriented interventions, by businesses, non-governmental organisations, and governments. Often, these interventions start as pilots, with a smaller scale and within the relatively safe boundaries of projects. The question central to the Seas of Change initiative is what makes such interventions scalable and how does this combine with inclusion, particularly of smallholder producers. In two working sessions at the SoC Plaza (Thursday April 12, 11:15-11:45 'bulking' and 12:00-12:30 'sourcing') we will seek to share some initial findings from a selection of case studies and engage you in sketching the contours of a knowledge agenda on scaling that fits with the practical realities businesses and development organisations are working in.

Researchers from Wageningen UR teamed up with BoP Innovation Centre and SNV Netherlands Development Organisation in a learning journey looking for how to conceptualise scaling and to explore what kind of knowledge and evidence is available or needed to unpack the processes of scaling and inclusion. The summaries of case studies attached to this invitation represent the start of this learning journey towards an enhanced understanding of how scaling and inclusion actually work and combine. In our first step, we discovered that what appeared to be less obvious is how the process of scaling exactly worked. What was it about the intervention and/or the setting that made it scalable? For whom did it work? And, under what conditions? The case studies used as examples in the dialogues were guided by three assessment questions:

1. What is it about the context that makes the intervention scalable?
2. What is it about the intervention that makes it scalable?
3. What is it about the scaling process that makes inclusion favourable for smallholder producers and, if applicable, for workers and small and medium enterprises?

In the dialogues, the discussion is organised around two types of value chain practices: bulking and sourcing. Firstly, bulking, i.e. the aggregation of volumes supplied by large numbers of smallholder producers, is a practice that invites thinking about how bulking hubs can serve as an entry point for development-oriented interventions. The examples in the first dialogue are dairy business hubs in Kenya and the establishment of an oilseed platform and its linkages to bulking hubs in Uganda. Complementary more elaborate case studies developed by SNV on livestock markets in Kenya and rice millers in Laos are available from the Seas of Change website. Secondly, the sourcing by lead firms from smallholder, e.g. involving certification, monitoring and various modes of control, is a practice that may provide opportunities for development-oriented interventions. During the second dialogue, three examples from Kenya will be used to further inspire you: sourcing of chillies, of fruits for making juices, and of tea.

I hope to welcome you to both or one of these dialogues and to make a contribution to a developing and intriguing knowledge agenda.

Further reading about relevant WUR programmes:

Action research: [Value Chains for Pro-poor Development](#)

Policy-research dialogue: [Value Chain Governance and Endogenous Economic Growth](#)

Action research with farmers' organisations: [Empowering Smallholder Farmers in Markets](#)

Realist Evaluation: [Understanding How Programs Work in their Context](#)

The Dairy Business Hub Model in Kenya

Alberto Giani (Wageningen UR Centre for Development Innovation), Simone van Vugt (Wageningen UR Centre for Development Innovation) and Winnifred Mailu (SNV-Kenya)

The intervention – what makes it attractive and effective:

The Dairy business hub (DBH) is a cluster of dairy services around milk chilling plants. Dairy business hubs provide a bulking and chilling service, secure markets and bring services close to dairy farmer members (and consequently offer business opportunities to services providers). The immediate benefits are in form of financial gains to farmers resulting from economies of scale and better negotiation power. There are also other major and longer term benefits that result from joint actions for investments and market penetration. SNV is presently collaborating with 12 DBHs; our case study, Lessos Livestock Breeders Network (LELBREN), was formed in 2004 with a purpose to raising the living standards and the quality of life of its members. It began its operation in November 2008 with 80 members and currently has roughly 4,000 members. LELBREN has grown from a community-based organisation to a farmer-owned company. Presently the number of farmer members of the 12 DBHs is roughly 40,000 with a daily production of 231,000 litres of milk.

The context – what was conducive, what was constraining:

Dairy value chain in Kenya has potential to provide income and employment opportunities for over one million smallholder households. This tremendous opportunity has however remained untapped due to a number of dairy value chain constraints; in fact lack of extension services and marketing opportunities for the smallholders farmers hampered the expansion of the sectors in the past years. Production and marketing segments have constraints of low productivity due to lack of knowledge on appropriate dairy husbandry, inappropriate feed & fodder and sharp price fluctuations respectively amongst other factors. Nevertheless, the dairy sector in the past few years has almost doubled. The production of milk increased from 2.6b to 4.5b litres between 2006 and 2010 and the price appreciated by 19.2%. Production levels and the demand for better quality milk and processed products increased mainly due to growing urbanisation and the rising of a higher purchasing power middle class. It is therefore one of most vibrant agriculture sector in Kenya, accounting for roughly 4% of the GDP.

Scaling – what helped the intervention to spread and gain scale:

Current DBHs grew by inclusion of more actors as service providers and as processors, enhanced quality of these services, higher production at the farm level, increased membership of CBEs and growing volumes of milk that are channelled through CBEs and processors. The DBHs have been replicated in other areas with a growth in milk production but yet underserved (or untapped). The main driving forces for this scaling have been the strong request for services among the farmers and the growing market for milk.

Inclusion – which smallholders are included and which are not:

The main group of smallholders included in the DBHs are the dairy farmers as they can become members of the HUB and get better access to market and services. Additionally, service providers, that can be represented by single persons or SMEs, are also included.

Oil seed platform and bulking hubs in Uganda

Mirjam Schoonhoven (SNV) and Sietze Vellema (Wageningen UR LEI)

The intervention – what makes it attractive and effective:

The case sketches a rapid development in Uganda's oil seed sector; with increases in production of over 400% from 2005 to 2009. It focuses on a combination of interventions, which started with the facilitation of a multi-stakeholder platform at national level leading to joint agenda setting. This emerging collaboration between various actors in the oil seed sector led to improvements in general farming practices, business relations and input provision; and jointly they also influenced government policies and financing streams. The combination of these interventions was particularly powerful and eventually helped to improve the incomes of more than 100,000 farmers. A strong focus was put on improving farmer capacity to deal with markets and vibrancy of the farmers-market interface. It led to major productivity increases and an increase in price of oilseeds of 350% with a corresponding rise in farmers' incomes, and significant substitution of national imports. The facilitation of a multi-stakeholder platform and the containment of previous conflicts enabled coordination of various development efforts. The presence of a common prioritized agenda made involvement in the sector more attractive to other parties with capacities and resources to support change and tailored public goods and private services to specifically identified needs.

Context – what was conducive, what was constraining:

- The specific nature of the oil seed subsector: the possibility of substituting imported vegetable oils with edible oils manufactured from locally sources oilseeds. This linked perspectives for collective action to dynamics and fluctuations in international markets;
- Government policies were enabling and constraining at the same time: large-scale processors actors were able to make investments and benefit from public support, whereas smaller actors had more difficulties to invest and receive public support;
- Restored peace in the North: provided political stability, which in turn contributed to the return of farming families;
- High population growth: thus rising demand for food, including cooking oils.

Scaling – what were the steps by which the intervention gained scale

- The development/establishment of sector-wide capacity to cooperate and coordinate: trust between main actors, growing appreciation of complementary roles of leading processing firms and farmers' organisations, recognition of diversity in, for example, bulking practices embedded in local complexities; joint priority setting in endeavours of platform to influence policy;
- The necessity to bulk raw materials enabled finding modalities to link large numbers of farmers to initiatives downstream the value chain or at policy level;
- Spin off effect of a prioritized agenda and enhanced coordination led to all sorts of initiatives and bilateral collaborations further downstream the value chain: availability of improved seeds, improved bulking practices, availability of inputs and finance, sharing of improved practices etc.

Inclusion – which smallholders are included and which are not:

- Difficult to pinpoint due to intervention at 'high level' in the value chain, but farmers profited in various ways: Better harvest collection practices brought efficiency gains to both farmers and processors; Empowerment through rural information systems; Better price arrangements benefited both farmers and traders; More effective practices and implements were extended;
- Gains at national level: save of 100 million USD per year since sunflower became the leading raw material for edible oil processing in Uganda, thus substantial import substitution of palm oils; sesame and maize oil production also increased.

Smallholders in Kenya sell premium quality chilly

Jennie van der Mheen Sluijter (Wageningen UR LEI)

The intervention – what makes it attractive and effective:

In 2010, Equator Kenya limited had dried, sterilized and exported 100 tonnes of dried African bird eye chillies. The 333 tonnes fresh export quality chillies were produced by 6,500 small farmers in the Coast Province, one of the poorest in Kenya. Equator Kenya Ltd has a highly standardized, efficient way of collecting the produce, implementing an unambiguous quality control and installing feedback system. This has led to low rejection rates and clear payment records, which rarely lead to disputes. Cash-constrained farmers have found a regular source of income, while the company can supply fully traceable chillies that meet all food safety requirements to its clients.

The context – what was conducive, what was constraining:

There is a high demand for premium quality chillies. For large numbers of smallholder farmers, chilly is an attractive crop to grow for several reasons: pest and disease control is relatively easy, wild animals do not destroy it, and harvesting is done on a weekly basis which results in regular income. However, the context is sub-optimal: smallholder farmers have limited access to agricultural extension, credit, seeds, chemicals and fertilizers. Hence, in order to ensure its supply of fresh chillies, the company has to actively build strategic alliances with banks, input dealers, and organisations that can assist with the training of the large number of farmers.

Scaling – what helped the intervention to spread and gain scale:

- To increase their supplier base whilst controlling costs and operating efficiently, the company only works with farmer groups and facilitates linkages with resource providers rather than providing the resources themselves.
- Paying farmers through a bank account, which promoted savings and consequently access to credit, has motivated farmers to produce and deliver chillies to Equator Kenya.
- Equator Kenya also tried to influence scaling through increasing farmers' productivity: free training of producers should result in higher yields and thus higher income for farmers. Moreover, Equator Kenya introduced volume incentives for farmers (offering a higher price for every kg above 100 kg delivered per group per week) and for group facilitators (an amount per kg of chillies sold by their group) to stimulate production. Training is organised in phases: professional trainers teach company extension officers, who subsequently train group facilitators.
- The company has replicated their model in six geographically spread areas, in order to expand the production season and diversify risks.

Inclusion – which smallholders are included and which are not:

As long as produce was delivered through the group collection point, the company accepted very small quantities of produce per farmer. Hence many smallholder farmers sold their chillies to Equator Kenya. This has resulted in an unequal distribution: in 2010, 65% of the produce was supplied by 10% of the farmers, while 50% of the farmers only contributed 3.9%. The company now focusses on groups that sell considerable quantities, rather than including as many producers as possible.

Fruit sourcing and processing in Kenya

Rutger Bults (BoP Innovation Centre)

The intervention – what makes it attractive and effective:

The Coca Cola Company, TechnoServe and the Bill & Melinda Gates Foundation launched Project Nurture in January 2010. This four-year, \$11.5 million partnership program is designed to enable smallholder fruit farmers in Kenya and Uganda to double their income by 2014. The program seeks to empower smallholder farmers by offering training programs, facilitating financial services and helping them organize to access inputs and sustainable market channels for their mangoes and passion fruits. It hereby links them to new markets, such as those provided by Coca Cola Juices' locally marketed Minute Maid fruit juice, as well as fresh domestic and fresh export markets. So far, 25,000 farmers in Kenya and 8,600 farmers in Uganda have been recruited and trained. These farmers sell to approved processors of fruits, making purees bought by Coca-Cola Juices Kenya and other franchisees. Coca Cola Juices Kenya Ltd. targets local BoP markets with bottles of Minute Maid through a well-developed distribution network of manual distribution centres (MDCs) with high penetration in low-income areas (both rural and urban). The intervention enables fruit farmers to increase incomes, productivity and competitiveness and to access commercial buyers.

The context – what was conducive, what was constraining:

TechnoServe's approach is to identify existing or to establish new smallholder farmer collectives, called Producer Business Groups (PBGs). A main concern for PBGs is how to access well-established processing channels that serve big buyers like Coca Cola or Britannia with mango puree. To create sustainable demand for the PBGs, Project Nurture targets four major market channels for the mangoes and passion fruits grown. These markets cover both fresh and processed channels, including exporters, high-end market consolidators, open-air market traders and processors.

Currently around 10-20% of the mangos and passion fruits produced by smallholders is sold to local puree processors. Around 5%, the best quality mangos, is exported to (mainly) the Middle East and the rest is sold on local or regional fresh markets. To increase the amount of fruits processed and made available for the Coca Cola beverage portfolio, local processors are encouraged to invest in facility upgrades and received advice on how to meet standards of international buyers.

Scaling – what helped the intervention to spread and gain scale:

- By strengthening the capacity of the farmers to be ready for export and local market interactions, the project partners facilitate relationship building between participating farmers and key stakeholders in each of the market channels. This helps the farmers gain greater market access and selling power for their fruits.
- Professionalizing the small- and medium-scale processors is critical to enable them to access expansion capital. The project facilitates advance orders of mango and passion fruit puree for use in beverages. In order to match demand, next to increasing productivity of farmers, investment in puree and concentrate processors is still necessary.

Inclusion – which smallholders are included and which are not:

The Producer Business Groups are registered businesses owned by 50-100 small-scale farmers. TechnoServe works with over 700 PBGs, which have an average of 26 mango trees per farmer. Estimated annual production per member is 2080kg and farmers receive between Sh12-15/kg (\$ 0,16) for mangos, which leads to an average annual revenue from mango sales of Sh28.080 (\$316,73). Prior to the project intervention the estimated annual revenue from mango sales was \$ 208.

Learning of smallholder Kenyan tea producers

Yuca Waarts (Wageningen UR LEI)

The intervention – what makes it attractive and effective

From 2006 - 2008, the Farmer Field School (FFS) method as a form of extension was piloted by the Kenya Tea Development Agency (KTDA) and partners. The reason for this pilot was to test if they could more effectively reach the smallholder farmers that supply them with green leaf through FFS than through their more traditional extension system. The FFS method was expected to result in more sustainable tea practices implemented by the farmers, which would lead to higher productivity, higher incomes, higher tea quality and environmental sustainability. In 2008, an impact evaluation study showed that the 121 farmers from 4 factories that took part in FFS had better knowledge on, and higher adoption of Good Agricultural Practices (GAP) than non-FFS farmers. KTDA then decided to scale up the FFS programme to reach all 500.000 smallholder farmers that supply them.

The context – what was conducive, what was constraining

The FFS system is implemented in the already existing KTDA factory system. All smallholder farmers delivering green leaf to KTDA are connected to a buying centre that delivers its tea to one factory. These KTDA factories already had qualified and skilled extension staff in place before the FFS system was implemented. They were trained on FFS methodology and could quickly adapt their work to facilitate the FFS processes. The factory staff was assisted in implementing the FFS by 2 newly appointed regional coordinators that have the task to ensure similar FFS setup and implementation in all factories. Through all decisions taken, the KTDA has shown its willingness to enhance its extension services for the benefit of the farmers and the factories. One constraining factor is that the intensive FFS system takes a long time to reach all 500.000 farmers supplying the KTDA factories when the usual number of extension staff are deployed, and not more extension staff are hired.

Scaling – what helped the intervention to spread and gain scale

Two important keys to the successful FFS implementation by KTDA were that the farmers themselves can steer the FFS curriculum (also non-tea related subjects can be and were included) and that they see the benefit of learning and adopting new practices. Also, the fact that they can continue with their group after graduation and decide on their own activities is seen as stimulating. The enthusiasm of graduated farmers inspired other farmers to join an FFS, which ensures sufficient farmers to participate in the FFS. Next to that, the aggregated outcomes of the FFS are seen as positive by KTDA: farmers have a higher productivity and supply factories with better quality leaf, resulting in increasing incomes for KTDA, the factories, and farmers (although the latter is still to be quantitatively confirmed). This led to the decision by KTDA to scale up the FFS in 2008. A final key to the success of FFS in tea is that when resources are available and farmers are enthusiastic to participate, the FFS method is easily replicated in the same factory or other factories.

Inclusion – which smallholders are included and which are not

The KTDA intends to reach all farmers supplying them through the FFS system. Positive word of mouth by the farmers on the impact of the FFS for their farm and family has inspired other farmers to express willingness to join FFS that will be set up later. But not all farmers seem to be willing to join an FFS. In

Focus Group discussions, farmers have indicated that young farmers are not inclined to participate as 'they know it all already', and that some farmers may not be able to participate. What will be done to reach the less enthusiastic farmers, or farmers that are unable to participate remains to be seen.