Editors: Fred Zaal, Jacqueline Sluijs, Aad van Tilburg, Roger Bymolt and John Belt

Regional Markets for Local Development

Smallholder engagement with **agribusiness** in practice

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Acknowledgements

Fred Zaal, Jacqueline Sluijs, Aad van Tilburg, Roger Bymolt, John Belt (editors)

This book bundles the experiences of practitioners in the field seeking for creative solutions to the world food problem: 9 billion mouths to be fed by 2050. They are the ones exploring and finding solutions to food security and sustainable agricultural development in innovative ways.

Smallholders form the lead in this book in which we try to show the importance of local and regional commodity markets. Ten cases from Africa and Asia reflect the challenges that smallholders encounter in practice. On the basis of these stories we try to better understand the fast growing opportunities of local, national and regional food commodity markets, and their impact on the development agenda. The practical storyline is embedded in a theoretical framework, and by combining theoretical analysis and practical know-how, we aim to demonstrate the real potential of these 'regional markets' for promoting sustainable economic development and food security.

The basis for the publication was laid in a 5 day's write clinic in 2011 in Arusha, Tanzania in which people related to 4 internationally operating organisations: Action Aid International, Fairtrade Africa, Royal Tropical Institute and Wageningen University discussed, worked and did the initial writing. The write clinic was filmed as well. The result, a 4 minute video (https://www.youtube.com/watch?v=PROEXWJxjs8), portrays the working process whereas the theme and content of the write clinic are captured in written form, i.e. the publication that you have in hand. We are happy to share both the book and video to be used as learning tools for future use.

MS-TCDC, Fair Trade South Africa, and KIT hosted the write clinic. The MS-TCDC team led the general facilitation process under supervision of Bo Damsted, Delphine Mugisha, and Anna Mmari. KIT, supported by WUR, represented by Prof. Aad van Tilburg, provided for the facilitation content wise. The main input however came from each and every individual participant. The core content was brought in by the case owners and resource persons: Jeremiah Kipkering, Abel Lyimo, Helena Posthumus and Kolawole Adebayo, Fatou Mbaye and Ibrahima Niasse, Ramata Niass, Moussa Faye, Sidi Ba and Buba Kahn, Elton Mudyazvivi and Tsitsi Choruma, Jacqueline Mkindi and Amani Temu, Aftab Alam Islam and Amirul Islam, Marcela Guerrero Casas, Anna Hans Makundi, Joel Musarurwa and Kirsten Hjørnholm Sørensen, Susan Were, John Mushoka, Celso Marcatto, Carlos Ruiz, Helle Løvstø Severinsen and Rutchi Tripati.

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Foreword

Bart de Steenhuijsen Piters, head of KIT Sustainable Economic Development and Gender, Royal Tropical Institute

Regional markets in Africa have promised to enhance rural development since state formation following decolonization during the fifties of the 20th century. Or maybe even long before then, when colonial powers drew linear borders through centuries' old societies and economies. What used to be common economic traffic then became cross-border 'regional trade' merely by the stroke of a pencil. Regional markets appear again formally on the development agenda since the seventies as part of a response to food crises and political debate on African unification. This resulted in the establishment of economic and monetary organisations of African states, such as the Economic Community of West African States (ECOWAS, 1975), the Southern African Development Community (SADC, 1980), the Common Market for Eastern and Southern Africa (COMESA, 1994) and the East African Community (EAC, 2000).

The role of regional trade in food staples markets in Africa is increasingly being recognised. We know that despite trade distorting national policies, lack of implementation of political and organisational commitments, road blocks and high transport costs and lack of appropriate standards and quality policies, regional trade in food crops is an important economic reality for the region. Much of regional trade is unrecorded and informal, mainly taking place over relatively small distances, sometimes crossing borders.

Jean-Christophe Maur and Ben Shepherd state in their 'Connecting Food Staples and Input Markets in West Africa; A Regional Trade Agenda for ECOWAS Countries (2015) that now that activist states have played their role in food staple markets, it is up to the private sector to take over their role. Much has improved in terms of doing business in Africa, and even more is still needed from states to facilitate local, regional and cross-border trade. The development of private markets for inputs, the increased efficiency in the transport and distribution sectors, and the promotion of value added processing activities for instance must be part of the agenda.

This publication outlines an alternative route to achieving sustainable economic development and food security. Rather than focusing on export crops as is often done by multi- and bilateral actors, this book tells the stories of local and regional (food) commodity markets. The authors show how important these markets are for smallholders, how vibrant and well-functioning markets can improve food security for both smallholder families and consumers at the regional and national level, and how a wealth of experience is gradually being gained.

Case study material is still needed. Many of these regional trade systems based on informal economies are not always fully understood, due to lack of data, visibility and popularity. Few are the policy makers that praise the successes of smallholder integration into the formal economy. Yet, understanding the dynamics of these integration processes is needed to promote more formalized trade. Informal and formal economies are not black and white, as they are often presented, but are both part of one continuum, with different levels of formalization and states of hybridization. Even highly formalized economies know informal transactions and so the objectives of projects aiming for their integration should be based on practical experience with these processes.

This book contributes to our understanding of regional markets, with a focus on Africa. By focusing on current practices and the role of smallholder producers, the potential for promoting sustainable economic development and food security is being explored. This brings more evidence and sense of reality to the debates on regional markets. As such, this is a book highly due.

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Introduction

Fred Zaal, John Belt, Jacqueline Sluijs and Aad van Tilburg

This publication outlines an alternative route to achieving sustainable economic development and food security in developing areas. Rather than on high-value, niche export markets for tropical products which attract a lot of attention, we want to focus on local and regional commodity markets. It is our intention to show how important these markets are for smallholders, and how vibrant and well-functioning markets can improve food security for both smallholder families and consumers at the regional and national level. Through several illustrative cases, this book highlights how various organisations are working to improve smallholder access to local and regional markets. They seek to realise this by helping farmers achieve higher productivity and production volumes as well as by working to improve marketing and provide stable economic development based on local conditions. The stories of small-scale producers are embedded in a theoretical framework, and by combining theoretical analysis and practical know-how, we aim to demonstrate the real potential of these 'regional markets' for promoting sustainable economic development and food security.

Introducing the concept of 'regional markets' and the analytical framework

Markets are an age-old phenomenon. Market systems, physical markets connected by trade relationships of producers, traders, brokers and consumers, have been the source of wealth since time immemorial. But often, the small-scale producer first finds him or herself on the local market. A local market is a (village) market close to the farm where local commodity production enters the market system, and where products from other regions can be found and purchased. A regional market is connecting bigger groups of suppliers and/or local markets to (inter-) national markets. These are the markets on which we want to focus here: regional markets represent trade networks that link local markets, with the produce of local small scale farms, to local and regional, and sometimes national consumer markets.

A value chain focus for local economic development

Agriculture is back on the agenda of policymakers as the principal engine for pro-poor growth (World Bank 2008). The aim is to trigger national growth in developing countries by strengthening the agricultural sector, which includes millions of producers and consumers of food commodities in these countries. By putting these often impoverished producers on a stable path to food security, the accumulated effects can kick-start other types of development (industrial, services etc.). In line with this revived neoliberal ideology, export earnings would provide both inputs and the means to finance this industrial development. Increasingly, the 'trade not aid' paradigm has been adopted as the new approach towards sustainable development. Public support for development policies in the North has declined, amid public questioning of the sustainability of aid donations and the expected improvements in quality of life and livelihood of those most in need. More and more, the role of the private sector is being recognised as important in this respect. Private enterprises and financial organisations are seen as sustainable sources of investment, incomes and products—both as foreign investors and as full-fledged actor in the value chain.

The social impact of private sector interventions in agriculture is receiving much attention, but also environmental concerns are gaining in importance. Certifying agencies, such as Fairtrade International, the Rainforest Alliance and others, have established social justice benchmarks in the value chains of many products. The goal to achieve sustainability in social, environmental and economic terms for all stakeholders in the value chain has replaced the idea of promoting economic development in terms of Gross Domestic Product (GDP) growth. This new holistic focus links equity within the value chain with fairness (distribution of income and securing a minimum standard of living) at a broader level.

The challenge is to design agricultural value chains in developing regions so that the desired economic, social, and environmental goals are reached. To respond to this challenge, researchers from the Royal Tropical Institute (KIT), together with their colleagues in the South, have been looking for cases that demonstrated good results in terms of pro-poor agricultural income growth in commercial agricultural value chains. A lot of attention has been paid to a particular type of value chains—high-value, niche products that are exported to the North (tea, coffee and cocoa).[1] With this publication we want to look at value chain development from a slightly different angle. Whereas earlier efforts looked at promoting economic development from a niche value chain perspective—i.e. adding value to particular products with strong export market potential, such as shea butter or tropical fruits—here we explore whether a focus on local production, marketing and consumption might also be a strong strategy for fostering sustainable economic development. We will examine how people are working to improve production, productivity and marketing of food grains (like maize and rice) so that they can lift up local and regional economies. The case studies in Chapter 3 provide examples of local projects and/or programmes that explore these alternative pathways to sustainable economic development and food security.

Earlier work in agricultural value chain development

In the past decade KIT has supported project partners to select cases, analyse them and distil the basic principles of sustainable and fair value chain development from practical experiences. The publication Chain Empowerment was the result of collaboration with the International Institute for Rural Reconstruction (IIRR) and Faida MaLi, supported by the funding partners Cordaid, the Technical Centre for Agricultural and Rural Cooperation (CTA) and the Ministry of Foreign Affairs of the Netherlands (see KIT and IIRR 2006). It explored trade networks and how these could offer opportunities for smallholders to improve their livelihoods. The book on Chain Empowerment was followed by the publication Trading up (KIT and IIRR 2008), supported by the Interchurch Organization for Development Cooperation (ICCO) and Oxfam Novib, which focused on governance issues within the value chain, and how these could be arranged so that traders would act as agents for development. Another study, Value chain finance, dealt with a key aspect of sustainable and fair value chain development: the role of finance (see KIT and IIRR 2010). This topic was studied by KIT and IIRR, with input from the Ford Foundation and a number of major Dutch NGOs (Hivos, ICCO and Terrafina Microfinance) and the Triodos Bank. In a further collaboration KIT, Agri-ProFocus and IIRR addressed another key aspect in the recently published Challenging chains to change (KIT et al. 2012). This publication elaborates more on

1 See Chain Empowerment (KIT/IIRR 2006), the publication on supporting African farmers to develop market presence. Later, more specific aspects of value chain development and its pro-poor impact were studied, such as the role of farmer organisations and that of finance (KIT/IIRR 2008, 2010).

gender issues in value chains and the challenge of securing opportunities and upward mobility for women smallholders. The basis for these studies was the practical experience of KIT and its partner organisations active in value chain development projects. The organisations implementing these projects collected relevant data, presented their analysis, and discussed the results with colleagues and experts in so-called 'writeshops'. This method facilitates group presentation, analysis and elaboration of case studies in a short time frame of intensive collaboration. The case studies are usually preceded by a theoretical chapter that provides the analytical framework and background of the problem, and are followed by a chapter outlining the analysis and conclusions of the discussion. These publications have been well-received, especially due to their practice-oriented focus.

Although the use of the value chain approach for further local economic development is on the rise, the broader development impact of this type of work was not clearly established as most project are restricted to niche products. Shea nut and honey are well-known examples, but also other niche markets were studied, such as organic coffee and cocoa, spices or peppers, as well as edible nuts (cashew, macadamia and groundnuts). These projects did demonstrate that there is significant impact on incomes at the level of small-scale producers; however, these value chains were often small, both in the number of actors involved (a few hundred smallholders) and in their economic scope. Developing niche markets for export has not led to the expected universal improvement in relative poverty levels. On the other hand, production for staple crop markets is considered the best way out of rural poverty, as was examined in the case of Africa by IFPRI (Diao et al. 2007). The domestic market is the main outlet for food commodities produced by the many millions of African smallholders. Local markets do not face the stringent standards found in export markets, and quality requirements are much more easily communicated and negotiated in the local context. Also the volume of production is promising as growing populations provide for growing food commodity markets. The rapid urbanisation across the Global South further spurs this demand. Upgrading agricultural production is possible—or can even be seen as a necessity—due to the growth of middle class demand for processed foods. Improvements in infrastructure, such as mobile communications and road construction, are rapidly enhancing the linkages between rural and urban areas. Serving local, national and regional markets can therefore in principle have a positive impact on local and national food security, and could add to local economic growth through multiplier effects.

The goal of this book is to better understand the fast growing opportunities of local, national and regional food commodity markets, and their impact on the development agenda. In addition, food commodity markets are closer to smallholders than export markets. The question is whether this proximity provides smallholders with enhanced control over the process of marketing. For this reason, we would also like to accentuate

in this publication the triple bottom line of sustainable development (social, environmental and economic impact) (Slaper and Hall 2011).[2] We will also touch upon the concept of power: what role does power have both in and outside the value chain?

Limitations of export value chains

Even when local small-scale farmers, traders and processors do profit from accessing an export market, those actors most vulnerable at the base of the chain are usually left out. Inclusion can have positive indirect effects on income through the local labour market (Neven et al. 2008); however, the direct effects on incomes of the poorest sections of society remain limited (Béné et al. 2010). Usually the rich farmers are those most often involved in value chains, cash cropping and exporting (see Neven et al. 2008; Rao and Qaim 2010). Poor farmers do secure some benefits, although without sustainable impact on improved landownership, income increases and price stability (Minten et al. 2009). The average, poor farmers usually do not dare to experiment with new methods or new crops because of the risks involved. A bad harvest could mean the end of their family business and the main source of their sustenance. Usually the very poor do not even have the resources to farm commercially, lacking access to land, inputs, additional technologies, wage labourers and other elements. They do not have strong networks that can assist them in transforming their livelihood along commercial lines, and sometimes lack access to knowledge to select the strategy for the prevailing market conditions. Even when rich and very rich farmers engage in value chains and export projects, they may face enormous challenges. The number of farmers and smallholders with averaged-sized farms participating in export often drops over time, especially when prices are low. Large-scale farmers, who reap the benefits of economies of scale, tend to take over much of the innovation rent in the market (see Vorley et al. 2007; Swinnen and Maertens 2007). In some cases, smallholders are forced to sell their land to larger estates and become labourers on these holdings.

As internationally operating actors aim to increase their control over the value chains for sustained profit, crop producers in developing countries are often marginalised. International competition greatly increases the risks faced by local producers in the South, both for domestic and export markets. An example is the pastoral small stock export chain to Saudi Arabia, in which East African small-scale producers were pushed out of the market by large-scale producers from New Zealand in the mid-1990s and again in the mid-2000s (Zaal 1998; El Dirani et al. 2009).

2 This concept is also known as the triple P model (people, planet and profit) and was first coined by John Elkington. For more information please visit the website of SustAinability, a think tank and strategic advisory firm co-founded by John Elkington, which works to catalyse business leadership on sustainability (http://www.sustainability.com).

These examples highlight a key aspect of the discussion on value chains: the limited pro-poor focus of niche export value chain interventions. The Business Organisations and Access to Markets (BOAM), a programme through which SNV and its partners have actively been contributing to value chain development in Ethiopia since 2005, acknowledges and recognises this limited pro-poor impact. BOAM introduced innovative approaches aimed at improving and scaling up business-to-business (B2B) relations in selected value chains (honey, oilseeds, dairy and fruit). It focuses on the private sector as an engine for pro-poor growth. A recent publication by that programme explains how the BOAM approach was successfully replicated in a national programme, targeting the most vulnerable farmers in food-insecure areas in Ethiopia (see Visser et al. 2012). BOAM demonstrated that when approached from a broader perspective value chain development practice can stimulate the strengthening of an entire sector, and hence contribute to overall economic development

Exclusion on the basis of gender, land ownership, access to inputs and other characteristics may manifest quite differently in interventions in niche export value chains than in interventions focused on local commodity market systems (see KIT et al. 2012). The quality requirements that food producers need to meet are usually lower for local markets, thus allowing for easier access than to export markets (generally seen to be prohibitively high for export to the EU). Infrastructure needs may also be different, allowing easy access to local consumers but not to foreign consumers. Strategies to improve productivity and production may be different, and perhaps easier to implement for poor and very poor smallholders for local markets. All these aspects should be examined when exploring the development potential and impact of local and regional value chain development.

Impact through sustainable commodity value chains

The commodity concept is usually associated with commodities sold in bulk, which have a negative connotation in product marketing because they cannot be easily distinguished by price and quality. Nevertheless, participation in a commodity market can be a good opportunity for local producers to engage in market-based sales. Basic grains, tubers and roots as well as certain fibrous crops are suitable for such commodity markets, and it is precisely the poorer producers who grow these commodities and can benefit from their mass marketing (even despite the usually small margins on these products).

Even though the initial call for cases for this book focused on food commodities and local markets, this publication will also deal with other staple crops. Non-food commodities, like fibres (cotton) and cash crops (coffee) are also included, but their intended markets are local, regional or national (not the export market). All cases describe local projects, organisations and movements that work on improving access to markets and

agro-related services for smallholders. They reflect the daily toils of small-scale producers and traders and the challenges they encounter. They also show that innovation, finding solutions to food insecurity, and initiating sustainable agricultural development are often taking place based on recognised smallholder needs. We see promising results in C:AVA's effort to enhance the position of smallholders in Malawi by adding value to cassava. There is the revival of dairy cooperatives in Kenya, partly thanks to the efforts of NGOMA to help farmers organise. But we see also the challenges that Zimbabwe's small-scale farmers encounter in a country that is slowly transitioning back to some form of economic stability after its worst economic crisis in 2008. All organisations figuring in these cases take a pro-poor stand and show the attempts made in upgrading the position of smallholders. All cases mention the importance of helping farmers organise so that their voices are heard and their access to financial and agricultural services is secured. In addition to these focal points, other aspects like prices and margins, institutional infrastructure, gender, food quality and food security are important factors to consider when looking at sustainability in food commodity value chains. We will first explain and briefly comment on these aspects below, and we will come back to them in the analysis section (see Chapter 4) when we consider the impacts in each individual case.

A pro-poor focus

Focusing value chain work on the poorer sections of the agricultural community usually means working with food crop producers, instead with those engaged in the production of cash crops for export. In most rural areas in developing regions, the bulk of the family's food consumption is met through own production. Their primary focus is on food security, and smallholders are usually not dependent on other producers to meet this need. However, in times of favourable weather and high yields, or with improved productivity as a result of interventions, farmers may be able to sell some of their excess produce. Even during tough times, it may be necessary to sell food crops to pay school fees and other urgent expenditures. A focus on the poorer sections of rural producers implies a strategic shift away from the lucrative niche, export markets toward local and regional markets and their dynamics.

A gender focus

Most small-scale farmers producing food crops are women, while men more frequently work with cash crops. A shift in attention from cash crop to food commodity implies that the gender aspect of agricultural production becomes a very strong variable. The exclusion of certain local (poor and/or female) producers from marketing systems, such as value chains, carries with it negative implications on access to innovation and knowledge as well as income, self-awareness and self-confidence. Gender considerations are not always central when considering value chains, but undoubtedly demand this position when food commodities are considered (see KIT 2012).

A food security focus

There is an implicit assumption that an increase in income from cash crop production will improve the food security of the household; however, this assumption has to be validated. By looking at food commodities as products in a value chain, we will be able to focus much more directly on the impact on food security. This applies first of all to the household level: Will production for the market also lead to improved food security (either directly through increased production or through rising incomes from sales)? The second aspect of food security is the impact on the national level. Food security remains one of the top priorities in many countries that have large populations of undernourished people. Admittedly, producing cash crops on the basis of a comparative advantage has an income effect. It allows for higher export trade, and thus income that can be spent on meeting the family's nutrition needs. However, food commodities prices on the world market are highly volatile. It is not uncommon for basic food commodities to experience upward pressure on prices due to structural causes, such as population growth, stagnant food production worldwide, urban use, competing land use for biofuel and animal feed production etc., and then sudden spikes when bad weather strikes. A focus on food commodity markets within states or between neighbouring states makes sense in this situation, as it would probably allow a much quicker and easier linkage with those markets than the export mark.

A focus on food quality

Export markets are marked by stringent quality criteria. Of course, quality needs to be assured also for local markets, but such requirements are more easily negotiated and communicated in a local context (due to the usually lower requirements as well as the facilitated communication through direct contact and similar language and business culture). Also, requirements of freshness are often less problematic when short distances are concerned; a distant export market may imply exorbitant costs for refrigeration and handling, which can eat up most of the added value of the final product. International exports to markets that use more strict quality requirements are also more unpredictable. Quality requirements may be used as political instruments to control imports, which is not the case in local and regional markets. In a long term view, achieving high-quality standards will become more relevant for local and national food markets. In large and growing markets, there is increased professionalisation and stricter quality requirements. Especially when large supermarkets come to dominate the retail sector, it usually implies political quality control tools and crowding out of some smallholder producers. Even though entry into the local market is relatively easy at present for smallholders, this may not always be the case in future, so quality is a key issue in assuring long-term sustainability.

A focus on infrastructure

Earnings acquired from sales are often used for investing in new agricultural technology as an important production input (sometimes also non-agricultural income

is used). Market knowledge can be instrumental for securing these additional funds. Partly, this access has been facilitated by enhanced telecommunications networks, for example, mobile phones have opened up ways to acquire this knowledge. Also physical access to new markets is improving across the developing world. After a long period of steady deterioration, road networks are again being built and upgraded. Of course, their construction still reflects their primary functions, i.e. linking the large cities and centres of mineral extraction to harbours; however, also strategic roads are being built (e.g., between East African countries in the framework of their further economic integration). A huge impulse to local economic growth, the growing urban centres, and thus to rising local food crop production is the result. In addition to examining this physical infrastructure (roads, telecommunications etc.), we will also deal with organisational infrastructure or institutional development. Institutional infrastructure has been recognised for some time now as an important production factor that reduces transaction costs. Institutional development means that relationships are being developed and trust is being built (Nederlof and Pyburn 2012), and it often is a prerequisite for changes in physical infrastructure (Kirsten et al. 2009). Even though the issue of reducing transaction costs is key to both physical and organisational infrastructure, we will discuss these issues separately in the concluding chapter, where we will go into detail on the governance of value chains and the various models presented in the cases.

A focus on producer and consumer prices

Policies on prices have evolved throughout the past decades. In the 1970s and 1980s, marketing boards (parastatal organisations that managed the purchase and marketing of food crops in many of the countries in the developing world) generally tried to maintain low food prices in order to reduce living costs for urban consumers. It was considered that with low food prices, the costs of labour could also be maintained at low levels, which would translate into competitive prices for industrial products on the world market. However, this low food price policy in developing countries resulted in very low market participation of smallholders in commodity production. With the Structural Adjustment Programmes (SAPs) of the 1990s, the food markets in the South were liberalised and local markets regained strength as food commodity prices increased and the livelihood of rural smallholders was improved. For poor local and urban consumers, of course, the price increase was a problem. Subsequently a focus on reducing transaction costs developed, most strongly with multilateral institutions, to protect their interest and safeguard their living costs against high food commodity prices. For example, market price information systems were developed, to make farmers, traders and retailers aware of prices and thus of opportunities to optimise market opportunities (both on the producer and consumer side). Road and market infrastructure as well as reducing the costs of bridging the physical distance between farmers and consumers were areas of action. Reducing the number and importance of middle-men has also always been a point of attention, which sometimes resulted in a complete redesign of the value chain.

Our interest in this study is the impact of value chain governance on price formation. The idea is that it must be possible to decrease the gap between producer prices and consumer prices through a free market for food commodities. Local markets are interesting markets in this respect, though the effect of their isolation and thus their vulnerability to local shocks (such as local dry spells, with subsequent high prices) may out-gun the benefits.

A focus on innovation and productivity growth

Another key area to consider is the impact of food commodity development on on-farm innovation and productivity. Local, regional and national markets may have different dynamics in terms of innovative responses to market development compared to international markets. Integration in international markets increases exposure to changes in productivity elsewhere which might be a driving force for food markets in developing areas to also raise productivity and adopt new technologies. On the other hand, local market dynamics may already enhance the search for innovation, certainly when we consider the rapid population growth in many developing regions, along with the accompanying upward effect on prices (i.e. through rising demand by a growing middle class for higher value products).

Limitations to food commodity value chains

We mentioned a number of reasons why this publication seeks to shift the focus from niche, cash crop value chains towards food commodity value chains. There are, however, also some issues of concern for food commodity value chains, issues that have to do with the context of these value chains. Recent developments towards regional integration and open boundaries may introduce volatility in prices. Of course, a larger market can be much more stable than a smaller market, but developments in demand on world markets may influence pricing in local and national markets. For example, the EU's decision to promote specific minimum quotas for biofuel in addition to mineral oil-based fuel for cars may cause an increase in prices of certain biofuel crops at the national level (e.g., maize or sugar cane). Food commodity markets catering for an increasingly urban clientele will reflect their customers' demand with regard to quality, timing, price and packaging. This may have negative consequences for local small-scale producers, requiring them to adapt farming practices: changes in cropping patterns, timing of planting and handling, and others. And, when small-scale producers then indeed shift their cropping patterns towards increased food commodity production, they may become very vulnerable to fluctuations in this market. If export to neighbouring countries is vulnerable to disruptions due to political unrest, there may be few remaining alternatives. For example, when world prices rise and exports increase from certain producing countries to large consuming markets in the North or South alike, then food security considerations may—and often do—entice governments to close

their borders to food grain exports when harvests fail due to bad weather. This will reduce the retail price at the national and local level, which will come to detriment of farmers—even despite the short-term benefits for local consumers.

A framework for studying smallholder-based food commodity value chains

Food commodity markets are big business, and big business attracts big players. Certainly in the Western world, most food commodity markets (like most 'mature' markets) are characterised by the presence of large corporations. In most mature markets, the largest five companies usually dominate around 70–80% of any particular market (whether it is fuel, food, fibre or any other commodity). Food production in the western world is increasingly large-scale. The small-scale family farm is a phenomenon of the past there (even though it is making a comeback in bio produce and other artisanal production). Looking at this development in the North helps put food commodity markets in developing regions in perspective, as small-scale production is still very vibrant there. A productive agricultural sector, stable and affordable food prices for consumers, and positive local economic development can be achieved through different models: the large-scale agricultural model (e.g., soya in Brazil) or the small-scale agricultural model (e.g., cassava produced in Thailand as input for the animal feed industry in the North). The impact of these models depended often on the design of the marketing system (local marketing to processors in the value chain allowing smallholders to benefit more due to local transaction costs between them and local consumers). A study of cases of successful integration of smallholders in the national food commodity markets will give policymakers the tools to decide on the policies that can support this process. At present, the overall preference seems to develop towards large-scale production.

A systematic study and analysis of cases selected along the dimensions discussed above is necessary to see how the various types of food commodity markets impact these key issues (pro-poor development, gender, food security etc.). Let us, for instance, consider the distribution of power and value added in the value chain. This depends on the relative size of the actor and its position in the chain. It also depends on the type of product, the complexity of the transactions (how complex is the information and how much knowledge transfer is needed before a sale is arranged), and the ability to codify/categorise these transactions (how similar or non-specific is the transaction across producers). Also the capacities of the producers are important (how complex are the transactions and do the various actors have access to the required knowledge).

A range of possible market models can be developed, but in practice spot markets are the most common model in agricultural commodity chains. However, when food commodities need to be processed, i.e. when value is added to the raw produce in a capital-

intensive process, it is often easier to control this process under a monopoly. To put it differently, it is sometimes more efficient to keep supply and processing of food commodities under one roof (i.e. a monopoly), instead of many producers supplying many processors with the associated risk of losing control over the value chain. A spot market with fully open competition can imply a loss of control and coordination, and can result in inconsistent and confusing price setting for consumers. Monopolisation brings with it other dangers, for example, price fixing and lower prices for small-scale producers. The point to take away is that value addition is closely linked with structural changes in chain coordination, which create friction and potential for conflict. It is important to carefully manage the changing interactions between the chain actors and to facilitate organisation and participation of vulnerable small-scale producers.

Certainly in the case of smallholders, who are many, and processors, who are few, there is built-in tension in the value chain. Aspects of inclusion and exclusion from the chain are crucial to consider, as they largely define the impact on poverty. Another element is institutional: organising farmers may introduce a balance in terms of control over the particular chain (Mangnus and De Steenhuijsen Piters 2010; Kirsten et al. 2009). There are several important questions to consider: Are certain crops more likely to lead to power inequalities in the chain than others? Are food commodity value chains systematically different from other (niche export) value chains, and thus a good focal point for interventions?

There are two aspects that can describe the tension in a value chain: the position of individual farmers or producers, and the position of processors and traders. The position is measured along a continuum from weak to strong (depending on their number or degree of organisation). Especially when the smallholders are organised and included in the ownership structure of their own client organisations (having shares as individuals or as a cooperative in processors of exporter enterprises) they are in a strong position to better control and secure benefits in the value chain (De Koning and De Steenhuijsen Piters 2009). The 'governance matrix' that can be developed along the lines of organisational strength is presented in Table 1.1, and will be used as a model for our later analysis of the cases in Chapter 4 of this publication.

Table 1.1 Matrix of case study analysis

		Traders and processors	
		Weak or not organised	**Strong or organised**
Producers	**Weak or not organised**	Market (Competition)	Hierarchy (Corporation)
	Strong or organised	Group action (Cooperative)	Network (Co-option)

When individual value chain actors—both the level of producer and of traders/processor- are weak and cannot monopolise the value chain, the market is said to be atomistic. In other words, the market actors are so small, relative to the market as a whole, that they do not have the power to set a price. This state is also known as 'perfect competition'. The relationship is a 'spot market': buyers and sellers are equal, and negotiate and agree their commodity prices on site (Kirsten et al. 2009). At the other extreme, where both producers and traders/processors are well organised, one or a few strong actors dominate the value chain on each side. In this case there is also balance of power. Both types of actors are large, professionally organised, and can largely negotiate as equals, which leads to a different type of relationship and behaviour—a 'network'. Depending on which type of actor is stronger, the two remaining cells characterise either a corporation-dominated value chain or one where cooperatives are stronger.

The outline of the book

This publication seeks to reappraise the potential for local, regional and domestic food commodity markets to serve as drivers of growth and poverty reduction. In the next chapter, we will present the recent history of thinking on marketing in agricultural development in developing regions in general, and in Africa in particular. We will further elaborate on the matrix, as shown in Table 1.1, and use it to classify the cases presented in Chapter 3 of this book. Subsequently, in Chapter 4, we will analyse the cases along the lines of the themes, and assess where they fit in the matrix. Finally, some valuable lessons and recommendations for food commodity value chain development will be shared. We aim to reach donor organisations, development practitioners, academia and government officials, and show what impacts a renewed focus on these markets could have. Small-scale agriculture can hold a powerful position in the global marketplace, and can contribute more to poverty reduction and food security than is presently expected.

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2

Inclusion of smallholder farmers in market networks and value chains: Useful theoretical constructs

Aad van Tilburg and Fred Zaal

Introduction

In this chapter we show how interaction between the theory and practice of marketing in developing countries has stimulated our thinking regarding the roles that primary producers and traders can play in markets or value chains for agricultural products (Van Tilburg 2010). Several key issues will be discussed. One focuses on the main bottlenecks for the inclusion of primary producers in markets or supply/value chains. Another will discuss theoretical constructs that contributed to an adequate problem analysis and proposed solutions. Case studies regarding marketing or market studies in developing countries will subsequently be presented to generate insights on how access of primary producers to markets or value chains can be improved.

If there is any lesson learned, it is that the inclusion of smallholders in value chains provides opportunities to increase wealth or alleviate poverty for primary producers in developing countries. However, this is not easily achieved, and requires careful consideration of the

specificities and conditions that provide for sustainable inclusion. This chapter will present recent academic thinking on marketing in agricultural development, and frame it in the context of emerging practices (with a focus on Africa). It begins with a brief overview of the developments in marketing studies in the past 50 years. Based on earlier case study research, the problem areas or bottlenecks in value chains analysis in developing countries are presented. We discuss theoretical constructs relevant for the analysis of these bottlenecks which will be illustrated with case studies in chapter 4. Finally, we will further elaborate on the matrix presented at the end of chapter 1, to analyse the cases in the final chapter.

Main bottlenecks in the value chain

There are numerous bottlenecks related to value chain development in developing countries (Van Tilburg 2010). Producers may have supply arrangements that do not take the needs of customers into account. This often happens when their livelihood system is primarily focused on consumption within the household, and marketing is limited to the sale of surplus production. The transaction and transport costs connected to the marketing of vegetables and fruits may be very high, due to the remoteness of the area and poor quality of roads. 'Getting institutions right' may still be an issue, due to inadequate institutional arrangements regulating the market, or unequal impacts of regulation and implementation in the more remote parts of a country. Due to these infrastructure, governance and social-economic factors the connection between supply and demand may be inadequate. The distribution of added value in the value chain may be skewed, hampering the motivation of smallholders to invest and produce for a certain market. Value chain performance may be inadequate, being affected by both market structure and market conduct in the various stages in the value chain. This again is a disincentive in the longer term. Price integration between far removed markets may be limited (which may also provide opportunities for traders of course). Low price integration causes volatility in individual markets due to localised market demands and deficiencies in supply. This is a disincentive for engaging in market-focused production as it is an additional risk for the farmer as a business entrepreneur. And lastly, farmer access to unique resources, such as knowledge and specialised inputs, may be limited.

Framework of analysis

Early studies on marketing and value chains in developing countries

From the 1960s to the late 1970s, the sub-discipline of marketing in developing countries was emerging, and this section will highlight some of this early work on marketing theory and analysis. We use the concept of marketing as it was understood at the time; later theoretic development stressed the wider value chain and its focus on value added at various levels by economic actors (not marketing exclusively as an activity, or the flow of goods itself often associated with the concept of supply chain).

Abbott and co-authors (1958, 1966, 1979) analysed marketing problems and improvement programmes in the tropics; Slater (1968) studied marketing processes in Latin America. Various authors—Bain (1959), Clodius and Mueller (1961), Scherer (1970), Cubbin (1988) and Baumol et al. (1988)—analysed market competition and market performance. Bucklin (1965, 1970, 1977) gave insight into the structure of vertical marketing systems and food retailing; Harriss (1979, 1981, 1982, 1983) published extensively about the roles of actors in food marketing in the semi-arid tropics. Colman and Young (1989) increased our understanding of the role of markets and prices in economic development; Van der Laan (1986, 1987, 1989) studied the functioning of marketing boards in Africa, and Meulenberg (1986) sketched the evolution of agricultural marketing theory. Early applications of marketing theory in developing countries included Geertz (1963) on social development and economic change in two towns in Java; Bijlmer (1987) on strategies of petty traders in Surabaya, Indonesia; Moser (1977) on upward migration of market sellers in Bogota, Colombia; Siamwalla (1978) on agricultural marketing in Thailand; and Bryceson (1985a, 1985b) on food marketing in Tanzania. Most of these publications included marketing as an entrepreneurial activity or governance of a supply or value chain as framework for the analysis.

In the following table, the upper part summarises the themes and focus areas of marketing theory dealing with the entrepreneurial activities in the value chain. The lower part resumes themes, and areas of interest that are about governance issues in the value chain. A more detailed explanation of the table can be found underneath it.

Table 2.1 Marketing and governance in the value chain as theoretical constructs

Theory	Theme	Specification
Marketing		
Marketing	Schools of thought	• Commodity approach • Functional approach • Institutional approach • Marketing management approach
Organizational Economics	Resource-based view	• Access to unique resources?
Governance		
Vertical coordination		
Marketing	Coordination in the value chain or distribution channel	• Ownership • Contractual • Network
Organizational Economics	Coordination through transactions or contracts	• Contracts in a weak institutional environment
Spot market coordination		
Organizational Economics	Industrial Organization: Market performance	Market structure analysis Market integration

Source: Van Tilburg (2010)

Marketing as an entrepreneurial activity in the value chain

Originally, the marketing discipline dealt with the process of getting agricultural commodities from farmer to consumer (Bartels 1970). Before 1950, three schools that viewed marketing as a socio-economic process were developed and gradually integrated: (1) the commodity school, focusing on the nature of the product; (2) the functional school, focusing on the marketing functions needed, and (3) the institutional school, focusing on institutions or organisations facilitating the marketing process (see Hill and Ingersent 1982; Meulenberg 1986; Stoelhorst and Van Raaij 2004).

The commodity school dealt with the terms necessary to bridge the gap in place, time and product between producers and consumers. It studied several sub-sectors in depth, such as cereals, coffee, tea, vegetables, fruit, meat or fish. Traders were seen as playing an important sorting function: they adjusted the discrepancy in supply and demand in the various stages of the value chain, from the initial producer sale all the way to retail (Bucklin 1965). This function includes sorting out, which implies breaking down of a heterogeneous supply in homogeneous lots; accumulation, which entails bringing similar stocks from a number of sources together; allocation, breaking down a homogeneous supply into smaller lots; and assorting, which stands for the build-up of an assortment for resale by retailers. In a cooperative market (see the matrix in chapter 1) these functions can be taken up by the cooperative, while in a hierarchical market, they are usually done by the dominant company in the chain.

The functional school focused on three functions: the exchange function, including buying and selling operations and negotiating a contract; the physical function, consisting of contracting for transport, storage or processing; and the facilitating function, comprising trade financing and market information.

The institutional school took into account how institutions facilitate the flow of products from producer to consumer in terms of several services: governance, the rules, procedures and actions of a cooperative or a marketing board; standardisation of products and processes, by issuing common weights, measures, quality classes or contract forms; market information services about prices and volumes; finance institutions, which provide trade credit and insurance; and commodity exchanges providing tools to reduce price risk.

From the 1950s onwards, the management approach was gradually being adopted in marketing analysis and decision-making (Kotler and Keller 2009). It focused on strategies and tactics of the entrepreneur to produce products or services that meet customer needs (see Meulenberg 1986; Stoelhorst and Van Raaij 2004). The related resource-based view of entrepreneurship (e.g., Locket et al. 2009; Kraaijenbrink et al. 2010) concentrated on a firm's unique resources, competences and opportunities to attain a competitive advantage in the market. The question became, can a firm obtain unique

or costly-to-copy resources or competences so that it outperforms its competitors in particular market segments? Examples of unique resources include raw materials, skills, competences, procedures, networks, market opportunities and brands. Examples of costly-to-copy resources are capabilities leading to innovation, insights in positional advantages in market segments, skills how to cope with imperfect market information, special organisational learning capabilities or unique brands.

Governance in the value chain

Supply or value chain analysis deals with the degree of vertical coordination required in marketing channels to adequately connect supply and demand (e.g., Bucklin 1970; Stern et al. 1996; Ruben et al. 2007; Van Tilburg et al. 2007). The discussion on this dimension of marketing started in earnest in the late 1990s and combined the thinking regarding the organisation of the business and the business partners in a chain, on the one hand, and the location of certain activities within the chain in developing and developed areas, on the other. Even though this line of theoretical thinking was developed in an industrial setting (Western companies outsourcing production to the South, for instance), it also proved useful as an analytical framework in the agricultural setting. The adaptation for the agricultural setting in the South included considering how primary producers could become more powerful by organising themselves, for instance in cooperatives.

The value chain in relation to its environment

Market institutions in general tend to be relatively weak in less developed countries. Trade and marketing characteristics differ considerably between value chains operating in a weak or strong institutional environment (e.g., Fafchamps 2004). Prevalent differences in the institutional environment between less and more developed countries are most notable in the level of purchasing power, the degree of market transparency, transaction costs and the degree of access to both resources and markets by actors in the value chain. In order to be beneficial, transactions in a weak institutional environment need to be embedded in trust relationships based on reputation, participation in business or personal networks, family relationships, a common location of origin, a common ethnicity or religion (e.g., hadji traders or marabouts in Senegal).

Marketing and finance are closely related, as the credit relationships in trade illustrate. Assembly traders in developing countries may be pre-financed by wholesalers, in order to be able to provide smallholder farmers credit during the lean season. The condition is that the farmers sell their harvested crops to these specific traders, usually at a lower price (e.g., Van Tilburg and Hamming 1999). This phenomenon is known in the literature as 'locked-in transactions' or 'interlocked product and credit markets'.

We have decided to use an adapted version of the framework developed by Gereffi et al. (2005) to categorise the cases presented in chapter 3, to uncover the most important

dimensions of the cases, and to come up with conclusions and policy recommendations how to use these markets as vehicles for poverty alleviation, food security and sustainable economic development.

Vertical coordination in the value chain

Types of coordination

Our point of departure is that a value chain between primary producers and consumers can be characterised by its governance structure. In Chapter 1 we proposed a two-dimensional matrix to capture the four typical types of value chains (Table 1.1). Spot market coordination of economic activities is governed by actors in which supply and demand are regulated through price disclosure. Market prices are a crucial signalling device that guide the decisions taken by market participants. A hierarchy of economic activities can be obtained through ownership at a crucial stage of the value chain (e.g., a brand name) or a legal monopoly (e.g., through a public parastatal or marketing board). It can also be obtained by means of contract (e.g., franchising) or by means of the action of a channel leader, taking the initiative to arrive at a joint marketing plan. A network of economic activities consists of informal relationships between agents, underpinned by trust based on personal or professional connections (e.g., family, town of origin etc.).

Based on this distinction, several common types of coordination in marketing channels have been identified (Stern et al. 1996). In conventional marketing channels competition in spot markets prevails at each stage of the chain. In vertical marketing systems (hierarchies) at least two subsequent stages in the chain cooperate through voluntary or contractual coordination, while in networks cooperation is based on mutual trust and prior experience. The specific environment in which many smallholder farmers work allows for a fourth model: the producer-organised or cooperative channel. Value chains can usually be characterised by a combination of two or more types of coordination. Key features in the coordination of economic activities are given in the framework presented in Table 2.2.

Table 2.2 Key governance features in the value chain

	Spot Market	Hierarchy	Network	Group Action
Normative basis	Contract	Employment	Trust	Empowerment
Coordination through	Prices	Routines	Business relations	Negotiation
Flexibility	High	Low	Medium	Low
Power of individual primary producers	Low	Low	Medium	Higher
Benefits	Own	Organization	Mutual	Primary producer

Source: Adapted from Powell (1991) and Gereffi et al. (2005)

Aspects of the spot market type of coordination

Roles of traders

Traders link subsequent market stages in the value chain, in most market types (spot, hierarchy, network or cooperative). These traders can be the owners of the commodities traded at various stages, but also can act as brokers, especially in the early stages of the chain. Only in a hierarchical value chain this function performed the main actor in the value chain, usually a large company. In case there is no group action by primary producers, collecting traders (also called petty traders, itinerant traders, or rural merchants) perform the vital function of linking the individual farmer with the market at a level of turnover that is generally unattractive to a large-scale merchant. Wholesalers buy in bulk from collecting traders and sell in bulk to retailers further down the chain.

Contracts

Subsequent stages in the value chain are linked by contracts. A contract is a written or spoken agreement representing a transaction between seller and buyer. It is embedded and strongly dependent on a specific environment of formal and informal institutions. The stages in the contract process are contract preparation, contract conclusion and contract enforcement (Table 2.3).

Table 2.3 Stages in realising a contract

Stage in the process	Action	Type of transaction costs
Contract preparation	Information search	Search costs
Contract conclusion	Negotiation on the terms of contract	Negotiation costs
Contract enforcement	Enforcement of contract conditions	Enforcement costs

Source: Van Tilburg (2010)

Transaction costs in concluding a contract tend to be high in developing countries because of a lack of standardisation, market information, market transparency, horizontal and vertical coordination, access to trade credit and economies of scale.[3] Search costs can be reduced by improving market transparency, which may reduce the ability of actors to monopolise market information (information–rent seeking behaviour). Negotiation costs can be reduced by standardising weights, measures, procedures and contracts. However, in many situations access to market knowledge and know-how is skewed, and this tends to be exploited by market actors to secure additional gain.

3 Please consult Rindfleish and Heide (1997) and Fafchamps (2004) for more information. Also Williamson and Eggertson provide useful insight into ex ante and ex post transaction costs, especially emphasising the point that information costs are not identical to transaction costs (in Kirsten et al. 2007).

Enforcement costs can be reduced by taking proper precautions for a successful transaction, or, in case of disputes, by using arbitrage instead of a judicial procedure through the court system.

In legal contracts, transactions are arranged in written form, and contract enforcement tends to be formal (e.g., arbitrage, court proceedings etc.). Transactions in developing countries tend to be more *trust-based* than *law-based*, in view of the limitations described above on reducing transaction costs. Trust is the willingness of at least two persons to enter in a negotiated agreement, to incur *obligations* and to acquire *rights* with a low level of legal protection. Trust-based exchange transactions assume trust levels based on the reputation of the contract partners or the strength of the mutual personal relationship. Shortcomings in formal institutions can be partly bypassed through trust-based exchange (Fafchamps 2004; Grosh 1993). Trust can work very well in reducing transaction costs and developing a normative basis for transactions, especially when strong social links (ethnicity, religion, family ties) can replace weak commercial links.

Market coordination in the value chain

The earliest theories on the coordination of economic activities through markets (e.g., Bain 1959; Cubbin 1988; Hill and Ingersent 1982) were based on the model of perfect competition (here called 'spot market'), and have been extensively applied in both agricultural economics and marketing studies. Market performance in the real world was evaluated by comparing the actual patterns of competition in a spot market with the theoretical characteristics of perfect, workable or contestable competition. The model of *perfect competition* (e.g., Henderson and Quandt 1980) is characterised by homogeneous demand, extensive and readily available market information, divisible and mobile resources, many buyers and sellers, costless transactions, and, consequently, buyers and sellers who seek to maximise their own welfare. Conditions of *workable competition* are close to perfect competition, e.g., products are rather homogeneous, there are sufficient buyers and sellers for a level playing field, market transparency is at a reasonable level, and only small barriers to entry or exit exist. The main condition of *contestable competition* is that market entry and exit are free, which means that incumbent traders also have to take into account potential competition by new market entrants (Baumol et al. 1988).

The initial idea of our publication was to examine whether regional and local markets in food grains for local and nearby urban markets could be characterised by this perfect competition model, and, if so, whether this model provides a good approach to promoting pro-poor value chain development (especially compared to the prominent value chains in niche export markets, such as for organic coffee, cotton or tea). The policies for developing these food grain markets may differ substantially from the policies for export markets. Less public money (international donor assistance) is generally spent

on developing the capacity of local producers in these commodity markets. In the concluding chapter we will come back to this question, where we will demonstrate that this framework does provide improved insight into how commodity markets work, why they are so different from export markets, and why there may not be a great need for public sector interventions.[4] However, we will also see that in some cases, positions of power of key actors reduce the space for small scale farmers to improve their position.

Comparing types of coordination

The network and spot market model

'Network' structures may show characteristics similar to 'market' models of perfect competition (many actors of equal strength), but usually are distinguished by a smaller number of actors and strong connections between multiple actors. Rather than having only one meeting point—the marketplace—the network consists of a multiple linkages, not necessarily focused on one area or place in the structure. This dispersion makes it difficult to obtain information on key conditions in the network, as access to information is dependent on personal linkages and not on participation at *a single spot* in the network.

Network markets tend to be less transparent than spot markets. Market transparency is necessary for facilitating proper decision-making by producers, traders, consumers and public authorities. Market transparency can be improved by standardisation of key elements required for market participation (product quantities and qualities, delivery options, contracts and market information, etc.), with the aim to lower transaction costs (Abbott 1958). To increase market transparency, a Market Information Service (MIS) for the main food commodities was set up by many governments in developing countries during the 1980s. A MIS is a public service that collects and processes data regarding prices and supply of agricultural commodities, in turn disseminating this information on a timely and regular basis (Shepherd et al., 1997).

For a value chain to be sustainable, all actors need to benefit sufficiently, both in the short and the long run. Expected benefits for each participant in the value chain are the raison d'être of his marketing activities. Benefits may accrue at various levels, directly and indirectly. As a variable, benefits for a certain category of participants can be systematically different among models. In the perfect market model, everyone benefits to the same degree because there is a level playing field. The network model provides a similar outcome, as individual benefits are actively sought by mutually connected actors. In the models representing hierarchies or cooperatives, there tends to be a skewed dis-

4 One area for public sector intervention is to provide contextual improvements that lower transaction costs and support farmers organisations, in order to promote a fair power balance in the market place.

tribution of benefits, depending on the power position of the actors involved. Generally, the dominant processor is the major winner in the hierarchical model, while in the cooperative model the producers may have the upper hand, if they are well organised and wield sufficient market power.

The hierarchy and the cooperative model

In both the hierarchical and cooperative models, there is an explicit power difference between the partners: in the former, the producer is in a dependent position (either as a contracted part-employee or an outgrower on a sharecropping basis, for instance), while in the latter the processor is dependent on the supply from participating cooperatives. Contracts and trust do play a role, but enforcement of contracts by the weaker partner in the transaction tends to be difficult, and trust may develop too slowly when power differences are prominent.

Hierarchical models and cooperative models share a key similarity as both heavily depend on negotiation. There can be a power imbalance in both models, but there is a mutual interest among the value chain partners to find common ground. In the hierarchical model, communication is achieved through routines (such as standardization), which normally follow the interest of the ultimate actor in the chain. In the case of the cooperative model, there is usually a small number of producer groups that offer the desired product, such a situation poses a need for negotiation. In both models transparency may be limited, as some actors have the liberty to keep trade secrets and lack the incentive to disclose information. The reduced flexibility in hierarchies and cooperative value chains is not necessarily a problem. For example, the most powerful actor in the value chain—the channel leader—can dictate value chain conditions that take into account the interests of the other channel participants and the changing context.

The next steps

Chapter 3 will continue by considering the case studies and examining in depth their contribution along the key dimensions introduced in chapter 1: pro-poor development, gender, food security, food quality, infrastructure, consumer and producer prices and innovation and the growth of productivity. In the final chapter we will seek to distil the most representative characteristics of the models. The analysis will combine the results observed in the case studies along the different dimensions, placing them in the broader framework. Finally, the publication will end with some implications for policies and practices that can be used to promote pro-poor development in local and regional markets.

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3 Cases

3.1 NGOMA - giving a voice to small-scale dairy and maize producers in Kenya

Jeremiah Kipkering and Jacqueline Sluijs

Introduction

For the vast majority of Kenyans agriculture is the primary source of livelihood. About 80% of the country's population lives in rural areas, concentrated in the most fertile parts (15% of the total land area). Eighty percent of agricultural output is produced by smallholders. Depending on the crops, the majority of farming output is non-marketed subsistence production or aimed at meeting domestic food needs. Farmers usually sell the bulk of their surplus production either directly to local consumers or through informal channels and local traders. Especially for staple foods, such as maize and dairy, production outputs are very volatile, due to strong reliance on rain-fed agriculture, inadequate and unstable access to inputs, and marketing bottlenecks. Half of the population of around 40 million is impoverished or struggling to meet daily nutritional requirements (Library of Congress–Federal Research Division 2007; IFAD 2011). During major disruptions of production and marketing—caused by persistent droughts,

political instability, or price shocks on the global market (e.g., low maize prices or high energy prices)—the food security of the rural poor can be severely threatened.

The Rift Valley region, one of the most fertile areas in Kenya, is home to a fourth of the country's population and a major production centre for the maize and dairy subsectors. It accounts for about 80% of the country's total maize harvest and is also home to more than half of all dairy cattle (FAO 2011). The development of market-oriented agricultural production in Kenya can be roughly divided in three phases: immediately after independence (1967–1978), the structural adjustment period (1979–2002), and the agricultural reforms since 2003.

Before independence, the agricultural sector was dominated by large-scale settler estates, which produced for export markets. After independence, the newly established administration sought to include more indigenous Kenyans in commercial agriculture (including market-oriented dairy). This period saw the rise of organised smallholders, as large estates were broken up and divided among local farmers. The government intervened directly: cooperatives were established, services and inputs for farmers were subsidised, and large purchasing and marketing parastatal enterprises came to life. The next phase saw a different approach; the government took a step back and followed a hands-off strategy in favour of private sector actors. The so-called Structural Adjustment Policies (SAPs) promoted the privatisation of state-owned enterprises as well as the reduction and easing of government regulation. These measures were aimed at promoting competition and the participation of private sector actors; however, they had some long-term negative effects (FAO 2011). Governmental budgetary allocation for agricultural support dropped from 10% to 3%, and many cooperatives collapsed. The internal market became much more volatile and producer prices towards the end of the period fell to all time lows (dropping as much as 50%). Corruption was rife among multiple levels of the administration, as key inputs (such as fertiliser) became hotly desired commodities on the thriving informal black market. Private millers and middlemen took advantage of the decreasing purchasing power of the parastatal National Cereals and Produce Board (NCPB) and Kenyan Co-operative Creameries (KCC). The SAP policies were not very popular with smallholders, and often have been blamed for the weakening of the cooperatives and the drop in producer prices (Rono 2002). These are the challenges hampering the development of the smallholder maize and milk sectors.

Since 2003, there has been a period of renewed reforms in agricultural policy, spurred by the revival of some market-stabilisation mechanism (e.g., the rebirth of the new-KCC). There are some visible results, like the tripling of milk production in the formal sectors between 2002 and 2007, but the system still suffers from many weaknesses (FAO 2011). NGOMA arose in the midst of this revival in 2002. It has focused on

organising farmers; providing support in lobbying and representation; and promoting smallholders access to necessary services. NGOMA is a membership-based organisation formed and owned by small-scale farmers, who either join as individuals or as farmers groups. Currently, NGOMA works with approximately 1,000 farmers groups in six counties in the Rift Valley region, where thousands of small-scale farmers grow maize and hold cattle.

The maize and dairy value chains

Maize value chain

Maize is essential for food security in Kenya. It accounts for 65% of staple food calories and for more than a third of total calories consumed. Small-scale farmers produce 70% of the total maize output. Production for 2010 and 2011 hovered around 3.4 million tons, almost fully meeting domestic demand. Only about a quarter of the produced maize is marketed (Ariga et al. 2010; FAOSTAT). The average yields of small-scale farmers are modest (15–20 bags[5] per acre) and can be improved through additional financing of farm input purchases. For comparison, large-scale farmers produce about 30 bags per acre and buy their farm inputs in bulk.

The key actors in the maize value chains are producers, intermediary agents and traders, private processors, retailers and consumers. The producers are primarily small-scale farmers, often organised in farmers' groups. Purchasing is done mainly through private intermediary agents but also the Government of Kenya (through the NCPB) is a large buyer. Recently NCPB has been purchasing 10–20% of the domestically marketed maize output, mainly from large-scale farmers (over 50 acres). Since the mid-1990s a very small percentage of smallholders has been selling to the NCPB. Nevertheless, the NPCB continues to play a significant role in price setting, and its budget has been increasing steadily since 2000 (Ariga et al. 2010).

Land fragmentation, the old average age of maize farmers (58 years old), poor access to credit, over-reliance on rain-fed agriculture, and declining soil fertility are some of the key threats to the sustainability of maize production in Kenya (HBS 2010). Other challenges stem from governance issues. The maize market is complex, and the government lays down rules and regulations and also acts as a principal buyer. Small-scale farmers are excluded from the larger market segments due to formal regulations and standards related to bulking and quality. Collective action through farmers groups could in principle tackle this challenge. Storage is another big problem—resulting in losses of up to 40% in some areas. One solution would be to utilise the excess storage capacity of the NCPB and make it available to farmers organisations for a nominal fee. Looking

5 Maize is commonly sold in bags of 90 kg.

at pricing and accessibility of maize for consumers, the import duty (partially lifted in 2009) and some non-tariff barriers have prevented the inflow of maize from neighbouring countries into Kenya at times when local production has faltered (Ariga et al. 2010).

Dairy value chain

Smallholders—numbering more than one million households—are the dominant producers in the dairy chain, counting for more than 70% of marketed milk output. The Rift Valley contributes around half of the total 3.8 billion litres of yearly milk production in Kenya. Less than 30% of the cattle population is grade cattle, but it still provides around 70% of total milk production and almost all of the milk in the formal marketing chain. Most small-scale farmers hold between 2 and 5 heads of cattle. Smallholder cattle are usually reared on natural foraging, cultivated fodder and crop by-products. Most small-scale farmers cannot afford to buy additional feed, and farm animals in Kenya are generally underfed, which results in lower yields per animal. Estimates from various studies indicate that about 85% of marketed milk is sold raw (Kenyans have a strong preference for consuming raw milk). Smallholders consume almost half of their milk within the household and market roughly 55% (23% directly to local consumers and 31% through informal channels and cooperatives (FAO 2011)).

The key actors in the Kenyan dairy sector include regulators, farmers and associated organisations, traders, input suppliers, service providers, marketing agents, research institutes, NGOs and others. The Kenya Dairy Board (KDB) is the main regulator, responsible for issuing licenses and packaging standards. With the Structural Revitalization of Agriculture programmes, the KDB has started to organise stakeholder forums with farmers organisations. Thanks to the 2005 policy changes, more and more private processors and retailers—especially small-scale vendors—are entering the market. There are 30 licensed milk processors, and the two largest, new-Kenya Cooperative Creameries and Brookside, account for 60% of all processed milk.

Before the early 1990s and the uncontrolled market liberalisation, there was an organised milk collection and bulking system. With the liberalisation of the formal market and the collapse of KCC, also the collection and transport system collapsed. Today, it is an intricate web of complex systems involving many different intermediaries, milk sheds, various road networks and other stakeholders. Major processors run their own collection points. In some areas traders have a powerful position, which can lead to depressed producer prices and complicated traceability, which can increase the risk of contamination (FAO 2011).

There are several challenges in the ongoing reform of dairy policy in Kenya. The lack of reliable and easily accessible marketing information is a major hurdle. Even for basic statistics, such as the number of heads of cattle in the country, there is a wide disparity between official numbers and various surveys administered by research institutes and

development organisations. Transport—both poor road infrastructure and cooling facilities—is another key bottleneck. Often smallholders have to discard their evening milk production, because they cannot take it to a cooling storage facility. Access to inputs and extension services, especially quality feeds and veterinary services, needs to be secured and made more affordable. The skyrocketing costs of these essential services outstrip any gains in improved producer prices.

NGOMA calling for attention

Established in 2002 as a lobby and advocacy group (since May 2010 a registered foundation), NGOMA works with approximately 1,000 farmers groups in six counties in the Rift Valley region in Kenya.[6] NGOMA strives to help smallholders secure sustainable access to markets at fair prices for their maize and milk. NGOMA deploys three main strategies in its effort to empower smallholders: (1) lobby and advocacy; (2) organising farmers; (3) linking farmers to service providers, particularly to financial service providers. The ultimate goal of the NGOMA foundation is for smallholders to engage in value addition.

To ensure that farmers are genuinely represented, county action groups and a national steering committee have been established. In 2004 NGOMA was involved in the Structural Revitalization of Agriculture Policymaking Forum in Nairobi. This was the first time that the voice of small-scale farmers was heard in formal formulation of national agricultural policy. NGOMA has also sought to empower farmers by linking organisations with officials from the Ministry of Agriculture and the Ministry of Livestock Development. Farmer organisation was enhanced by building strong relationship and supporting existing farmers groups, and by establishing new cooperatives and federations. Better organisation has enabled farmers to improve their access to services like agricultural credit and input supplies. It has provided farmers with additional technical support and capacity building. Instead of functioning as a service provider, NGOMA acts as a catalyst between smallholders and local service deliverers. The project has been instrumental in linking farmers groups to microfinance institutions and cooperative banks, such as K-Rep and Faulu Kenya.

Impact of the intervention

Pro-poor development

NGOMA is first and foremost a pro-poor organisation, established to organise and lobby on behalf of poor, small-scale maize and dairy farmers. It has directly assisted in the formation of over 1,000 autonomous farmer groups. Most groups have 25–30

6 NGOMA is an abbreviation of two Kiswahili words Ng'ombe (cows) and Mahindi (maize), but it is also the word for drum, an instrument used in many African communities to call for attention.

members, but there are also large groups with over 200 members. Being organised allows farmers to sell their produce in bulk for higher prices and at reduced transport costs. By improving the position of smallholders in the value chain, NGOMA has helped farmers secure stable market access and better prices for their products. Thanks to these advances, farmers have started to invest back into their farms, and production volumes are increasing. Others diversified and turned to horticulture for their livelihoods, producing seasonal crops, such as passion fruit or tomatoes. Some cooperatives have acquired processing facilities, like milk coolers. This is an example of investment towards enhancing value-added processing capacity, the ultimate goal of the foundation.

Photo: Jeremiah Kipkering

Secretary of NGOMA supervising preparation of dry matter

There are still many challenges to consider. Often, farmers do not participate in the newly established groups, either because they cannot afford the registration fees or because they are hesitant due to mistrust and lack of adequate leadership at the farmers group level. Mistrust is a crucial hurdle for organising farmers and securing the benefits of collective participation in the value chain.

Gender

Rural women are a particularly vulnerable group in Kenya, with around 70% relying on subsistence farming as their primary source of livelihood (IFAD 2011). In the Rift Valley control and ownership over livestock or maize most often rests with the man in the family. Even though 80% of women participate in farming activities, they are often left out of decision-making and profit sharing arrangements. Women farmers have great difficulties to secure equal access and benefits from extension support programmes or input subsidies. Looking at the dairy sector, female-headed households trail far behind male-headed homes in access to improved dairy breeds and dairy technology (Wambugu et al. 2011). In response to these structural challenges, NGOMA has adopted a strong gender-sensitive approach, explicitly seeking to enhance women's access to decision-making power and organisation. As a result, two-thirds of NGOMA's farmer groups are women's groups. In NGOMA's governance structure, one out of two county representatives is a woman, and one out of four members on its National Steering Committee is a woman.

Food security

Low producer prices for milk and maize, as well as the lack of adequate farmer representation in key agricultural institutions, are key factors that perpetuate the spiral of poverty and food insecurity in the Rift Valley. NGOMA's work has resulted in tangible livelihoods improvements, primarily by securing higher incomes through higher producer prices. The values of several indicators (considered key by NGOMA and reported on annually) are increasing: higher expenditures in other than basic needs; more wedding ceremonies after harvest; and more children are going to school.

Farmers have also gained access to loans from microfinance institutions that accept dairy cows as guarantees. Using these additional funds farmers are making small investments in equipment (e.g., small milling machines used for producing livestock feed), thereby enhancing their control over the value chain. People can afford electricity and are buying mobile phones to receive timely market information. Also, investments in transport are being made: motorcycles to carry milk to the milk collection centres, second hand tractors for mechanised on-farm production, and milk coolers for preserving evening milk.

Food quality

The project explored opportunities to upgrade the cattle breeds or maize types, in order to significantly improve the volume and nutritional value of production. Regarding milk, the key issues are the length of the chain between producer and consumer, and in particular the absence of a cold chain (refrigerated transport and storage). This issue was addressed in the dairy cooperatives in Kericho and Nandi with the purchase of milk cooler plants. The farmers contributed 60% of the investment and the remaining 40% was complemented by Heifer International. At the time of writing the cooperatives had repaid almost half of the funds lent by Heifer International. The intention is to move up further in the chain by starting milk processing.

Regarding maize, storage is the key bottleneck for maintaining produce quality. Often due to inadequate storage facilities in the area, upwards of 40% of the crop can be lost while waiting for a spike in market prices. Usually storage is financed through a warehouse receipt system. Keeping maize in special warehouses—instead of farmer fields in the open air—helps preserve food quality. Maize stored in local warehouses can maintain its quality for up to 6 months and can thus bring in a premium price during periods of high demand and low supply.

Infrastructure and governance

There are several long-term challenges regarding physical infrastructure. The lack of post-harvest storage facilities is a big problem. Transport costs for farmers living in remote areas are particularly high, not only to transport their produce but also to bring

in inputs and equipment. Sustainable access to water for crops and pastures is another key limiting factor for growth. NGOMA ensures that farmers groups are aware of existing government funds that can be used to establish small-scale local storage centres in remote areas. Smallholders, particularly those in remote areas, lack access to key services, such as extension, input supply, veterinary services and credit. NGOMA provides information to farmer group leaders regarding the various government devolved funds—such as the Community Development Fund and the Road Maintenance Levy Fund—which farmer groups can petition with specific development projects.

Advances in physical infrastructure (especially information and communication technology) are making a big difference in the lives of ordinary Kenyans. Mobile telephone use has continued to expand (current penetration rate stands at 77%), and two-thirds of subscribers are taking advantage of mobile money transfers (CCK 2013). Most smallholders can use mobile devices to exchange information on prices and production volumes, or to make deals with local traders. The number of trips that traders need to make to remotely located suppliers is thus reduced. Combined with the fact that several farmers can coordinate and bulk their produce in a single shipment, the widespread use of mobile phones has directly benefited farmers by reducing transport costs and effectively increasing their profit share of farm gate prices.

Building the institutional infrastructure for farmers to connect with each other and participate in decision-making is central to NGOMA's approach. Starting with the organisation at farmer group level and moving on up to county and national lobby efforts, smallholders have enjoyed an effective channel for participating in national-level policymaking processes.[7] For the first time in history smallholders played a direct role in the formulation of national agricultural policy. The Ministry of Agriculture has pursued a more participatory approach in their policymaking processes, reaching out to these groups for consultation. Also, NGOMA was one of the several coalitions that came together to form the Kenya Producers Coalition (KEPCO).

Producer and consumer prices

Dairy

Prices for raw milk dropped from KSH 20 to KSH 8–10 per litre during the late 1990s. The steady recovery since the early 2000s was interrupted in 2008, due to Kenya's post-election crisis (which brought large-scale violence to key dairy regions) and the global economic crisis. The prices of most dairy cattle feeds went up dramatically, in some cases by more than 100% (FAO 2011).

7 Some examples include Kenya's structural revitalization of agricultural policies, national food security and nutrition policy, inclusion of the right to food in Kenya's new constitution, as well as participation in the National Agricultural Livestock Extension Programme (NALEP) and the National Accelerated Agricultural Inputs Access Programme (NAAIAP).

Considering that well over 70% of the marketed milk is sold as raw milk to informal trades, the 2004 Dairy Policy took a big step towards acknowledging and supporting these informal small-scale milk vendors by introducing a licence-issuing scheme and specific support measures. These measures increased the stability of the milk supply and provided for regulated competition on the demand side, thus helping maintain strong producer prices. Recent studies found that the current national average milk price is well over KSH 20 per litre (see Wambugu et al. 2011), but prices can fluctuate widely (15–35 KSH per litre) depending on proximity to large processors and urban markets as well as the type of customer (institutions, such as schools and hospitals, pay considerably more than cooperatives) (FAO 2011). NGOMA activities seem to have yielded concrete results as the private sector now offers on average KSH 30–35 per litre to their members (which is more than KCC). Taking in consideration the persistently high domestic demand (Kenyans rank among the top consumers of milk per capita in the developing world) and the periodic dips in production, due to adverse weather and input disruptions, producer milk prices can be expected to remain strong, as long as a strong organised collective marketing channel can be maintained.

Maize

The price of maize is very volatile. Maize is the main staple crop in the country, closely linked to food security and a fiercely debated policy issue. Prior to the structural reforms, NCPB kept the producer price of maize high, by purchasing large volumes of maize at fixed high prices for the strategic reserve. Since the SAP reforms, NCPB's purchasing volume has dropped significantly, which combined with other factors has resulted in steadily declining wholesale maize prices. In the 1995–2007 period yearly average wholesale prices were 25% lower than during the 1985–1994 period. Due to several mutually reinforcing factors (the political instability, the economic crisis, import restrictions and the drought), after 2008 there was a substantial maize shortage and a significant increase in wholesale prices (Ariga et al. 2010). In 2012 wholesale prices were still high but showed some indications of going back down, due to eased import restrictions and the abating crisis. In Eldoret, a major maize producing region, prices fluctuated between 1,900 and 2,600 KSH per bag, while in the major urban consumer area of Nairobi they were between 2,200 and 2,900 KSH per bag (FEWS NET 2013).

Even though only 10% of the maize purchased by the NCPB comes from smallholders, its price-setting power has a significant influence on producer prices as a whole, even at its reduced purchasing volumes. For the 2011 harvest, the NCBP increased the buying price from 1,850 to 3,000 KSH per bag to build up the national strategic reserve. Smallholder farm-gate prices tend to follow the general trend in wholesale prices (Kamau et al. 2012; Ariga et al. 2010). Improving storage, reducing transportation costs and assuring stable marketing channels are the main strategies that can help

smallholder increase their farm gate price share. Through strong farmer organisation, NGOMA has helped farmers coordinate and engage in such collective marketing.

Innovation and sustainability

As described above, the innovations promoted by NGOMA are focusing mainly at the institutional level. Even without substantial direct interventions, helping farmers improve the technical and technological elements of production is still an integral part of all smallholder-focused interventions. Group formation, access to support services, improved capacities and an improved enabling environment all help smallholders secure a better position in the value chains.

Concluding remarks

The success of NGOMA highlights the added value that multi-layered organisations can bring in facilitating the connection between the various actors involved in small-scale farming. Yet, there are still many challenges ahead and more work needs to be done. Despite improved prices and increased participation in policy formulation processes, a large part of smallholders still cannot meet quantity and quality standards. Farmers now widely use mobile phones to obtain market prices, but poor road infrastructure hinders trade. The overreliance on rain-fed agriculture is a serious threat to local livelihoods and food security, especially with the increasingly more frequent periods of severe drought.

In such a complex environment, the beating of the drum, NGOMA calling for attention, has been heard and has had its effect. NGOMA proved the importance of collective action by producers to facilitate market access. To support inclusive market access for small scale dairy and maize farmers in the Rift Valley, the beat must go on.

Abbreviations

KCC	Kenyan Co-operative Creameries
KDB	Kenya Dairy Board
KEPCO	Kenya Producers Coalition
KSH	Kenyan Shilling
NAAIAP	National Accelerated Agricultural Inputs Access Programme
NALEP	National Agricultural Livestock Extension Programme
NCPB	National Cereals and Produce Board
NGOMA	Ng'ombe (cows) and Mahindi (maize) in Kiswahili.
NGOs	Non-Governmental Organizations
SAP	Structural Adjustment Policies

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3.2 Developing cereal value chains in Tanzania

Abel Paul Lyimo

Introduction

Tanzania has a total land area covering 94.5 million hectares of land out of which 44 million hectares are suitable for agriculture. However, it is estimated that only 10.1 million ha or 23% of this arable land is under cultivation. The population consists of approximately 45 million people, with 45% of the population under 15 years of age. The annual population growth rate is 2.8%.

The agricultural sector is the driving engine of the Tanzanian economy; the need to develop it can never be overemphasized. In 2008, the sector accounted for about 25.7% of the GDP and 22% of foreign exchange earnings. The sector provides 95% of the national food requirements and livelihood to more than 70% of the population. Tanzania's medium-term development strategy as outlined in the National Strategy for Growth and Reduction of Poverty (NSGRP, commonly known by its Kiswahili acronym – MKUKUTA) is to increase growth of the agricultural sector from 5% to 10 % per annum by 2010 and the number of food insecurity households considerably reduced by 2015.

Since 1985 the six main food crops (maize, rice, sorghum, millets, wheat and legumes) have grown at 3.5% per year, while export crops have grown with 5.4%. In Tanzania rice is one

of the widely grown crops and is the second most important food crop in terms of number of households, area planted and production volume. Besides meeting local consumption demands, the rice sector is a major source of income and employment in rural areas.

Maize is the most important crop in Tanzania. Its market performance, therefore, has a significant impact on the welfare and food security—especially of poor smallholders. The country mainly produces white maize, and production levels are just meeting local demand. It is the most important staple crop in the food security policy and has been subject to regular export bans. With growing urbanisation and high rates of poverty that limit dietary upgrading, market demand for food staples will grow steadily to USD 11.2 billion in 2015 and USD 16.7 billion in 2030 (WB Report AFR Sept 2009). For Tanzania this growing demand brings with it a great marketing opportunity (Match Maker Associates, 2010). Tanzanian rice productivity is lower than most neighbouring countries, and is actually among the lowest in the world. The country hardly meets its own rice demand and therefore imports large quantities, mostly from South-East Asia. Nevertheless, Tanzania is the second largest rice producer in Eastern Africa. Around 90% of the rice is grown by smallholders, largely for substance use. Main rice growing regions are Mbeya, Morogoro, Arusha, Iringa and Dar es Salaam. It is a highly fragmented subsector with millers and brokers playing a central role in the trading process (Match Maker Associates, 2010).

Founded in 2007, RUDI (Rural Urban Development Initiatives) works to support smallholder farmers in the development of highly competitive value-adding enterprises in Tanzania. RUDI was established with a vision to be a catalyst for economic growth through state-of-the-art professional capacity facilitation. It is a non–profit organization promoting entrepreneurship in low-income rural areas of Tanzania to create employment and income generation through the establishment of agricultural small and medium enterprises. RUDI provides business development services, associational development services, market and financial linkages, business management systems, monitoring and evaluation, public-private partnership linkages including policy dialogue.

At least 16,000 rice growing households and 2,200 maize producers are involved in the project. The organisation empowers entrepreneurial men and women in low-income rural areas of Tanzania, enabling them to initiate new and expand ongoing businesses. RUDI is specialised in organising smallholder farmers into sustainable value chains through collective marketing systems, and has extensive experience in rural and agricultural development, finance, banking and policy formulation. RUDI works in the most productive rice growing areas in Tanzania (Mbeya and Morogoro regions) and in the area that produces the highest quality rice (Mbarali). Since rice production is heavily concentrated in geographic clusters, it provides a good opportunity to focus interventions. The project is also active in the maize growing areas of Handeni/Tanga, Dodoma and Iringa.

RUDI empowers micro–small enterprises (MSE) and farming communities through improved market linkage and distribution channel for their products. Its activities are targeted to building strategic partnerships and strong business associations especially within farming communities that can: formulate and advocate policy reform measures; improve market linkages through Warehouse Receipt Systems (WRS) and through information sharing; facilitate access to credit; and, expand crop/product through business skills management training. These integrated activities are designed to empower MSEs/farmers group to help reduce poverty through wealth creation in rural and urban communities. They consist of: conducting business management training for MSE/Farmers; improving the policy and regulatory environment for MSEs/Farmers; improving and diversifying added value crop production; creating farmers/business associations and strengthening a Savings and Credit Cooperatives (SACCOs) network; and, broadening MSEs/farmers' access to markets and increase international trade in agricultural commodities.

The rice farmers and operators hire many labourers to work in the fields, employ people to transport commodities, sell to local traders or to mills. An intricate network of brokers, wholesalers, touts, middlemen, and retailers is responsible for transporting the product to the end consumer. Overall, there are up to 35 cash transactions involved in this entire process, making cereals extremely good crops for stimulating economic activity. RUDI carried out a baseline study in the cereal producing regions of Morogoro and Mbeya (specifically in Kilombero, Handeni, Iringa and Mbarali districts) in order to investigate how farming communities in these regions can be empowered through improved market linkages and distribution channels for their products.

Farmers producing cereals sell part of their harvest immediately, keep a part as seed for the following year, to feed their family and as in-kind savings when cash is needed. As a result, commodities are sold at different times throughout the year, with varying prices. As cash is always short right at harvest time, nearly all farmers will sell some (if not all) of their harvest to traders. As a consequence, farm prices are lowest in the period just following the harvest (from May to August) and then rise gradually through the year.

Cereals are milled and hulled in or close to the production areas to reduce transport costs. Occasionally farmers or traders go to a larger mill in an urban area, but usually they prefer to have it processed close to the point of purchase. Commodities are sold to traders either at farm gate or at nearby spot markets.

The cereal value chain

Although most cereals are primarily consumed within the producing households, the main commercial forces driving the cereal business are the urban food markets, with

the country's capital Dar es Salaam being the most important. RUDI identified three major types of cereal value chains:

The traditional farmer–trader chain has the greatest number of actors (growers, traders and millers) and supplies the largest amount of cereals to the market. The chain is relatively disorganised and its farmers are less commercially oriented.

The small irrigated rice farmer–trader chain is the most dynamic chain with many MSEs involved. The smallholder rice producers achieve higher yields and more regular output volumes than other rice producers. They purchase many services and have a good understanding of the market. They are interested in growing more cereals and searching for new techniques and technologies to use on their farms;

The integrated miller–trader chain is very important for getting cereals to the formal urban markets. It can however be a destabilising factor for local markets. Next to buying and milling cereals, the firms attached to this chain are involved in many other activities, including import of cereals. They will arbitrage the price of local cereals versus price of imported cereals, and will continuously review the opportunity cost of their investments. These firms can disappear from the market for a couple of years when margins are too low or when it is more favourable to import, and then will re-enter when the margins improve.

Producers

Almost all farmers interviewed for the baseline survey are smallholders who own between 2 and 20 acres of paddy (rice) or maize, mainly for subsistence production. A distinction is made between three main types of farmers. First, subsistence smallholders are the most numerous farmers in the region and in the country as a whole. These farmers cultivate one to five acres using traditional methods: they will either plough the field by hand or will hire oxen with a plough (occasionally renting a tractor). Many local labourers are hired during peak periods for planting, weeding, and harvesting/threshing. The second type of smallholder, the small irrigation farmer, grow about one hectare of rice in an irrigation scheme, often controlled by the government. Such farmer rents a piece of land from the scheme, and is provided with water for his crops. He will hire labour as required to meet key functions (ploughing, planting, weeding), and then rents out his services, in turn, to neighbours to earn extra income. There are some scattered small informal irrigation schemes too, such as the 100 acres in Mkula (Kilombero District) which are farmed on very small plots (which have often been supported by the Ministry of Agriculture and Food Security (MAFS). Irrigation provides the farmers with the opportunity to produce more than one crop per annum and allows them to control the timing of their production to harvest when prices are at their highest.

The last type is the larger irrigation farmers who grow more than 5 hectares of rice in an irrigation scheme. They outsource all ploughing and mechanised services, and hire most of the labour needed for weeding, harvesting and threshing. All these production steps are cash intensive and form a major financial concern for larger farmers but, due to economies of scale, their productivity per acre is higher.

In RUDI's working area four main rice production systems are applied: unbunded rainfed lowland rice (used in Morogoro); bunded rainfed lowland rice (used in Mbeya's Usangu plateau); rainfed upland rice (Morogoro); irrigated rice cultivation (Morogoro, Mbeya), and small scale irrigated rice (Morogoro). In Tanzania there are two main maize production systems: rainfed maize production, found all over the country, and the more productive wetland/lowland maize farming, on small plots of land near sources of water.

As the smallholder farmers in these cereal producing areas mainly engage in subsistence farming, and only market their produce if excess grain remains, they find themselves at the lower end of the cereal value chain. They cannot bargain for better prices, and lack marketing skills and post harvest technologies. RUDI assisted in farming groups establishing associations in their respective areas for collective marketing. They also started to practice a warehouse receipt systems (WRS), through which they could keep their commodities to await better prices. Groups under RUDI organise and conduct technical training on post harvest technologies, marketing skills, branding, farm gross margin calculations to eventually help farmers realise good prices for their commodities.

Processors

All rice and maize must be milled before consumption. Thanks to superior storage capacity, this usually happens as close as possible to time of consumption. Traditionally, the women of the household would do the milling by mortar and pestle, but today, nearly all rice is milled in electric or diesel rice mills that hull and polish the rice, unless the farm is too far away from a rice mill. While the owner of the mill usually employs only 2-3 people who manage and maintain the mill, there are usually another 6-7 workers who help with the other aspects of milling (transporting rice within the mill, loading trucks etc.). During peak milling season, the number of seasonal workers can increase up to 20.

The cost of milling varies by region and by process. The bigger rice mills in Mbarali have invested in add-ons to the mills for careful sorting of rice between broken and different grades. There are a number of waste products that can be sold, like rice husks. In urban areas, the miller must pay to have the piles removed. In the rural areas, the rice husks are often used by local farmers in their fields as mulch or as source of fuel

for brick burning. Given their combustible properties, with some technological application, the husks could be compressed into bricks and sold as a very high-energy fuel source. The polish "powder" gets blown into a separate pile. This can be sold as feed for animals, especially pigs. In some of the poorer areas, poor women will sift through the powder to cull out the small quantity of broken rice that they can then take home and eat or prepare rice buns (vitumbua) for resale.

Traders

From the mill, different types of traders take up and transport the product to the end markets. First, there are intermediate regional traders who buy rice or maize at the mill, buy empty bags, and then pay for filling and loading of bags onto trucks. They also pay for the transports of the produce to Dar es Salaam, and any contingencies along. The second type is the integrated regional intermediate traders. They buy grain at the farm or in the market, store it and then have it milled, usually in the region. The grain is stored in rented go-downs or houses in the villages, or for free at the mill (depending on the level of activity at the mill). They contract the miller to mill the grain by the bag and to take it to the destination market, where it is sold through brokers. This is in contrast to the integrated millers/traders, who do their own milling and packaging and usually sell their products to supermarkets, institutions and retail stores. The third type is the wholesalers/traders who are usually based in the wholesale market, but will go back to the cereal mills to purchase from the local traders. They will dispose of all the rice themselves and are able to bypass the broker stage (as they are the broker). Finally there are also the rice importers (usually the same persons as the integrated miller/trader), allowing them to arbitrage between local purchases and imports. If they import grains, they will then use their milling facilities to put the products into bags for sale.

Brokers, wholesalers and retailers

The marketing of rice in the urban areas of Tanzania through the informal market system is quite complex. Brokers play a critical coordinating role in the entire process. The broker is one of the most influential actors in the sub-sector and plays a very important coordinating and financing role. The broker never takes ownership of the product but receives it from either the regional trader or the farmer/trader. Brokers operate differently in the various markets. The wholesalers will buy a number of bags from the brokers in the urban areas and then sell them to the retailers. Some of the wholesalers also retail, providing a double function. There are several different types of retailers: big urban centre, the smaller urban centre (closer to the rice producing areas), and at the village level. In smaller urban centres and villages, retailers purchase directly from local traders at the mill and then add about a 10–15% mark-up and sell the rice locally.

Transport

The two main modes of transport for rice from the mills to Dar es Salaam and the urban markets are by truck and by train. There is some price sensitivity and it is not exactly clear when one mode is preferred over the other. In Mbeya, all the traders use trucks. However, in Ifakara, the larger traders shipped their rice by train to Dar es Salaam.

The difference between the two modes is related to the availability of cheaper forms of transport. There is a lot of truck traffic coming through Mbeya, and along the main paved road, returning from Zambia. The fact that they can get cheaper backhaul rates and that there is a great frequency of trucks makes it easy and cheap to use trucks. In contrast, Ifakara is at the end of a long, poorly maintained dirt road. The cost of truck transport from Ifakara to Dar es Salaam is nearly as high as from Mbeya, even though it is much closer. In contrast, the price of rail transport is much lower from Ifakara than it is from Mbeya, making the train a better option for large quantities.

There are important implications for the transport of rice by rail compared to trucks. First of all, rail is more transparent and therefore subject to the cess. Secondly, the weight is measured and it is difficult to get around it by overpricing bags, as traders do with trucks, so there is a very smaller fee to fill the bags. Thirdly, since it comes in and out of the train depots, there needs to be an organised receiver in Dar es Salaam. Therefore, the train might be a viable option for a large shipper, with the systems and facilities, but it is not a viable option for the small trader.

Cereal markets

As mentioned earlier, most cereals are locally consumed by rural households. They consume the greater part of their own production and sell what is left. In rural villages, there might be a mill (to process the cereals before consumption) and there is some trade in cereals, but this appears to be limited. Commodities consumed in the rural areas come strictly from local production.

Most of the rice and maize eaten in urban areas is purchased (not home grown), either in bulk by the kilogram or also in supermarkets and stores in pre-packaged bags.

There can be substantial price differences depending on the quality of the rice. Rice from Kyela has the reputation to be of the highest quality in Tanzania, with a special aroma, likening it to basmati rice from India. Imported rice from Thailand, the Sabarmati variety and rice grown in Shinyanga region have the lowest prices. To increase final sales price, it is not uncommon for retailers to mislabel or mix different grades of rice.

At the markets in Dar es Salaam, a wide variety of products (maize and rice) are available to the consumer sold in bulk or by the kilos. Prices can vary by point of sale (supermarket, small kiosk, wholesale market, etc.), point of origin, variety of the products, grade (for those traders who grade the rice), quality of the products (percentage of broken rice and colour for maize) and the age of the rice. Older rice sells for a lower price than the rice of the current season. At the retail level, the top price for Chimala rice in Dar es Salaam was TZS 1,200 per kilogram. Meanwhile broken rice from Ifakara was sold for around TZS 600 per kilogram.

The RUDI marketing department collects wholesale prices for rice. A brief comparison between the wholesale price of rice per bag in Dar es Salaam and the price in Chimala, Iringa and Ifakara/Kilombero demonstrates that in Iringa, Chimala and Kilombero rice is consistently TZS 5,000–20,000 cheaper than wholesale prices in Dar es Salaam (for 100 kg bags). Prices increase as one gets farther away from the production areas.

While the statistics show relatively little official export of rice and maize from Tanzania, it does take place. For instance, in times of famine in neighbouring Kenya and Malawi, it is very likely that substantial quantities of maize are flowing across the borders to those two countries, as well as to Burundi, but these statistics are not officially recorded. Some rice is exported to Uganda from the lake zone, particularly from Kagera, and some is exported to the Gulf States via Pemba/Zanzibar. Many traders from Zanzibar/Pemba have agents in the rice growing regions, who buy substantial amounts of rice during harvest time. In total, rice and maize often change hands five to six times between the farmer who grows the maize and paddy and retailer who eventually sells it.

Challenges

Weather is a critical variable in agricultural production as it can have major impacts on yields and supply. Hence actions that reduce the unpredictable impact of weather patterns (such as irrigation) are important for securing long-term growth. Competition from other crops is another key challenge. For most farmers, maize and rice are first and foremost food. Because of their durability in storage, they can also be used as very good cash crops; however, farmers are often quick to switch to a more profitable cash crop if the opportunity arise. For example, growing sugar cane can be as much as 3 to 4 times more profitable than rice. The implications for RUDI are to not invest in trying to promote rice in areas where there is a functioning sugar mill or other major investments to promote the marketing of more remunerative crops.

Impact of the intervention

Pro-poor development

RUDI adopts a combined approach to pro-poor development: direct support to farmers for procurement of inputs and reduction of transaction costs combined with a bottom-up approach, focused on local organisation and social movements. RUDI works with 16,000 smallholder rice-producing households and 2,200 small-scale maize producers. Traditional smallholders usually have one to five acre plots; small irrigation farmers own one hectare (2.5 acres), and large irrigation farmers may have as much as five hectares (12 acres). RUDI focuses on tackling two main challenges: the low prices offered to farmers and their weak negotiating position. As there are no strong producer representation at crop markets at local level—villagers lack marketing skills and market information is not readily available, if at all—RUDI promotes the organisation of farmers and provides trainings (harvest technologies, marketing skills, branding, and farm gross margin calculations) to help them secure better prices for their commodities. Furthermore, farmers established associations in their respective areas to pursue collective marketing. They also started a warehouse receipt system, allowing farmers to receive immediate payments for their crops, while the association stores the grains to take advantage of higher grain prices later in the season.

Gender

RUDI in does not make any specific mention of a gender dimension in their work. The project talks about small-scale maize and rice producers in general, not making any distinction between men and women. The project may utilise some aspects of a gender-sensitive approach, but is not a prominent part of its strategy.

Food security

RUDI explicitly focuses on building strategic partnerships and strong business associations, especially within farming communities. Building relationships within the value chain seems to be just as important as improving quantity and quality, when it comes to food security. Strengthening positive relationships between value chain actors can be a good approach to promoting food security at the level of producers.

Food quality

It was mentioned that there could be a substantial difference in the price of rice depending on its quality. Rice from Kyela seems to have the highest perceived quality in Tanzania; however, this distinction is made based on the grade and/or taste of rice rather than its nutritional quality.

Infrastructure and governance

RUDI's baseline survey recommended different strategies for transporting produce from the different intervention areas. The easy access to frequent transport opportunities and the cheaper backhaul rates make truck transport an easy choice in Mbeya. In Ifakara, on the other hand, larger traders transport their rice by train, as the town lies at the end of a long, poorly maintained dirt road.

The establishment of associations via farming groups and the setting up of a WRS contribute to farmers receiving better prices. Strengthening partnerships with private operators and improving the market channels by enhancing the availability of market information are among the challenges for RUDI's future work.

Producer and consumer prices

Poor market information was a source of insecurity for farmers during price negotiations. Asymmetric market information—compounded by poor financial literacy and incomplete cost calculations—makes it very difficult for farmers to negotiate effectively on prices. RUDI therefore focuses on training farmers on farm gross margin calculations so that they can set profitable selling prices, at the farm gate as well as during the offseason.

RUDI's report, stating that mislabelling and mixing of rice is a common practice for increasing rice prices at point of sale, does emphasise that special value is attached to known high-quality types and brands of rice in the regional Tanzanian market.

Innovation and sustainability

We saw that RUDI complements its technical trainings with education on marketing skills, to both increase the quality and quantity of production as well as to enable farmers to find an outlet for the increased production volume. RUDI further mentions the importance of reliable storage capacity, a trustworthy transport system, processing at milling hubs, and collective marketing (through WRS) as key contributions to improving cereal value chains.

Future opportunities for RUDI

There are a number of issues where RUDI can facilitate the development of private sector solutions to further enhance the growth of the cereal sector. The first is the underutilised potential of irrigated areas (modern, improved, or traditional). A lot of smallholders live in these areas, often organised in farmers' groups, which makes it easy to share market information. Also many services are already in place, but pricing is often skewed, and therefore the services are not being fully utilised. The second area is to improve the availability of market information from the main urban markets, such as Dar es Salaam, to cereal-growing rural areas. Review of tools and identification of private sponsorship

opportunities need to be conducted. The third area is to conduct an in-depth study and devise solutions for improving transport. The fourth area is access to financing. RUDI has already been talking with Stanbic Bank, on the development of two new products: a warehouse credit scheme (providing farmers with immediate credit against their stock) and provision of working capital needed for farming larger areas (particularly important in the irrigated areas). RUDI can also be helpful in other areas, like developing farmers associations and enhancing management skill; policy issues around regulatory access; and investigating opportunities to market Tanzanian cereals in the neighbouring countries.

Rural Urban Development Initiatives (RUDI)

Main opportunities

- As staple foods, maize and rice have a continuous and relatively high demand.
- Providing irrigation in concentrated areas can greatly increase smallholder productivity.
- Cereals create employment and involve many cash transactions, thus stimulating the local economy.
- Paddy rice has long storage life, and farmers can hold on to their stock until market prices are high.
- Milling is more profitable than farming, which creates an interesting investment opportunity.
- Many services are available to smallholders, but need to be better coordinated and made more affordable.

Key obstacles

- Market information from the Dar es Salaam wholesale market is not available at the farm and village level.
- Rice production is primarily rainfed marked by low productivity primarily subsistence use (not marketing-oriented production).
- Cash flow constraints seriously hamper the ability of small-scale farmers to secure inputs and often force smallholders to sell their crop at lower prices.
- The cereal value chains are long, fragmented, uncoordinated and involve many actors.
- Information on new agronomical and technological alternatives for improving production is not reaching farmers.
- There is a large unmet immediate demand for trainings, especially in basic business management for farmers and millers.
- There are only a few successful farmer associations (mostly in irrigated areas).
- The big price fluctuations throughout the year (on average about 100% of the base price) bring a lot of risk to the sector and promote speculation.

Abbreviations

MAFS	Ministry of Agriculture and Food Security
MSE	Micro – Small Enterprises
NSGRP	National Strategy for Growth and Reduction of Poverty
RUDI	Rural Urban Development Initiatives
WRS	Warehouse Receipt System

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Photo: Lora Forsythe

3.3 Adding Value for Africa with Cassava in Malawi

Helena Posthumus and Kolawole Adebayo[8]

Introduction

Cassava is an important staple food for many small-scale farmers and vulnerable groups in Africa. It requires less inputs to grow and is more drought resistant than other staple crops, such as maize. Unfortunately, cassava farmers—particularly from remote areas—face restricted market access for their produce, because the roots are highly perishable and bulky which makes them expensive to transport. Other challenges include low multiplication rates of planting material, labour-intensive production and processing, and the relegation of the crop to marginal lands, due to competition with higher-value and higher-status crops. These challenges also make processing by large-scale enterprises less economically viable. But there are opportunities, especially for processing by small-scale farmers. Producing dry, shelf-stable products is cost-effective and is a good way to produce value-added products close to the supply source. C:AVA aims to develop value chains (VCs) for High Quality Cassava Flour (HQCF) in Ghana, Tanzania, Uganda, Nigeria and Malawi, in order to improve the livelihoods and incomes of small-scale farmers (especially women and disadvantaged groups). This article will present the experiences of the project in promoting value-added processing of cassava in Malawi.

8 With contributions from Vito Sandifolo, Lora Forsythe, Louise Abayomi and Andrew Westby.

The cassava value chain in Malawi

Cassava is an important food security crop in Malawi and an important staple food for many vulnerable groups. As a commercial crop it is especially valuable for women smallholders (Lamboll et al. 2009). According to official data, Malawi produces 3.5 million tons of cassava per annum; other observers have put the total at around 2.5 million. Nationwide sales make up about one-third of cassava production (of which one-third in dried form); the rest is consumed within the farmers' households (Kleih 2009). The existing cassava VC in Malawi is divided in a fresh and a sun-dried cassava channel.

The fresh cassava chain tends to be more streamlined, largely due to perishability issues (fresh cassava has to be sold within two days). Generally, farmers are likely to sell to traders who bulk fresh roots into larger consignments that can be transported to wholesale markets in urban centres. There the roots are then often rebagged and transported to local retail markets. Urban centres tend to be supplied by neighbouring areas, with the catchment area gradually expanding as the cassava consumption period progresses. Although cassava is consumed throughout the year, consumption of dried cassava increases from July to February, when the availability of other foodstuffs decreases (e.g. maize) (Kleih 2009).

Smallholder farmers use various methods for sun-dried cassava processing: peeling, soaking, chipping and drying. Dried cassava is mainly marketed as traditional products, such as chips (*makaka*) or fermented flour (*kondowole*), at local food markets with low levels of organisation. Traditional methods of submerged fermentation dominate cassava processing, as bitter varieties with high levels of cyanide prevail, in particular in Central and Northern Malawi. These traditional cassava products are generally used within the farmers' households, but some find their way to local markets.

New markets for dried cassava have opened up in Malawi since the 1990s, including supermarkets, bakeries, refugee camps and industrial users (such as biscuit producers and large-scale starch users (plywood manufacturers and the packaging industry). During the last decade, small and medium-sized enterprises (SMEs) have been established with project support from IITA/SARRNET, FAO, Plan Malawi and the African Development Fund. These SMEs use improved processing technologies (such as chippers, graters and drying racks) but still primarily rely on sun drying. The average processing capacity of these enterprises is about half to one ton of dried cassava per week during the dry season.

C:AVA explores new cassava chains in HQCF

The C:AVA project aims to market HQCF as a wheat flour and starch substitute in Malawi. Traditional cassava flour is not classified as HQCF as it has been dried too slowly to prevent fermentation, and can contain a considerable amount of extraneous

matter (e.g. dust) and—more importantly—cyanide. This cheap 'low quality' cassava flour competes with maize flour as one of the two main staples in the country. As an imported commodity, wheat flour is expensive in Malawi due to the additional transport costs. The current shortage of foreign currency in Malawi makes it even harder to procure imported goods, such as wheat flour. Next to the financial incentives of using HQCF, various companies expressed an interest in buying Malawian products from smallholder producers for corporate social responsibility reasons (Lamboll et al. 2009).

There are several main market segments for HQCF as a wheat flour replacement in Malawi. The most easily accessible market is the biscuit industry, a long-time customer of traditional cassava flour. This market opportunity is projected at 2,500 tons per year at a price of USD 425 per ton HQCF (due to this low price it does not provide the most lucrative potential). The second opportunity is in bakeries. Large bakeries are estimated to consume about 35,000 tons of wheat flour each year. Between 5% and 10% of the wheat flour can be substituted with HQCF for bread production. The projected market share (3,500 tons) is not substantially more than the biscuit market, but rural bakeries are willing to pay a higher price (about USD 525 per ton). The third opportunity lies in flower mills, and two milling companies in Malawi have expressed interest to substitute part of their wheat flour. However, additional guarantees are needed that a year-round stable supply can be secured and that HQCF will not adversely affect the taste, nutrition and health properties of the flour. There is another opportunity to market HQCF as a starch feedstock for the manufacturing industry, to be used for paperboard, textiles and plywood (Sergeant 2009).

The challenge in Malawi was to set up a new VC for HQCF that (a) benefits smallholders, and (b) can produce year-round the volumes required by industrial end users (which requires large-scale artificial drying). At the start of the C:AVA project, there were no large-scale enterprises that produced HQCF. To seize the potential market, large-scale enterprises needed to work together with small-scale farmers, who could do the initial processing of cassava roots into pressed wetcake. This outsourcing requires careful planning, excellent quality management (e.g., the wetcake must be delivered immediately after production before any fermentation takes place), and increases the complexity of the VC.

Currently cassava is sun dried during the dry season, which limits the total volume and consistency (quality and quantity) of the flour. Processing capacity constraints typically include limited drying space for sun drying, low capacity of chippers, labour requirements for peeling, lack of presses for dewatering, prices paid by buyers of dried cassava, and lack of accessible financing (Hillocks 2010; Kleih 2009; Lamboll et al. 2009). Although sun-drying production of HQCF is based on a feasible low-cost technology, some larger potential buyers in Malawi were not interested in sun-dried HQCF

because of its disadvantages. Artificial dryers can eliminate many of the potential problems associated with sun drying, but require more technical skills and are more costly—both in terms of capital expenditures and operating costs (Sergeant 2009).

Figure 3.1 Costs and gross margins of HQCF

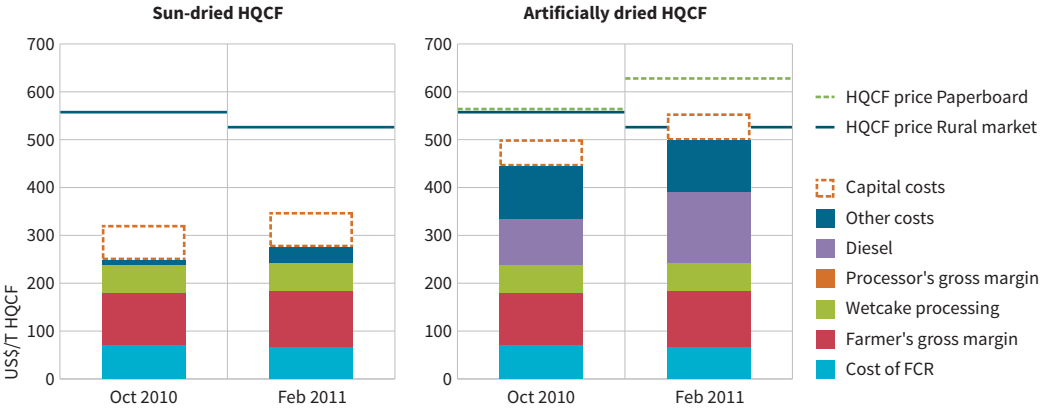

Figure 3.1 shows the generic cost prices and gross margins for artificially and sun-dried HQCF VCs. Given that the associated challenges of producing and marketing dried cassava are different for each chain, the project focused on specific markets: (a) sun-dried HQCF VC, serving rural bakeries and *mandazi* (donut-like snack, often used as breakfast food) makers, and (b) artificially dried HQCF VC, for wheat flour and corn starch replacement markets (in particular the food and paperboard industries) (Sergeant 2009). Each chain requires different stakeholders for the investment in the respective processing and drying technologies, and different suppliers of raw materials. Investors in artificial drying technologies prefer to obtain their raw materials from larger, more commercially focused farmers, while processors using sun-dried cassava usually purchase surplus production from farmers' associations (Sandifolo 2010a). Because artificially dried HQCF has a higher cost price and requires greater technical skills, it is expected that it cannot compete with traditional cassava flour on the staple food market (Sergeant 2009).

Sun-dried HQCF is to be sold to buyers as close as possible to the village processing units. This means that both buyers and producers operate on the small-scale level, allowing for a good match between supply and demand. Also, both parties will be able to quickly interact if there are any quality, transport or payment issues. The sun-dried HQCF VC has been initiated in 2010 to produce a high-quality product acceptable to the bakers and is being scaled up over the next few years (Westby and Adebayo 2010). Processors include farmer associations and small-scale, village-based entrepreneurs working with farmers. Table 3.1 presents the estimated targets and benefits for

the sun-dried HQCF VC. The total number of stakeholder expected to benefit, either by selling roots or processing HQCF, is around 1,000 by the end of 2015 (with a potential expansion to around 6,000).

Table 3.1 Targets for the sun-dried HQCF VC in Malawi

	2010	2013	2015	Potential
HQCF production (tons per year)	18.6	300	400	2,000
Number of beneficiaries				
Smallholder farmers	38	400	600	4,000
Farmer processors	Not known	180	270	1,800
SME employees (1 SME)	5	101	101	0
*Average estimated additional return per beneficiary (USD per year)**	*Not known*	*156*	*159*	*165*
		90	90	90
Smallholder farmers		333	333	333
Farmer processors		100	100	100
SME employees				

**Based on 2010 prices and estimated production costs excluding labour costs*

It is unlikely that the sun-dried HQCF VC can competitively deliver the quality or the quantities required by urban industrial end users. Therefore, to offer producers of fresh cassava roots a VC opportunity to participate in the large urban markets, it is necessary to establish artificial dryers for large-scale processing. These flash dryers, fabricated in Africa with a capacity to turn out one to two tons of dried product per day, can deliver high-quality dried cassava consistently and in large volumes. Table 3.2 gives the estimated targets for the artificially dried HQCF VC. The average estimated benefit per smallholder in the artificially dried HQCF VC (USD 105 per year) is lower than the average benefit in the sun-dried HQCF VC (USD 156 per year). However, the number of beneficiaries that can benefit from the artificially dried HQCF VC is larger because of its scale of operation. It is estimated that by the end of 2015 over 6,000 smallholders can benefit by either selling fresh roots or being involved in processing (with a total estimated potential of close to 10,000 smallholders).

Photo: Lora Forsythe

Tiyamike Processors Group in Zomba District, Malawi

Table 3.2 Targets for the artificially dried HQCF VC in Malawi

	2010	2013	2015	Potential
HQCF production (tons per year)	0	1,800	2,700	4,000
Number of beneficiaries				
Smallholder farmers	0	3,600	5,400	8,000
Farmer processors	0	203	608	900
SME employees (3 SMEs)	0	213	242	330
*Average estimated additional return per beneficiary (USD per year)**	*0*	*105*	*105*	*105*
Smallholder farmers	0	90	90	90
Farmer processors	0	205	205	205
SME employees (3 SMEs)	0	200	200	200

**Based on 2010 prices and estimated production costs excluding labour costs*

At present, three private sector companies are interested in investing in flash dryers and establishing the artificially dried HQCF VC. It is anticipated that each will buy at least one flash dryer, with a total potential production of 2,700 tons per year. By 2013, at least two-thirds of total capacity will likely be met (around 1,800 tons of HQCF). Although primarily food processors, these companies are also interested in selling HQCF to the packaging industry in Malawi and the neighbouring countries (Westby and Adebayo 2010).

However, investing in a new product (HQCF) and a new technology (flash dryers) is not without risks. C:AVA helps promote investor engagement in large-scale processing in multiple ways. First, it introduced investors and end users to new technologies, for example, it organised a study tour to Nigeria. Second, it facilitated technology transfer from Nigeria to Malawi on the fabrication of efficient ancillary equipment, such as motorised stainless steel graters and hydraulic jack presses. Third, it tapped into new HQCF markets, by organising demonstration trials for using HQCF in packaging materials, by linking investors to potential industrial buyers, and by providing technical support to buyers to incorporate HQCF into their production systems. Fourth, it worked on securing a consistent supply of raw materials, by helping investors grow limited quantities of cassava in house or sign contracts with commercial growers (both are important back up mechanisms during the dry season when the smallholder supply can be unreliable).

Impact of the intervention

Pro-poor development

In the sun-dried HQCF VC, the average benefit (i.e. additional income) per smallholder is estimated at almost USD 160 per year. (For comparison, the average wage for unskilled labour stands at about one dollar per day.) Smallholders who produce

feedstock for processing in the HQCF VC benefit more because they can sell larger volumes. Also by having some of the processing done at the smallholder level, the direct financial returns to smallholders were increased (from estimated return to labour of USD 2.43 per day for fresh cassava to USD 3.42 per day for farmer processors producing wet cake). Processing at village-level thus helps to reduce poverty in rural areas. By 2015, 1,000 smallholders are expected to benefit from the sun-dried HQCF VC, and another 6,000 are anticipated as beneficiaries in the artificially dried HQCF VC (see Table 3.1 and 3.2). In 2010, the five sun-drying processing sites had a total area of 860 m^2, and produced a total of 18.6 tons of HQCF. Although increased volumes are expected over the next years, the processing capacity of the sites is limited by the drying area and the length of the dry season. Artificial flash dryers, on the other hand, can produce 2 tons of HQCF per day year-round. It is unlikely that individual smallholders of farmer groups will be able to invest in artificial dryers, because of limited access to capital. In order to maximise the scope of the intervention, and thus the number of beneficiaries reached, the project actively involved the private sector to secure their investments in processing sites with artificial dryers. Even though part of the value addition will go to the private sector, this approach helps guarantee a durable outlet for cassava growers.

Gender

Women play an important role in cassava processing, as they manage most of the activities and decisions after the crop has been planted (Kaitano and Martin 2009). However, it is not uncommon for both women and men of the household to jointly decide on the final sale of their product. Women producers feel that they could benefit more from cassava cultivation if they are organised, thus improving their market bargaining power, scale of production, and access to credit and agricultural equipment (Lamboll et al. 2009).

Food security

C:AVA facilitated the distribution of improved planting materials to villages within a 45 km radius of the project location, allowing another 40 hectares to be planted with cassava. The increased production area and the improved quality of the planted crops translate into more income for smallholders. Their additional income improves the households' ability to secure adequate nutrition throughout the year (especially through savings to be used in the dry season when direct farming incomes are lower). On the rural food market, composite flour (mixed HQCF and wheat flour) is a competitive alternative to wheat flour, which has to be imported and is highly vulnerable to market and exchange rates fluctuations. Various rural entrepreneurs are successfully selling composite flour (20% HQCF and 80% wheat) for *mandazi*. The introduction of flour based on locally sourced feedstock helps stabilise—or even reduce—flour prices on the rural markets, and increases accessibility of flour and flour products (biscuits) for rural

populations. Training producers in the development of marketing and advertising strategies is crucial for opening up these local market opportunities (Sandifolo 2011b).

Food quality

Preserving and improving food quality is particularly challenging due to the specificities of cassava. The sun-drying process, often carried out in inadequate conditions, results in the accumulation of the fungus that produces aflatoxins. Also inadequate soaking and processing of the root may lead to dangerously high levels of cyanide. These health aspects play an important role in the decision-making process around the investments made and the actions taken to support either HQCF VC. Wide application of improved drying solutions (especially for artificial drying technologies) that were developed under this project will not only provide for more marketable cassava products, but also ultimately for more nutritious and healthy ones. Food quality in general will be improved when the successful example of this policy of food commodity development stimulates processing industries to upgrade within their respective sub-sectors.

Infrastructure and governance

Working with farmer groups rather than individuals increases project efficiency and reduces transaction costs. Collective action amongst smallholders in the form of producer groups (formal or informal) is an important element for enabling economies of scale in cassava production, increasing the effectiveness of capacity building activities, increasing the bargaining power of smallholders, and reducing the transaction costs of trading cassava (Posthumus 2010). The groups also receive training in group dynamics and management, to improve group functioning and increase their effectiveness. Farmers who are trained, organised and empowered should be able to supply raw materials to a VC in a consistent and cost-effective way. Because smallholder farmers produce at the small-scale level, the investor has to deal with many suppliers, increasing the costs of sourcing raw materials and also the associated risks (the quantity and quality of the raw materials, the timing of the transaction, the costs of transport and logistics etc.). C:AVA seeks to reduce these costs by linking farmer groups and associations to investors, and helping stakeholders assure a stable supply of quality feedstock. It is crucial to have the right information (e.g., on the raw material supply, markets, and technical information—such as agronomy and processing technology) at the right time, to facilitate the engagement of private sector investors in VC development (Sandifolo 2011a). For durable involvement of end users, it is important to maintain regular contacts with the end use markets, especially during the initial stages of setting up the new VC (Sandifolo 2010a).

Producer and consumer prices

If farmers grow high-yield cassava varieties they can obtain a considerable gross margin (about USD 100 per ton HQCF), assuming typical market prices for cassava roots

(USD 39 to USD 46 per ton fresh roots). With local varieties, farmers would obtain half the yield, thus practically production costs would double (from USD 70 to USD 140 per ton HQCF), resulting in a very small gross margin (USD 30 per ton HQCF). By promoting the introduction of high-yield varieties, the project worked on ensuring that production costs of HQCF remain competitive and smallholder farmers still receive a good gross margin. If the first stage of processing (transforming fresh roots into pressed wetcake) is outsourced, the farmer processor can secure a better gross margin (about USD 45 per ton HQCF), but it is not without risks. In February 2011, the estimated production costs of artificially dried HQCF exceeded the price biscuit manufacturers were willing to pay for HQCF (due to the lower price of wheat). However, by having all processing take place at the factory site, the processor price could be reduced to a viable level for supplying HQCF to the paperboard industry.

Innovation and sustainability

Equipment should not be purchased based on price alone: tight quality control and technical backstopping for manufacturers of equipment is crucial. Making high-quality products for new markets requires processing equipment that is of the right specifications, to assure quality and processing efficiency. Although NGOs and donors have distributed graters and presses for cassava processing before, the equipment was often designed for household processing, where timeliness and volume issues are less important than in a commercial HQCF VC. Furthermore, the equipment was often of inferior quality and often broke down because of inadequate maintenance. C:AVA faced this problem in the sun-dried VC; the equipment failed to meet the requested technical specifications and had to be modified. The project also took steps to include and empower the private sector as drivers of innovation in the HQCF VC. Taking advantages of pre-existing strong links amongst the private sector (processors and end users) is crucial. Working closely with the private sector can have very positive effects on the sustainability of project outcomes (Sandifolo 2010a).

Concluding remarks

There is potential to include small-scale producers in both sun-dried and artificially dried HQCF value chains. Proximity to customers and lower production costs give the sun-dried HQCF VC a competitive edge in the rural market. Quality, reliability of supply and economies of scale give the artificially dried HQCF VC the edge in the industrial markets (Westby and Adebayo 2010). A crop initially meant as food security crop might become a profitable cash crop with such increased market opportunities.

Abbreviations

C:AVA	Cassava: Adding Value for Africa
FAO	Food and Agriculture Organization
HQCF	High Quality Cassava Flour
IITA/SARRNET	International Institute of Tropical Agriculture/Southern Africa Root Crops Research Network
SMEs	Small and Medium-sized Enterprises
USD	United States Dollar
VC	Value Chain

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Photo: ©FAO/Simon Maina / FAO

3.4 Smallholder banana farmers access up-market value chains in Zimbabwe

Elton Mudyazvivi

Introduction

Like other neighbouring countries, Zimbabwe's national economy is largely dependent on agriculture (estimated at 15–20% of GDP for 2008). It provides both livelihoods and valuable foreign currency secured through export. Exact population statistics are more difficult to secure. Zimbabwe has a somewhat stronger urban split than other sub-Saharan African countries (of the estimated 11-12 million inhabitants, 69% are estimated as rural with the remaining 31% classified as urban). Nevertheless, the majority of the population is engaged in the agricultural sectors, primarily as smallholders in subsistence farming with modest surplus marketing (FAO/WFP 2008).

How can smallholder communities seize opportunities for prosperity and climb out of poverty in a sustainable way? Smallholder communities in the Honde and Rusitu valleys of Zimbabwe, some 300 km to the east of the capital Harare, managed to achieve this goal. They turned what used to be a free time, small-scale banana production into a profitable cash crop. Integration into a viable and inclusive value chain, followed up by the building of strong farmer institutions and a sustainable business model, was instru-

mental for their success. Before embarking on this project, smallholder farmers were confined to selling their bananas on spot markets in rural communities and the urban markets of Harare, Bulawayo, Masvingo, Gweru and Mutare. They faced many challenges, such as having to sell at prices below production costs and dealing with unreliable traders. However, there was an untapped opportunity: the perpetually undersupplied high-value urban markets, which were normally the domain of large-scale banana producers. In 2008, smallholders from the Rusitu Valley Fruit Growers and Marketing Trust (RVFGMT) approached SNV for assistance. Their banana business in the existing markets had collapsed, yet they noticed the high, unmet demand at the national high-value and the regional export markets to neighbouring countries.

SNV assisted the smallholders by linking them to private sector actors, providing market and production expertise, helping set up farmer associations, and by facilitating access to inputs and support services. In 2011 an estimated 95,000 tons of bananas were produced in Zimbabwe, a 9% drop from the average of the previous five years (see Table 3.3) (FAOSTAT 2011). Smallholders from Rusitu and Honde account for about 20,000 tons of annual production. Even though bananas are not a traditionally strong export crop for Zimbabwe, through this project 5,000 tons per year were exported to South Africa and Zambia through Matanuska Private Limited.

Table 3.3 Banana production in Zimbabwe (in million tons)

2006	2007	2008	2009	2010	5-year average
104,000	102,000	102,000	106,000	108,000	104,000

Source: FAOSTAT (2011)

The banana value chain project

The project started with a detailed study of the banana value chain by SNV. It confirmed that the national high-value market supply was short by more than 25,000 tons, and that the only existing banana exporter could only meet 50% of export demand. This undersupply provided a clear opportunity for smallholders. But it was marred by severe constraints: poor market access, low productivity and quality, weak negotiating skills and position to secure better prices, and lack of economies of scale. RVFGMT was the only remaining farmer organisation active in the banana sector, but its membership plummeted tenfold between 2000 and 2008 (falling from 3,000 to only 300). Since many farmers had neglected their banana plots, the remaining members could not attract bigger buyers, and were forced to sell to local small traders (2008, pers)[9]. The study also revealed that more

9 Personal observation by the bookkeeper of the RVFGMT at the time.

than 7,000 smallholders in the Eastern Highlands region of Zimbabwe were involved in banana production. These farmers were potential new association members. An average banana farmer had 2.5 hectares of land, of which only 0.5 hectares was planted with bananas, generating an income of around USD 200 per year. For around 60% of these smallholders, bananas generated a third of their total income (SNV 2010).

Based on the outcomes of the study, SNV facilitated development of a strategy for implementing an inclusive value chain with active participation of smallholders and private sector actors. The main interventions areas are outlined below.

Private sector engagement

At the start a private company with substantial experience in banana production and marketing, Matanuska Private Limited, was selected as a strategic market partner. Its main task was to develop an inclusive banana value chain that can integrate the many smallholders. Although Matanuska wanted exclusive rights to partner with banana smallholders, the farmers declined this offer. This would have created a monopoly for Matanuska, closing off other opportunities to partner with other banana marketing companies. Later on, the project developed linkages with other companies, including ZN Fruits, Kutapira Produce, City Market, Mutserwa, Favco and Sunspan.

Banana stakeholder platform

SNV brought together the relevant actors that had a potential to bring change to the smallholder banana sector. They included farmer associations, the private company Matanuska, the Government extension department (Agritex), the Chimanimani business Trust (CBT) and rural district councils. An informal stakeholder forum was established to facilitate value chain improvements, such as strengthening producer organisations, provision of market information to farmers, enhancing production and business skills, facilitating value chain financing, and strengthening market links.

Strengthening producer groups

RVFGMT was assisted in mobilising more farmers to increase its membership in order to improve economies of scale and increase its market bargaining position. The strategy was to providing tangible services that addressed the burning questions for their members. The services included organising transport logistics to the market, paying cash on site and selling in profitable markets. This was so attractive to farmers that membership increased from 300 to 1,000, with women farmers increasing from 24% to 32%. In Honde Valley, 1,500 farmers formed the Honde Valley Fruit Producers Association (HVFPA). More women joined because the opening of nearby markets allowed them to participate

in banana marketing more easily. Previously they simply could not afford to spend the 10 days required for taking their bananas to distant markets like Harare, where they ripen and are sold. Venturing to faraway markets was therefore a men's domain. The new situation of farm gate and nearby markets sales has led to increased participation of women in the banana chain and subsequently to their enhanced involvement in the association.

Agronomic extension

The smallholders were constrained by the low quality of their produce and their low productivity (which was only one-fourth of that realised by the larger producers). A local level partnership organised by SNV, involving Agritex, CBT, HVSDC (Honde Valley Smallholder Development Company) and the Zimbabwe Farmers' Unions Project, started to train farmers in best practices in banana production at ten demonstration sites. SNV hired a specialist in commercial banana production, who coordinated the local consortium. An estimated total of 3,000 banana smallholders were trained, which included farmers not affiliated with the associations. Demand for training in the communities was so overwhelming that farmer associations were compelled to organise more farmer-managed demonstration plots. The consortium also produced an extension guide for lead farmers and extension staff. In a snow-ball effect, experimental banana plots were also set-up by twenty-three local schools, earning them around USD 500 per month. The demonstration plots in the community and at the schools were successfully used for training farmers in best practices in banana production. This banana campaign stimulated the farmers who had abandoned banana farming to re-start their production, using the improved practices they learned. The total land area planted with bananas increased by 30%. An elderly farmer described the unfolding events as 'a banana revolution'.

Market linkages

To facilitate smallholder access to the urban high-value market, SNV initiated the bulking and grading of produce. Whereas the big market players were not interested at the beginning, small and medium-sized companies were, and logistics coordination mechanisms between the farmers and these purchasing companies were set up. This involved establishing a system of collection centres, where lead farmers recorded and graded the bananas. Smallholders developed confidence in their abilities to engage in collective marketing. Around 1,500 smallholder banana producers reaped substantial financial benefits from the scheme (partly because they were paid in foreign currency, which helped them avoid the raging inflation of the Zimbabwe Dollar at that time).

The partnership with the Matanuska Company started with the signing of supply agreements with smallholders. Next to providing training in improved farming prac-

tices, productivity and quality, the company offered logistical support, including transport. Smallholders could access a larger market through the network established by Matanuska in the high-value urban and export markets. The company offered better prices, along with a transparent price arrangement.

Facilitating value chain investments

Lack of access to financing is one of the main challenges for farmers and companies. Banks were offering credits only up to three months, which is not useful for banana cultivation as the entire production cycle takes eleven months. Also the interest rates of 18% per year were too high for the banana farmers. With SNV's brokering, Matanuska successfully applied for a loan of USD 400 000 from CREATE fund[10] to expand its smallholder banana model. In addition, Honde Valley banana farmers also successfully applied to a bank for a loan of USD 100 000 from a banana and tea revolving fund. The money was part of a USD 200 000 fund invested by Ford Foundation through SNV for the development of smallholder banana and tea value chains in Zimbabwe. This investment has stimulated expansion of irrigation capacity of smallholder plots, increased access to inputs and farm implements which is key to further enhancing smallholder participation in the value chain.

Capacity building in business skills

SNV trained and mentored producer organisations to develop their business skills:

- Governance in producer organisation. Bulking created economies of scale and formed the basis for the strengthening of farmer organisations. Participation and leadership of women was promoted, especially concerning group management. Being newly formed farmer groups, ample attention was given to governance systems and structures.

- Understanding and honouring contracts. For productive long-term business relationships to flourish, contracts need to be honoured. This is crucial for reducing the risk of financial loss for both the farmers and company as well as for building trust in the farmers–company partnerships.

- Market negotiations. Farmers were coached in reviewing price developments, assisted to develop from being price takers into price negotiators. Price is not the only variable in market negotiations; deals also have to be made on embedded services, such as inputs, transport and training.

10 SNV set up a revolving fund to finance investments in agriculture called CREATE administered by Zimbabwe Agricultural Development Trust with an initial seed capital of USD 15 million.

- Entrepreneurial mindset. The dependency mindset—i.e. being overly reliant on free services provided by external actors—among the communities was tackled from the start. The aim was to reorient them towards a business-minded approach. Without this mindset, the farmers' commitment to the business partnership could be compromised.

Impact of the intervention

Pro-poor development

Banana production in Zimbabwe can be a profitable venture with gross margins of over 60%. An established banana plantation can be productive for more than a decade. The potential is there, but the majority of the association members are so poor they cannot afford the fertilisers, chemicals and irrigation required to achieve maximum yields and profits. Nevertheless, even without irrigation and some key inputs, gross margins increased from USD 200 to USD 700 per year through the intervention.

Gender

Of the 2,500 smallholder farmers involved, 32% are women. Women farmers had the greatest need for an easily accessible market. They could not spend the ten days required to sell bananas at the high-value city markets (needed for transport, ripening and sale in Harare). Venturing to faraway markets was therefore a domain of the men. Since the new buyers are now buying at the farm-gate, the situation changed. More women are profiting from the cultivation of bananas, and more women have joined the farmer associations (up from 24% to 32%). With the increased income opportunities, women can now hire additional labourers to supplement household labour.

Food security

The increased income from banana raised the purchasing power of the involved households, thereby improving their food security situation. During the countrywide food shortages in 2008, there was an increase in household-to-household trade of banana flower and fresh banana, which helped meet household food requirements. In the high-income urban markets, companies are now able to meet consumer demand due to increased supply by smallholders. Higher banana consumption is likely to contribute positively to overall public health.

Food quality

Smallholders were able to supply better quality bananas through the training on quality, use of improved varieties, better plantation management, access to inputs on credit, grading standards, improved transport logistics, and access to packaging and ripening facilities. Before the companies could mostly find low grade bananas, while now 60% of the bananas delivered are of high grade quality.

Infrastructure and governance

Banana production and sales to far-away markets depend on reliable infrastructure. Roads and (cooled) storage facilities are crucial for a perishable product. When Matanuska entered the smallholder market in Honde community in 2009, prices went up with increased demand. In Rusitu, prices stagnated. Honde has a tarred road whereas Rusitu lies along a gravel road, a clear sign of the impact of road infrastructure on the performance of the value chain for local producers. To further enhance the quality of delivered bananas, SNV engaged the Mutasa Rural District Council which assisted smallholder banana communities far from the tarred road to upgrade feeder roads.

With regard to governance (institutional infrastructure), the organisation of the various actors bears fruits. The establishment of an informal stakeholder forum facilitates institutional and service related value chain upgrading. The forum helps in strengthening producer organisations, provision of market information to farmers, enhancing production and business skills, facilitating value chain financing, and strengthening market links. Part of the mentoring of producer organisations to develop business skills was aimed at governance issues, e.g. the honouring of contracts, and improving the participation and leadership of women and youths. Farmers were encouraged to become members of RVGMT and HVFPA to improve economies of scale and to increase their bargaining position.

Producer and consumer prices

Quality improvements pushed prices upwards. In January 2009 the farm-gate price offered by traders was USD 0.08 per kg, whereas Matanuska offered USD 0.20 in July 2009 and USD 0.30 in December 2010. Smallholders were able to capture a higher share of the consumer price. Lower transaction costs also increase profit margins. Farmers in Honde Valley, served by a tarred road, did better than Rusitu farmers, who are only connected by gravel roads. The latter enjoyed a price increase of only USD 0.10–0.13. This emphasises the importance of road infrastructure for the performance of the value chain, including the participation of associations and smallholders. Prices partly also depend on organisational set-ups and the influence that farmers can exercise in the value chain. Organising in farmers groups, bulking products together, securing affordable access to inputs and financing, and above all negotiating a strong position with a durable purchasing also drive producer prices up.

Innovation and sustainability

This case was the first successful banana contract farming scheme with smallholder farmers in Zimbabwe. This is a particularly interesting development: bananas are considered a perishable crop, and the sector has been stagnating for years. One key innovation was

the introduction of tissue culture[11] giving farmers access to a disease-free and highly productive planting material. As a result, productivity surpassed 50 tons per hectare showing the potential of new technologies for intensification of production (Mudyazvivi and Maunze 2010). The banana case is one of a few where the private sector took a leadership role, developing inclusive business practices with smallholders and linking up with other actors, including government. The private-public partnership pooled together efforts to integrate smallholders sustainably in a commercial value chain. Partnerships with agro-dealers were also realised: they obtained inputs from wholesalers and sold these at a commission (about 5% of price). This not only revived the provision of inputs which had collapsed in the past decade, but also directly responded to the demands of smallholders.

Key lessons

The banana case demonstrates how smallholders can be included in remunerative food-commodity based value chains and improve their livelihoods. It shows that integrating smallholders in more lucrative markets requires a long-term outlook, external development support as well as commitment and leadership by private sector players. Securing commitment for this 'inclusive business model' requires that facilitating organisations (such as SNV) also elaborate 'what needs to be done and how'. Too often development organisations assume that providing financial resources to private sector and smallholders is enough. This case shows that having the ingredients does not make a meal—some cooking is also needed (in this case: market research and capacity building, bringing together different stakeholders and linking smallholders with the private sector, strengthening producer groups and training farmers on best practices in banana production).

This case stresses the need for external resources to accelerate farmer-market linkages, especially in a context of stagnant economic performance as in Zimbabwe. Previous value chain initiatives mainly focused on niche export markets. Yet, this case shows that local rather than international actors can be a vehicle for development. In a country crippled by economic crisis, public resources to invest in a sector like banana remain limited and others need to fill the gap.

During the development of the project it was unclear how increased pressure from competitors would affect the interest of the value chain champion (the Matanuska Company) to invest in and provide overall leadership for smallholder engagement in the banana chain. It remains important to manage the risk of creating a monopoly, though the experience here shows that that risk may not be very high in an economic environment that reacts to opportunities.

11 Also known as in vitro culture, it is the cultivation of plants or parts of plants on an artificial culture medium under sterile conditions, with the goal to grow disease-free planting material or to produce clones of a particular plant.

One unanticipated development was the influx of many companies eager to compete with Matanuska. With smallholder yields and produce quality increasing, competitors started to develop parallel arrangements to source supplies from smallholders, even from farmers contracted by Matanuska. By January 2011, five companies were sourcing from smallholders in the region. Matanuska managed to keep offering the highest price. The competition improved the bargaining power of smallholders. Matanuska had to accept a flexible, market-driven pricing system and facilitate access to other formal, high-value markets. With the newly acquired liquidity, the majority of banana producers have been able to diversify into other plantation crops, such as tea and coffee.

The project started with 300 organised banana farmers. Today, 2,500 smallholders have joined the farmer associations HVFPA and RVFPMT. Crucial benefits of the intervention include the price increases and the agronomic training, which through demonstration plots has reached the entire community (affecting 7,000 banana smallholders in the Honde and Rusitu valleys of Zimbabwe).

Abbreviations

CBT	Chimanimani Business Trust
HVFPA	Honde Valley Fruit Producers Association
HVSDC	Honde Valley Smallholder Development Company
SNV	Netherlands Development Organisation
RVFGMT	Rusitu Valley Fruit Growers and Marketing Trust
USD	United States Dollar

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Photo: AAS

3.5 Improving access to local markets for women groundnut farmers in Senegal

Ibrahima Niass, Ramata Niass, Moussa Faye and Fatou Mbaye

Introduction

Originating in the Amazonian Basin, groundnuts were introduced into Senegal in the 19th century by the French and quickly became an important commercial crop. Today, groundnuts are still an important part of the national and local economy, used as processed outputs (as seeds, oil, paste or candies) and processing by-products (such as oilcake or combustibles). After independence, groundnut production expanded and further entrenched itself as the most important export commodity. While today groundnuts have been overtaken by another traditional food commodity (fish) and mining (phosphates), they still have a strong

From seed to market

After planting, it takes between three and four months for the groundnuts to mature. After harvesting, they are dried in heaps, and thrashed—manually using wooden sticks—to separate the nut from the shell. The next steps are winnowing, cleaning and bagging the nuts for storage or the market. The official price of undecorticated nuts is 165 CFA franc per kilogram, and decorticated bring in 350–400 CFA franc per kilogram. Decorticated nuts can further be crushed into oil or grilled to produce paste, which yield 900 CFA franc per litre or 700 CFA franc per kilogram respectively. Flour is produced from groundnuts and sold locally.

position. Groundnut farming is especially widespread in the so-called Groundnuts Basin in central Senegal, which includes the Saloum, Fatick, Kaolack, Diourbel, Louga and Thiès regions. The area represents about one-third of Senegal's cultivable lands, and employs almost two-thirds of agricultural workers (Akobundu 1998). Peanut farming provides the main source of income, with millet, maize and sorghum as the important staple crops. In recent years, groundnuts are increasingly being used as a food commodity and livestock feed (processed peanut cake). The groundnut sector in Senegal has been battling various problems since the 1970s. In the 1960s groundnut exports accounted for more than 80% of Senegal's overall exports. In the 1970s they fell to 40% and continued to fall, finally stabilising at around 10% in the 1990s (Freud et al. 1997).

Over 70% of Senegal's population is involved in rain fed agriculture (only 5% of agricultural land is irrigated). Smallholder estates dominate, and usually plant both a staple food crop and a cash crop, for example, intercropping groundnuts with millet. Covering 40% of agricultural land, Groundnut production provides direct employment for almost a million Senegalese (USAID Foreign Agricultural Services 2007). Since the full liberalisation of the sector and the privatisation of the official groundnut marketing and processing company (SONACOS) in 2002, farmers have been coping with several problems and challenges. Particularly pressing issues have been the availability of fertilisers, good quality seeds and product marketing. Since 2002, ActionAid Senegal (AAS) has been supporting the groundnut farmers of Fatick and Kaolack. AAS assisted the *Cadre de concertation des producteurs d'arachides* (CCPA), a groundnut farmers association formed in 2001, in the launch of a seed multiplication project, aimed at revitalising production volumes. Focusing on women farmers in particular, the programme supports their efforts to organise production, increase productivity as well as process and market their produce. Also an advocacy element is involved, encouraging the government of Senegal to develop adequate and sustainable agricultural policies. This case tells the story of women groundnut producers from the Kaolack Region, who improved their access to markets by linking up with processors.

The groundnut value chain: how farmers organise

CCPA is a member organisation of the national farmers' platform, Conseil National de Concertation et de Coopération des Ruraux (CNCR). The groundnut farmers association's main objective is to lobby on behalf of its members to secure better support from the government. It has 8,000 members in rural areas, divided into 48 groups. A particularly pressing problem during the last decade was poor seed quality. The quality of the available seed had degraded, providing for lower yields and thus lower productivity. ActionAid Senegal and CCPA partnered to improve and cultivate seeds. GIPA, the Inter Village Association of Groundnut Producers, implements this seed programme.

The GIPA of Taiba Niassene is an initiative of women smallholders, who grouped together to improve their production process and access to local markets. They established processing units, funded by the Swiss Development Cooperation (SDC), which are directly organised and controlled by the women's groups. Income is generated by selling value-added products, such as oil, flour, soap, butter and paste.

What the women say

According to Faty Penda Niasse, a member of GIPA in Taiba Niassene, the association can process 100 kg of groundnuts, which yield up to 42 litres of oil. The processing machine can produce around 80 litres per hour (1,000 litres every 12 hours or 2,000 litres per day) if there are no power cuts). Soap is another important value-added product; a 0.5 kg bar of soap sells for CFA franc 150 (USD 0.30). Groundnut cake is sold as livestock feed, while the shells are used as biomass for cooking. According to Ramata Niasse, by working in production units, each member secures an average monthly income of CFA franc 60,000 (USD 120).

The main actors in the groundnut value chain are producers, processors, wholesalers, retailers and consumers. Groundnuts, groundnut oil, butter, paste, flour, soap and livestock feed cake are sold in local, regional and national markets as well as in community shops and trade fairs. Despite large market demand, however, engaging in marketing carries potentially serious risks. The GIPA of Taiba Niassene (numbering 149 women) has signed a contract with a private wholesaler in Dakar to produce 72,000 litres of groundnut oil in six months. This is a great success, as fixing such contracts with a retailer would be much more difficult as a retailer has to deal with varying consumer demands. The contract enables the group to plan ahead and provides security for product placement (though at potentially lower prices than those offered by retailers).

The producers work in teams of 15, each team focusing on a certain aspect of the value chain: seed cultivation and production, harvesting, decortication and quality selection for processing, and final marketing (i.e. distribution to weekly markets, promotions in trade fairs or direct sale to businesses).

Other stakeholders in the groundnut value chain

In addition to women producers and processors, there are several key stakeholders in the value chain. After decades of extensive intervention in groundnut markets, the Senegalese government initiated a reform programme in 1985, to increase private sector participation and raise the efficiency in the procurement system. The main rationale behind the state's intervention in the groundnut sector is to safeguard the viability of state-owned processing mills. Consequently, the government has partially liberalised groundnut markets, still keeping administration of uniform pan-territorial and pan-season prices during the administratively determined official marketing season (Badiane 1998). The government also provides subsidies for the marketing of certified seeds.

Another key actor is the multi-stakeholder National Groundnut Council (CNIA), which coordinates the various actors involved in the production, processing and supply of inputs and services, and assures that these activities follow the framework agreement with the Government of Senegal (signed in 1997 and renewed in 2003). The CNIA is also responsible for setting producer prices. Other key stakeholders include the farmers' organisations, responsible for the production and marketing of groundnuts; intermediary traders; and SUNEOR, the dominant oil processing company responsible for organising the primary marketing of groundnuts. The role of the private sector should be emphasised in particular, because of its increasing importance (especially with the advanced liberalisation after 2002). More private traders have entered into groundnut marketing, gradually replacing cooperatives as the main purchasing agents (the proliferation of traders has also lowered marketing costs).

Impact of the intervention

Pro-poor development

Groundnut production is strongly linked to other sectors of the economy, such as the food industry and transport. Moreover, it is the source of a strong intermediate demand for inputs produced by the rest of the economy. On average, groundnuts are a more profitable crop than cereals for farmers and so the reforms of the groundnut sector and external price shocks have had severe effects on the Senegalese economy, from rural household all the way to national welfare concern. The intervention played an important role in stabilising groundnut production and increasing the direct income for groundnut farmers, especially of vulnerable groups in the Kaolack Region.

The seed programme helped revitalise the groundnut sector more broadly by providing smallholders with access to quality seeds, to improve their productivity and production. In addition, the processing units add value to the harvest and enable the smallholder to secure additional income by marketing products instead of raw groundnuts. By setting up these small groundnut processing and marketing units, smallholders (and women in particular) could strengthen their livelihood and combat poverty.

Gender

In the past, the role of women in agriculture was to help men in cultivation—and especially in harvesting. Most women still do not have access to or control over land and other means of production. Credit and seed distribution are generally diverted to men who control the land and natural resources. Through the support of ActionAid Senegal women are gaining access to and control over land and other productive resources. In the groundnut sector, women are now organising themselves to collect their harvests and to market their products themselves. Furthermore, they now actively participate in decision-making at the CCPA. The project emphasised the empowerment of women

farmers by facilitating their participation in the entire value chain. Overall, the project involves 960 men and 235 women in seed cultivation. In Taiba Niassene, the processing and marketing component is fully controlled by women, as they constitute 99% of members in this GIPA. Enjoying strong group representation at these crucial parts of the value chain greatly improves the position of women in the region—both in economic and in social terms.

Food security

Groundnuts are an important staple food in most rural households, contributing up to 28% of the daily calories intake of Senegalese families (Evers 1997). Oil, paste and flour provide a balanced diet rich in proteins and calories, positively impacting household food security. Incomes from sales of the products increase purchasing power, enabling households to complement their dietary and domestic needs. Groundnut by-products, like cake and hay, are also used to raise livestock, which provides a ready source of proteins and additional income.

Food quality

One of the major advantages of the adoption of this quality seed lies in the enhanced caloric and protein content of the groundnuts and the extracted oil. Groundnut oil is one of the most nutritious oils. Low in saturated fatty acids, it prevents the build up of cholesterol levels better than other oil products. However, aflatoxin rates (a toxin produced by fungi that grow well in the local climate and can be found in peanut butter and oils) remain of concern when it comes to trade and health. While there is more work to be done, Senegal has already taken important steps to combat this fungus and to ensure that its groundnuts production is largely aflatoxin-free, a key prerequisite for obtaining lucrative export contracts (USAID Foreign Agricultural Service, 2010). Adequate information dissemination and farmers trainings on the prevention and control the fungus is crucial for achieving this goal.

Infrastructure and governance

The government provided facilities to support groundnut production, like the manufacturing industries in Kaolack, Diourbel and Ziguinchor that process groundnut into oil for export, which generates employment for the rural poor. However, with the groundnut sector reforms, these facilities have been privatised. The government, industrial oil processors, operators and farmers (CCPA) established a framework for setting prices and payment of subsidies. Usually the industrial processors offer prices that do not meet the farmers' expectations. Therefore, after many roundtable negotiations, the government decided to introduce a subsidy so that farmers can cover their production costs. In the 2010 groundnut trade season, the industrial processors offered 120 CFA franc per kilogram and the government added CFA franc 45, bringing the price up to CFA franc 165.

Producer and consumer prices

International markets determine the purchasing price of groundnuts. The government, in consultation with farmers organisations, controls producer prices. SUNEOR has a capacity to buy 300,000 tons of groundnuts per year, which provides a minimum purchasing capacity and some security of product placement. However, with the significantly fluctuating production volumes and the current level of one million tons, Senegalese farmers need to find additional markets. This is the key bottleneck, where and through which channels to market surplus production during good harvest years. Even though rural areas have dynamic weekly markets, with very competitive prices offered by individual buyers, their absorption capacity is limited.

The women farmers in Taiba Niassene receive 775 CFA francs per litre (USD 1.5) for a volume of over 50,000 litres. For lesser quantities the price is slightly higher, CFA franc 800 (USD 1.6). Very small quantities for local consumption bring in CFA franc 900 (USD 1.7). The women smallholders have already signed a contract to provide 72,000 liters to a private buyer in Dakar. The small processing units help absorb part of the remaining surplus 700,000 tons because other GIPAs (Thiakho Maty, Ndrame Escale and Diossong) ship their groundnuts to the Taiba Niassene processing unit. The price is substantially higher and seen as fair (165 CFA franc per kilogram, compared to the CFA franc 125 offered by intermediary agents). Also the farmers benefit from cash payment on delivery, while the national industry champions that usually buy the groundnuts operate with a payment delay of at least 4 months. Table 3.4 illustrates the profit margins for processing one ton of groundnuts into oil.

Innovation and sustainability

CCPA and ActionAid Senegal entered into a seed cultivation partnership in 2006. From the very start, CCPA has been running the programme without any strong government support. It links up with organised GIPAs, which are preselected by the national agricultural research institute to receive the improved seeds. The seed programme producers buy these cultivation seeds for 2,500 CFA franc per kilo (USD 5). They produce and sell Base and N1 seeds (for CFA franc 400 and 250 respectively) which are much more attractive than the seeds offered by private sector providers (often of inferior quality and offered at widely fluctuating prices). By supporting the launch of this seed cultivation programme, AAS wanted to assist farmers to find the best way to grow a marketable crop. When the farmers subsequently faced problems selling their produce, AAS encouraged the establishment of processing units. As the farmers are directly involved in the programmes, they can control their production, add value to their product and gain access to markets at the same time.

Table 3.4 Profit margins for processing groundnuts

Activity	#	Unit cost	Total amount
Purchase	1000	165	165,000
Trading margin	1000	8.5	8,500
Transport	1000	10	10,000
Weighing	1000	1	1,00
Monitoring fees	1000	1.5	1,500
Handling	1000	0.8	800
Decorticate	1000	8	8,000
Winnowing	1000	3	3,000
Sorting*	700	3	2,100
Production	**308**	**25**	**7,700**
Packaging	16	500	8,000
Label	16	250	4,000
Electricity			3,000
Other			3,000
Total expenses			**225,600**
Oil sale (44% yields)	308	800	246,400
Cattle cake (Wholesale)	392	60	23,520
Total sales			**269,920**
Margin			**44,320**

**(yield of 70% = 700 kg)*

Main achievements

- The recognition of CCPA as a certified agent to produce seeds, in collaboration with the national agricultural research institute and agriculture technical services.

- CCPA taking part in determining groundnut prices and influencing the government's provision of subsidies. As a result the CCPA became a credible farmers organisation with access to credit from the national agricultural development bank.

- Improving the lives and livelihoods of smallholder women farmers through increased incomes from sales of the groundnut and its derivatives (groundnut oil, cake, soap, paste, flour etc.). Some of the products have been awarded prizes for superior quality.

- Empowering women in both economic and social terms, changing the power dynamics as women now actively participate in decision-making.

Key lessons

What can be learned from this case about the women of Taiba Niassene is that agriculture production and productivity can greatly improve with quality seeds that are accessible and affordable when farmers need them the most. It further shows that with value-adding processing producers can gain a lot more than simply selling the raw product. Another lesson is that public-private partnership seems to be an important leveraging tool for agricultural development. It is important to understand the dynamics of the state, private sector and the farmers, and to formalise their roles, thus ensuring equitable and sustainable relationships. The government should take deliberate efforts to protect and promote small agro-industries that enhance the processing of raw agricultural products. Using this experience, ActionAid Senegal has helped create four food processing units (for groundnuts, cereal, seafood and banana), mainly managed by women. Through this support, it aims to put forward new models and alternatives for smallholders and influence Senegal's agricultural policies. Although the women of Taiba Niassene have achieved some promising results, they encountered some key challenges: the lack of good packaging materials, market competition from other oil products that are subsidised, delayed infrastructural development and poor access to a regional market.

The way forward

To enhance an ever smoother market access, continuing efforts are needed to build the farmers' capacity to play an increasingly effective role in the development of the groundnut value chain. To counteract the competition of other subsidised oil products, import regulations should be put in place. At the same time, regional integration for effective cross-border trading among the members of the Economic Community of West African States (ECOWAS) and the African Union (AU) should be promoted. By linking up with small-scale groundnut processing units, the groundnut producing women farmers of Taiba Niassene have proven that their engagement in value chain development contributes to local economic development.

Abbreviations

AAS	ActionAid Senegal
AU	African Union
CCPA	Cadre de concertation des producteurs d'arachides (groundnut farmers association)
CFA franc	Communauté Financière Africaine (African Financial Community)
CNCR	Conseil National de Concertation et de Coopération des Ruraux (National Farmers' Platform)
CNIA	Conseil National Interprofessionnel d'Arachide (National Groundnut Council)
ECOWAS	Economic Community Of West African States

GIPA	Inter Village Association of Groundnut Producers
SDC	Swiss Development Cooperation
SONACOS	Name of official groundnut marketing and processing company
SUNEOR	Name of oil processing company. It is a contraction of the word 'sunu' which means 'our' in Wolof and gold, referring to groundnuts as one of the main resources of the country.

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Photo: ©FAO/Giampiero Diana / FAO

3.6 Quality seeds improve livelihoods in Bangladesh

Aftab Alam Khan and Amirul Islam

Introduction

In Bangladesh, agriculture accounts for 23% of GDP, and about 75% of the total population are engaged directly or indirectly in agricultural activities (BSGDMA 2007). Rice is by far the most important staple grain in the country, and planted on 77% of arable land (IRRI 2013). In 2010, total production of rice topped 50 million tons, but even this record breaking harvest still could not fully meet local demand. An additional 650 tons of milled rice had to be imported (FAOSTAT 2013a, 2013b). Major factors that hold back rice production include the lack of good quality local seeds, high input and seed prices, the low quality and inadequate supply of agricultural inputs as well as natural disasters. Improving the cultivation of this key commodity would both provide food security for vulnerable sectors of the population and help improve the national account balance. Rice seed quality and availability was singled out as the major bottleneck to reaching this goal. In the following, we will examine which activities are undertaken to improve the livelihoods of people through the provision of good quality seeds in several districts in Bangladesh.

The Kurigram District is located in the north-eastern part of Bangladesh bordering India. Kurigram is one of the poorer areas of Bangladesh and among those afflicted by a severe food scarcity phenomenon called *Monga*[12] in the Bangla language. Moreover, in general, livelihood opportunities and provision of services by the private and public sectors are limited in this area. ActionAid International (AAI) works on poverty alleviation through the FoSHoL project in the Kurigram, Patuakhali, Khulna, Noakhali and Satkhira districts. FoSHoL is an abbreviation of Food Security for Sustainable Household Livelihoods (the word *foshol* also means 'crop' in the Bangla language).[13] It is a successful example of community mobilisation, empowerment of women, income generation, and seed and food security.

FoSHoL's approach

The project actions described in this case focus on three unions[14] in the Kurigram District: Pandul, Dhoronibari and Durgapur. The project sought to enhance food and livelihood security of poor and marginalised households through a holistic approach with four key objectives. The first objective was to promote innovation in farming systems and improvement of cereal and livestock production. The second focused on strengthening the community's capacity to better market their produce. The third objective was the development of the community's linkages with various public and private service providers. Due to the perceived potential for growth in the local market and economy, facilitation of income generation and livelihood diversification was the fourth objective.

Several measures were taken to improve agricultural productivity and production volumes. Sustainable agriculture was promoted by reducing the use of agro-chemicals and by taking measures to increase the efficiency of water and soil use. Farmers were provided with training on the harmful impact of chemical fertiliser and pesticides on soil fertility and productivity. The approach introduced a balanced use of fertiliser, quality seeds, mulching, integrated crop and pest management as well as new sowing methods.

Biodiversity centres, managed by women's and men's farmers groups, were established for the production of locally improved varieties of medicinal plants, spices, vegetables and fruits. Compared to previous market-based sources, the planting materials could

12 Monga is a period of severe food insecurity, caused by floods, droughts and spells of cold weather. Usually it is an annual phenomenon, but can occur also twice a year.
13 FoSHoL is actually a series of projects aimed at addressing food security concerns across the entire country, with support of the European Union (see Delegation of the European Union to Bangladesh).
14 Union is the lowest administrative unit of local government.

be secured at lower prices. Most of the output was used by the households themselves, with the surplus being sold at the local spot market.

To produce, process and distribute improved rice seeds, a community-based seed enterprise was set up. In order to provide a source of additional cash income and organic fertiliser, union livestock service centres were set up through collaboration between local governments, the Department of Livestock Services and the FoSHoL participant groups. The centres provide livestock veterinary facilities, which were not available due to the limited resources of the department.

And finally, to provide a marketing channel, a FoSHoL Bazaar was set up, i.e. a shop in the village market run by one of the members of the farmers organisation. It provides the marketplace space for farmers to sell their produce (eggs, fish, vegetables and fruits from the biodiversity centres) directly to local consumers.

The FoSHoL project is thus comprised of a number of inter-related activities or components, which sought to apply the logic of the value chain approach to pro-poor development. The remainder of this section will focus on the community-based seed enterprise and its impact on rice production.

The rice seed value chain

There are huge gaps between demand and supply of rice seed in Bangladesh. The Bangladesh Agricultural Development Corporation (BADC), the sole public sector producer, is able to meet only a quarter (25-26%) of the total annual demand for rice seeds (400,000 tons) (CPD 2002). Another 4% is met by the private sector, through seed imported mainly from China by a number of corporations and NGOs. These imported seeds are mostly hybrids with built-in genetic constraints that limit the production of good quantity and quality crops in successive plantings. The remaining 70% of rice seed is obtained from the informal system (from the farmer's own stock of seeds and farmer-to-farmer exchanges). These seeds are often of poor quality because of the genetic degradation inherent to successive plantings. The seeds are saved from previous harvests and with each season the quality of the seed declines. Although there are ongoing attempts to strengthen and revamp the BADC, there was a long period (2001–2008) of reduction of state involvement under free market policies. However, the private sector seed value chain has not provided farmers with an adequate alternative to the services of the BADC and the public sector.

On the contrary, private seed dealers used to exploit the aforementioned gap in supply and demand of rice seed in Kurigram. They deliberately restricted the supply of seeds during the sowing season to drive up prices. The quality of seeds was also an issue for

farmers. In this context the Farmers Alliance in the three unions in Kurigram District decided to produce, process and market seeds for their own use (as well as to sell seeds to other farmers in the area). It is estimated that if Bangladeshi farmers obtain quality rice seeds, they could produce an additional 2.1 million tons of rice annually (worth USD 420 million) (CPD 2002). This would greatly reduce food grain imports, contributing to food security at national level and increased incomes at local level.

FoSHoL community-based seed enterprise

In 2008, with the help of FoSHoL, the Farmers Alliance developed a seed enterprise. The members of the alliance were split according to their interests into three groups: seed growers, seed traders and seed processors. These groups received trainings on their respective functions. Around 260 members of the Farmers Alliance were trained as seed growers and 39 as seed traders. The Bangladesh Rice Research Institute (BRRI) trained seed growers on seed production technology. The BRRI also agreed to provide growers with foundation seeds, which are purebred seeds used for the production of certified quality rice seeds. The farmers were also introduced to representatives of the Seed Certification Agency (SCA) to certify their seeds.

Photo: Amirul Islam

Group discussion

The foundation seeds are transported to the processing centre where the processor group manages the processing strictly according to SCA standards. A qualified seed technologist is responsible for supervising the process. The seeds are packaged and sold to the members of the farmer's alliance and other farmers in the rice cultivation areas.

In 2009, farmers produced around 30 metric tons of high-quality foundation rice seed on 42 acres of land. The seed growers were allowed to keep 10% of the harvested seed for their own use or for local exchange or sale, providing them with seed security.

The existing seed production and distribution system (shown in Figure 3.2) is characterised by the involvement of various commercial actors, including multinational seed companies and NGOs. All these players aim to maximise profit, and the farmers end up paying the price as the final consumer in the seed chain. The long supply chain increases the price of the seed and provides farmers little control over the availability and quality of seeds.

Figure 3.2 FoSHoL seed production and distribution system

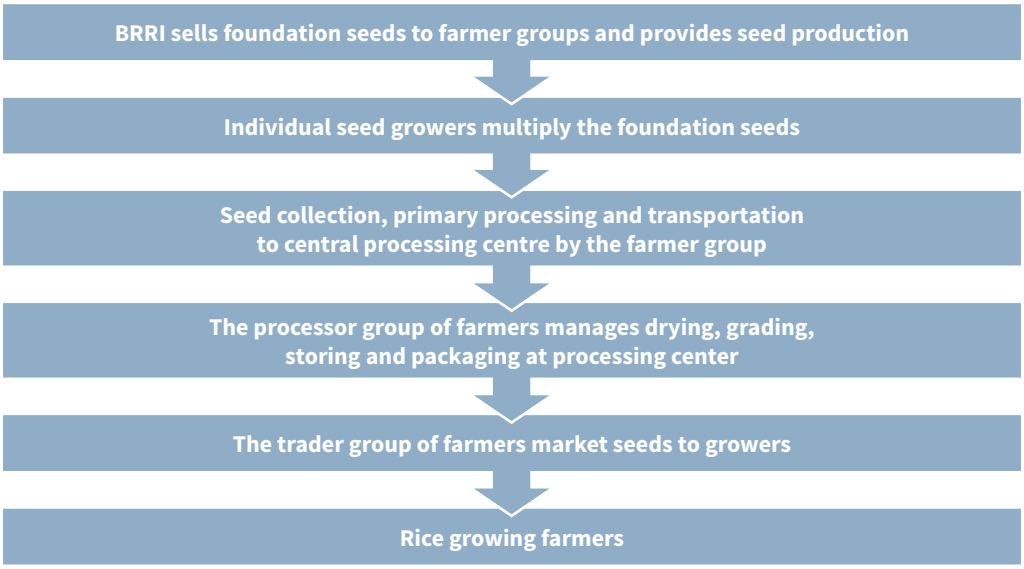
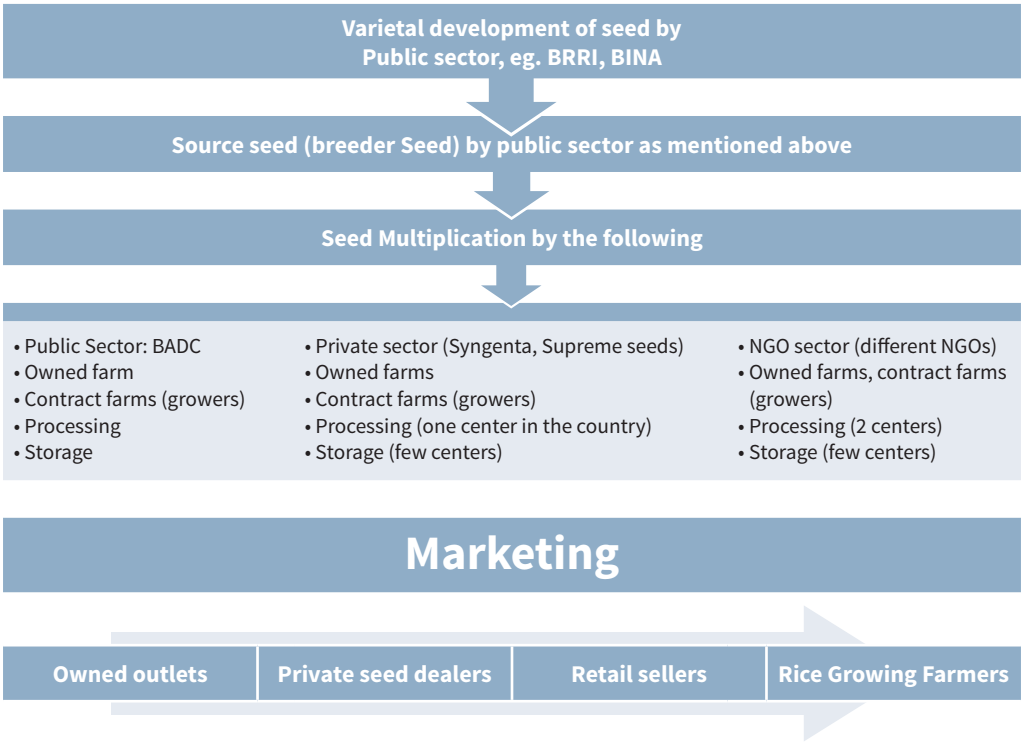


Figure 3.3 Existing rice seed production and delivery systems in Bangladesh



The FoSHoL system is very different as can be seen in Figure 3.2. Compared to the long supply chain in which farmers have little control, in FoSHoL's chain control is exercised at the level of farmers groups. The system is reversed, i.e. availability and quality are now in the hands of the end consumers of the seeds—the smallholder farmers.

Impact of the intervention

Pro-poor development

FoSHoL focused on those most in need: all of the participating smallholders own less than 0.2 hectares or have no land of their own. The FoSHoL seed initiative generated additional incomes for all stakeholders in the intervention area, including seed growers, processors and traders. The production and marketing of quality rice has directly improved incomes for the farmers who purchase and use FoSHoL seeds for rice cultivation. Through its other actions, the project promoted diversification of livelihood sources (like fish ponds) and the upgrading of the skills needed to expand production of already existing livelihoods (like livestock and poultry). These activities provided both direct food sources and additional commercial products to be sold on local spot markets (ActionAid 2011).

In addition to the economic benefits, the success of the FoSHoL project helped boost the confidence of smallholder farmers. They realised that by coming together they can achieve greater food security through improved rice production. The Farmers Alliance provided a viable alternative to the seed dealers and companies, which used to charge high prices for sub-standard seeds. Their empowerment was most prominently displayed when they challenged the established political structures by seeking to obtain union council posts at the local elections.

Gender

Looking at rice cultivation, the gender roles are almost evenly split according to time spent. Men are primarily involved in planting and harvesting the crop as well as the marketing. While the women do much of the work of winnowing/cleaning seeds, threshing, drying and packaging. Often they perform these tasks as wage labourers, thus providing additional income for their families. Through FoSHoL, women are employed both at the local seed production and at the central seed processing stages. The women of the community are also more active in additional productive activities, like cultivating crops in the homestead gardens or preparing organic fertilisers for rice.

Direct participation alongside the men in the seed enterprise, biodiversity centres and union livestock service centres has increased the women's self-esteem. They enjoy greater respect in their families and the community as a whole. They are also able to

secure some additional income that they control, largely through the economic activities where they are most directly involved, like fruit trees, livestock and poultry. This has resulted in women feeling less constrained in their mobility and more confident in voicing their opinions during meetings when men are present. However, it should be emphasised that gender equality is still a long way away. Looking at the gains in mobility, while women do feel free to go to other people's homes and deal with traders, they do not usually go to the market. The direct income that women secure is disproportionally smaller compared to the invested labour. For example, women do 95% of the work in homestead gardening but receive only 12% of the proceeds (ActionAid 2011).

Food security

Overall, there has been a durable increase in food intake at household level. Also, with the adoption of homestead gardening and the emphasis placed on poultry and livestock-rearing, families have more diverse livelihood options at their disposal. The impact of income diversification on food security should be underscored. During field studies it was found that poultry were the most resilient source of protein and income, as they could best weather natural disasters, like storms, droughts and cyclones (ActionAid 2011). Also one innovative introduction at the level of women's groups was the 'fistful of rice' savings scheme. Each woman brought to the meetings 250 grams of rice, which was placed into a collective grain bank, to be used by members in time of need. This experience prompted the women to apply the same practice in their homes, i.e. when they cook they set aside a small portion of rice, thus creating their own household food security batch.

The quality seeds provided to farmers led to improvement in the quality and quantity of rice production. The initiative increased farmers' income, thus improving access to other food items from the local markets. The FoSHoL seed initiative has brought greater control to the farming community over rice seeds, because they produce, process and distribute the seeds themselves.

Food quality

The diversifications of livelihood also had an impact on the quality of food consumed at the household level. Primarily it provided for a regular supply of easily accessible proteins, primarily from the fish ponds, augmented sometimes also by egg consumption (eggs are primarily used as a cash commodity in these communities). Along with the line-sowing and quality seeds, other key improvement to crop management practices included the introduction of organic fertilisers and integrated pest management with plant-based insecticides (ActionAid 2011). The wide application of environmentally friendly farming techniques has had a marked effect on productivity. It also improved the general health of the population. The scarce sources of clean drinking water are not being polluted by runoff, not to mention the direct benefits to the personal health of those who no longer have to handle chemical agricultural agents.

Infrastructure and governance

As discussed in greater detail previously in the description of the FoSHoL project, the actions were primarily focused on providing the physical and institutional infrastructure to sustainably improve livelihoods in the districts. The government institution BRRI provided breeder seeds and trainings to farmer groups for seed production. Through this network, the existing government infrastructure facilities were engaged for the benefit of communities. FoSHoL also constructed a seed processing centre and helped set up the FoSHoL Bazaar, a shop stall at the local market. These are important infrastructural improvements, which are owned by the communities themselves.

The aforementioned development of women's and men's farmers organisations is the most important institutional development in the community. It improved the production and marketing potential of the community as well as enhanced farmers' self-confidence in their unity, coordination and cooperation.

Producer and consumer prices

The shift from cultivating paddy to growing seeds resulted in a significant rise in income for the farmers. The seed growers who cultivate the seeds sell their crop for seed processing at 19 Taka/kg compared to the usual market price of 15 Taka/kg. When producing the usual paddy, farmers used to earn only 5,600 Taka per acre. However through seed production they earn 25,000 Taka per acre, which is a 190% increase in income for the seed growers (see Table 3.5).

Table 3.5 Comparison of paddy and seed cultivation per acre

Items	Production cost (Taka)	Yield (kg)	Price (Taka/kg)	Total income (Taka)	Profit (Taka)	% increase in profit
Paddy	25,000	2,160	15	32,400	7,400	190
Seed	30,000	2,280	19	43,320	13,320	

The processing group of farmers produces good quality seeds, while the traders group sells the seeds to farmers at around 50 Taka/kg. This price is a bargain, compared to what is offered by the other seed sellers in the market (around 85 Taka/kg). Poor farmers who use FoSHoL seeds not only save 35 Taka on each kilogram of rice seed, but also benefit from the high germination rates of these seeds (95%). FoSHoL seed is cheaper because no excessive commercial profit is being made within this value chain. The following table shows that the cost of producing and marketing each kilogram of seed is 35 Taka/kg. Hence, at a market price of 50 Taka/kg, the grower and processor farmers groups make a reasonable profit, which is distributed back to their members.

Table 3.6 Cost and profit comparison of the FoSHoL seed initiative (Taka/kg)

Grower cost	Processor cost (processing, packaging, marketing and transportation)	Total cost	Sale Price	Profit	Price of other seeds in the market
19	16	35	50	15	85

Innovation and sustainability

The FoSHoL seed initiative has introduced some innovations in the organisation of rice seed production. Farmers are in charge of all the stages of seed production—from the cultivation of seeds to processing to marketing. The profit earned by the groups is distributed back to their members. More importantly, compared to other readily available seeds on the market, FoSHoL seeds are of a better quality and come at a lower price. As a result, more farmers can enjoy access to improved seeds. There are other NGO-initiated seed enterprises in Bangladesh, but many operate as an income-generating arm for the organisations. The farmers only function as contracted seed growers. The multiple innovations in the other project components—the 'fistful of rice' grain banks, the introduction of diversified livelihoods, women empowerment training and others—are outlined in the previous sections.

After the end of the project, there are signs that the initiative is still going strong. In fact, farmers have produced more seeds after the phase-out of project support. In the final year under ActionAid support, 30,000 kg of rice seeds was produced. After the phase-out in 2010, when seed production was completely in the hands of farmers organisations, they produced 50,000 kg of seeds—a two-thirds increase in yield.

Abbreviations

AAI	ActionAid International
BADC	Bangladesh Agricultural Development Corporation
BINA	Bangladesh Institute of Nuclear Agriculture
BRRI	Bangladesh Rice Research Institute
FoSHoL	Food Security for Sustainable Household Livelihoods
NGOs	Nongovernmental Organisations
SCA	National Seed Certification Authority

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3.7 Horticulture Development in Tanzania

Jacqueline Mkindi, Amani Temu, and Aad van Tilburg

Introduction

The horticultural industry is the fastest growing subsector of the Tanzanian national economy, with a growth rate of 8–10% per annum. It encompasses the production, processing and marketing of flowers, fruits, vegetables, seeds, spices and herbs. The subsector has been recognised as a powerful engine for socio-economic growth and a significant contributor to the alleviation of rural poverty. Horticulture contributes extensively to food, income, health and employment security in the country. The industry generates more than USD 358 million per year, and it offers direct employment to about 350,000 Tanzanians. The subsector has registered tremendous growth in the past three years, but there is still vast untapped potential in the industry. Recent market research—conducted by the Tanzania Horticultural Association (TAHA) at the local, regional and international levels—revealed that there is large global demand for horticultural produce, mainly fruits and vegetables. If Tanzania is to secure a strong position in the global horticultural markets, it has to create the necessary soft and hard market support infrastructure (e.g., efficient market systems, structures, institutions and supportive policies). Farmers also need to be empowered with the right knowledge on horticultural business operations and proper farming methods (TAHA, 2012).

TAHA is a member-based organisation representing producers, exporters, processors, service providers and small grower groups in the horticultural sector of Tanzania. It was established in 2004 with the main objective of promoting the horticultural industry and making it more competitive, viable, profitable and ultimately sustainable. Since its establishment TAHA has made remarkable strides towards upgrading the industry and addressing the common cross-cutting issues that erode the industry's competitive advantage. TAHA has been an effective platform for discussion of industry issues, acting as a bridge between various stakeholders.

In the Kilimanjaro region of Tanzania, TAHA works with both urban and rural small-, medium- and large-scale farmers to improve household incomes through increased vegetable production and employment. By taking advantage of the decent road infrastructure in the region as well as the proximity of several international airports, TAHA was able to establish a profitable export-oriented enterprise.

The structure of TAHA

The association undertakes four primary types of activities: (1) lobbying and advocacy (local government and relevant line ministries, e.g. the Ministry of Agriculture, the Ministry of Finance, etc.); (2) provision of technical support to its members; (3) promotion of the horticulture sector abroad and seeking out foreign direct investments (FDI) opportunities; and (4) dissemination of market information to members and other stakeholders. TAHA offers three categories of membership: comprehensive, allied and associate. Comprehensive members are large-scale farmers, exporters and processors with an annual turnover of at least TZS 100,000,000 (EUR 50,000). The members in this category have a single vote in the general assembly (one member, one vote). There are about 25 comprehensive members, who each pay a membership fee of TZS 1,000,000 (EUR 500). Allied members are service providers to the horticulture industry, for example, chemical and fertiliser companies, financial services and extension services. This category has a voting right in the general assembly to choose a board member. There are about 45 allied members, and their individual fee is TZS 500,000 (250 Euros). Associate members are smallholder farmers, who may participate as part of a farmer's group or as individuals. There are about 174 groups of smallholders (representing about 16,000 farmers) and about 45 individual farmer members. They also have rights in the general assembly along the 'one member, one vote' principle, and pay TZS 50,000 (EUR 25) in annual membership fees.

The board reports to the Annual General Meeting, where all members come together to discuss the performance of the year that has passed and to plan the association's strategy for the next twelve months. When preparing strategies, the General Assembly is divided into two groups, one with comprehensive and allied members while small-

holder farmers are gathered in another group. The members are placed in separate groups for practical reasons: the two stakeholder groups have different strategic goals and smallholder farmers are more comfortable presenting issues in Swahili. TAHA has an annual target of increasing membership by 25%. The secretariat is charged with the task of meeting this target by visiting new areas and going to the local agricultural shows to promote the benefits of TAHA support to potential members.

Similar organisations

Currently, there are several organisations that have similar goals and activities as TAHA. One example is the Agricultural Council of Tanzania, which has 500 members and works across the entire country. Its main activities include lobbying and advocacy as well as the provision of technical support to farmers associations. Another one is the Tanzania Smallholder Farmers Network, which primarily provides technical support to its 100,000 smallholder members, and has a mixed membership of both food and non-food farmers. Tanganyika Farmers Association, with 32,000 members, works primarily on the mainland with non-food farmers (e.g., coffee, tea, sisal and cotton). There are two strong business associations in the country, namely the Tanzania Chamber of Commerce, Industry and Agriculture (TCCIA) and the Zanzibar Chamber of Commerce, Industry and Agriculture (ZCCIA). The chambers' specific activities include lobbying and advocacy as well as the provision of market information and technical support on business development. ZCCIA also focuses on promoting agriculture in Zanzibar, one of the major producers of spices in the world. Many of TAHA's members are also members of these associations.

Supporting smallholders

Lobbying and advocacy

TAHA promotes open dialogue in the horticultural sector at large by initiating successful discussions with the government and other relevant stakeholders on various topics vital for the development of the sector, such as policy reform and operational challenges in supporting horticulture.

Technical support

This assistance is given to smallholder farmers in the form of trainings and demonstration plots. The trainings focus on safe use and handling of pesticides, good agricultural practices, post-harvest handling and financial/business management. The association has its own technical department with extension officers who provide services to farmers. TAHA's strength lies in its ability to use different partners (e.g. local government extension workers) to reach farmers in the rural areas. As part of its technical supporting services, TAHA established a logistics company (TAHA Fresh Handling Ltd.), which is a commercial venture with a separate board and management. The company provides

logistical services, such as cargo consolidation, airline bookings, trucking of produce, clearing and forwarding of horticultural perishables.

Promotion

TAHA serves as a champion of Tanzania's horticulture industry abroad, and actively seeks out FDI opportunities with international funding partners and private financiers. It showcases Tanzanian produce at international fairs, engages in direct marketing, and designs websites, brochures and other promotional materials. FDI opportunities have been explored in fruit processing, seed breeding and other capital-intensive operations. TAHA has developed an information dissemination system to provide members and other stakeholders with updated information about local and regional market trends, production volumes, policy issues, etc. TAHA also engages in direct promotion of its members' produce, for example, by distributing samples to hotels and supermarkets chains and negotiating prices.

The horticulture value chain

TAHA primarily promotes the following horticultural commodities: flowers, fruits, vegetables, vegetables seeds and spices. Plans for expansion during the 2012–2015 period include the addition of roots and tubers, i.e. Irish potatoes and sweet potatoes. Most smallholder farmers are involved in one of the two strands in the vegetables value chain: high volume products (tomatoes, onions, carrots etc.) or high value products (French beans, baby corn, garden peas etc.). The produce is sold on three primary markets: the local and national market in Tanzania, the regional export market in East Africa, and the European export market. The Tanzanian local and national market is concentrated around key wholesale distribution centres (like Kariakoo wholesale market, Kisutu retail market for fruits and vegetables) and retailers or customer with smaller distribution chains (like supermarkets, local chains or hotels). In addition to the capital Dar es Salaam, other important cities with sizable markets include Arusha, Moshi, Mwanza, Mbeya and Morogoro. Farmers also supply vegetable processors—like Darsh Industries, Dabaga, and S.S. Bakhresa (Azam)—who further process vegetables into value-added products (tomato paste, chilli paste etc.).

There are two main export markets, the nearby regional one in the East African Community (EAC), and the distant European market. In addition to the member countries of the EAC, Tanzanian vegetables are also exported to the Comoros and Southern Sudan. The produce that reaches the regional markets mainly consists of onions, tomatoes, African egg plant and okra. The main European market is found among the member states of the European Unions, primarily in north-western Europe (Sweden, Denmark and the Netherlands) and the UK. The produce most commonly exported to this market includes French beans, peas, baby corn, snow peas, chillies and cauliflower.

Table 3.7 Relative market share of smallholders and large-scale farmers

	Tanzanian markets	East African markets	European markets	All markets
Smallholders	60%	30%	25%	38%
Large-scale farmers	40%	70%	75%	62%

National and local market places

TAHA farmers market their produce at several key marketplaces in Tanzania. The Dar es Salaam wholesale market, the biggest in Tanzania, attracts more than 5,000 traders and buyers each day. TAHA farmers supply all types of vegetables to this market seven days a week. The hotel market in Zanzibar is supplied by local farmers and by traders who purchase various types of vegetables on the mainland and ship them over to the island. Hotels buy only top quality produce, and are ready to offer top-price in times of shortages. The processing industry in Tanzania is another large client, who primarily deals in tomatoes and chillies. The companies usually buy directly from farmers and traders year-round, and like to have stable longstanding relationships with their suppliers. In times of irregular or poor supply, they import tomato paste in bulk and repackage it in tins and bottles. The retail markets in mid-sized towns provide another outlet for daily deliveries of fresh produce. The retailers operating at these markets usually buy directly from farmers in the region, but also from collecting traders who purchase produce at-the-gate. The weekly village markets are the local spot markets in production areas, patronised primarily by local farmers and residents.

Table 3.8 Summary of customers in the fresh vegetables value chain

	Dar es Salaam wholesale market (5,000 traders)	Hotel sector in Zanzibar	Retail markets in mid-sized towns (1,000 traders)	Village markets (100–200 traders)
Farmers	X		X	X
Collecting traders	X	X	X	X
Wholesalers	X	X		
Retailers	X		X	
Consumers	X		X	X

Impact of the intervention

Pro-poor development

By facilitating access to export markets for their produce TAHA is building a sustainable marketing channel for the smallholder farmers. As farmers have not received consolidated and sustained trainings on good agricultural practices through the existing support and extension mechanisms, TAHA's extension staff, together with local government

extension officers, has been providing farmers with the needed trainings. The application of good agricultural practices has a strong beneficial effect on productivity per acre of farmland, and also helps secure higher prices by improving the quality of the produce.

Many smallholder farmers in the sector employ at least two seasonal workers from their communities, mainly in the ploughing and harvesting seasons. The total number of seasonal workers employed by TAHA-associated farmers is at least 64,000. TAHA trains group leaders and farmers on leadership, group dynamics and conflict resolution. The large-scale farmers in the sector permanently employ between 20,000 and 35,000 persons in total. TAHA has also worked to empower these employees by providing trainings on various topics for personal development and livelihood enhancement (HIV/AIDS, family planning, personal hygiene and nutrition, integrated pest management, post-harvest handling etc.).

Gender

Women are strongly represented in horticulture at the producer level—as many as 65% of smallholder farmers are women. Also during harvest time smallholder farmers employ more women than men because they are more careful and skilled in handling fragile horticultural products. The TAHA project has been improving the incomes of smallholders through specific targeted activities. By organising smallholders in women's groups at village level, it provided them with access to new technologies (through demonstration plots) and trainings. The trainings include such topics as sustainable agricultural practices, post-harvest processing, and the much needed financial literacy and management. Also personal areas of development were enhanced by the accompanied training in sexual and reproductive health (e.g. HIV/AIDS and family planning).

In the next planning period (2012–2015) the formation of Village Community Banks (VICOBA) is foreseen. These local financial institutions will allow women smallholders to strengthen their financial capacity and to take care of the needs of their businesses and families (through investments in their farms, school fees for the children, health care etc.).

Food security

The increased incomes from the higher volumes of vegetable production and the strong marketing channels improve household food security by assuring a more stable food supply. Smallholders can afford to purchase the staple foods that they do not produce themselves, like maize, more regularly. They can also afford to purchase larger stocks of storable or durable processed food items, which provide nourishment during lean periods. The increased income and spending generate additional funds for other households in the villages (e.g. small vendors, house construction and maintenance workers), thus also having a multiplier effect on food security of the community at large.

On the consumer side, TAHA projects increase the supply of vegetables to meet the increasing demand of cities, which has substantially increased due to population growth and urbanisation.

Food quality

The TAHA project improves food quality by teaching 'good agricultural practices' including the proper use of pesticides, fungicides and fertilisers, proper handling and packaging measures. These trainings help farmers to obtain a good quality product and to reduce post-harvest losses substantially both resulting in additional income. By increasing the supply of produce and other natural sources of vitamins and minerals, the diet of the Tanzanian urban population is diversified and healthier, in terms of nutritional value.

Infrastructure and governance

The TAHA project has been instrumental in improving the closed cold chain infrastructure from point of harvest to point of supply for vegetables. This includes farm level collection centres, regional or zonal collection hubs, and cooled transport. For example, in Zanzibar TAHA invested in a collection hub where vegetables are collected from eight zones in Zanzibar and supplied to the hotels at a fee. The hub has been transferred to farmer groups at no cost. Infrastructural support helped increase productivity and reduce post-harvest losses by more than 50%. The logistics company, TAHA Fresh Handling Ltd., has improved farmers' access to export markets, at a reasonable fee. Most farmers supported by TAHA reside in the Arusha and Kilimanjaro regions, which have decent road and airport infrastructure. This infrastructure has been very beneficial for facilitating access to the nearby East African regional markets as well as the distant European export market.

The close collaboration with policymakers, relevant regulatory bodies, industry lobby groups as well as other key stakeholders has been instrumental in the streamlining of horticulture-related policy in Tanzania. Prominent examples include the revised Pesticides Registration Protocol and the improved Sanitary and Phytosanitary Inspectorate System. Other contributions include TAHA's lobbying efforts with the national government, which have yielded two important successes: the removal of the 18% VAT on airfreight and the reinstatement of the tax exemption on deemed capital goods.

Producer and consumer prices

TAHA hired commission agents in the various vegetable zones in Tanzania to collect prices and demand trends. They submit this information daily to the TAHA office where it is processed and the results are circulated to farmers and buyers by SMS. The main factors that determine the cost price of vegetables at the farm gate are agro-input

costs, including seeds and labour costs. The price of agro-inputs has been increasing annually by 10% on average for the past last decade. Combined with the steadily rising energy prices, it has increased the fiscal pressure on farming households.

Innovation and sustainability

TAHA was instrumental in the introduction of various new technologies in good agricultural practices, including irrigation, demonstration plots, small greenhouses, financial management and a closed cold chain. Farmers were trained in the construction of small greenhouses using locally available materials like branches, stones, wooden poles etc. In addition to providing enhanced technological capacity, the trainings were very useful for promoting a business-minded approach to improving production. They also serve to foster resourcefulness based on the unique opportunities in the local context. Often due to stagnant economic performance and reliance on old fashioned way of farming and doing business, smallholders do not take advantage of easily available opportunities to improve their livelihoods.

Sustainability of the vegetable sector has been enhanced by public-private partnerships at both local government and central government levels. For example, the District Agricultural Officers were familiarised with the horticultural activities taking place in their region, in order to increase their understanding of the importance of horticulture, and to secure their support in allocating additional budgetary resources to this sector.

Persistent challenges

Despite the gains made in promoting pro-poor development through the horticultural value chain, there are some issues that still need to be addressed, namely the high tax rates, inadequate subsidies, non-inclusive government policymaking and the rising energy prices. All horticultural produce is subject to a 3% tax. Horticultural exports are exempt from paying VAT, but agricultural inputs are taxed at 17% VAT and are subject to additional fees and chargers (e.g. by the Tanzania Bureau of Standards). These taxes make input costs relatively high compared to neighbouring countries, which increases producer costs and invariably also consumer prices. Even though the government does provide subsidies for agro-inputs, they are not well-targeted as the horticultural sector needs different, specialised inputs that are not included in the government's scheme. The drafting of agricultural policies does not always follow a transparent and inclusive process. The main policy and decision-making bodies continue to formulate key legislation and regulations without considering the opinions and needs of the actors in the horticultural sector. The rising costs of energy, for example electricity and petrol, have had a negative impact on the price of inputs as well as storage and processing costs. Rising fuel prices in particular have increased living costs and exerted additional pressure on the poorest segments of the population.

Abbreviations

EAC	East African Community
EURO	Official currency of the European Union
FDI	Foreign Direct Investments
TAHA	Tanzania Horticultural Association
TCCIA	Tanzania Chamber of Commerce, Industry and Agriculture
TZS	Tanzanian Shilling
UK	United Kingdom
USD	United States Dollar
VAT	Value Added Tax
VICOBA	Village Community Banks
ZCCIA	Zanzibar Chamber of Commerce, Industry and Agriculture

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Photo: MalinOlofsson

3.8 Fairtrade in Africa: Applying export lessons to local markets

Marcela Guerrero Casas

Introduction

Fairtrade Africa (FTA) is the independent, non-profit umbrella organisation that represents all Fairtrade certified producers in Africa. Established in 2005, FTA is a member of Fairtrade International (FLO), which unites three producer networks (FTA in Africa, CLAC in Latin America and the Caribbean, and NAP in Asia) as well as 21 labelling initiatives across Europe, Japan, North America, Mexico, Australia and New Zealand.

From export to local markets

Even though it does not explicitly deal with a specific staple commodity, the Fairtrade case provides a valuable contribution to examining the potential of utilising local markets for pro-poor development. Fairtrade International is seeking to take its extensive experience of working and supporting local smallholders in export-oriented farming and apply it to the local and regional markets. This is a new and evolving effort, with substantial potential for future growth and impact.

FTA is owned by its members, African producer organisations which have received certifications according to international Fairtrade standards. The members usually focus on traditional export commodities (such as coffee, cocoa, tea, cotton, cut flowers,

bananas, pineapples, mango etc.), but also non-traditional commodities feature prominently in their work (including shea butter, rooibos tea, vegetables, fresh and dry fruits etc.). FTA operates three regional networks: the Eastern Africa Network, based in Nairobi, Kenya; the Western Africa Network, based in Accra, Ghana; and the Southern Africa Network, based in Cape Town, South Africa. A new network in North Africa is soon to be established by Fairtradecertified producers.

Historically, Fairtrade has relied on export markets driven by a strong demand from North America and Europe. However, with the establishment of a producer network in Africa, FTA is leading a shift towards the promotion of local and regional markets, particularly through the establishment of labelling initiatives in South Africa and in Kenya. The organisation seeks to seize the growth momentum with the emergence of powerful economies in the fast-expanding developing countries—especially in countries like Brazil, India and South Africa, which already have many certified Fairtrade producers. Not only are new products being introduced, specifically tailored for these markets, but also Fairtradeis aiming to raise consumer consciousness in producing countries and increase local demand.

The experience in Latin America, and Brazil in particular, has demonstrated that there is strong potential for creating a grassroots 'Fair Trade' movement through the promotion of local products as well as the introduction of the concept at the policy level. Opportunities are also emerging in Africa. On the one hand, Africa is fertile ground for the introduction of staple foods into the Fairtrade market bydrafting the relevant standards and promoting consumer demand in the local or regional markets. On the other hand, new developments in the modernisation of the retail sector, such as the aggressive expansion of big supermarket chains, allow farmers new opportunities for influencing supply-chain policies at large through producer networks.

Impact of the intervention

Overall, the Fairtrade model, as it has been implemented so far, offers useful lessons for effectively promoting smallholder production and marketing.

Pro-poor development

By guaranteeing a minimum price for certified commodities, participation in the Fairtradevalue chain has a positive impact on the stability of producer incomes. In a volatile market, Fairtrade provides the type of safetynet that can protect producers in times of crisis. During harsh economic times, 'Fairtrade diminishes risks of high de-capitalization and of farms being neglected or abandoned' (Laroche and Guittard 2009). The minimum price guarantee provides additional income (with the similar effects of a subsidy), which producers can use to cover daily costs and bridge economic

slumps.Being able to weather bad economic periods protects vulnerable smallholders from sliding into poverty and long-term indebtedness.

The Fairtrade guaranteed minimum price mechanism introduces an element of economic security and stability for the families of small-scale producers; however, it does not fully address the challenge of poverty. Depending on the specific situation in each country and market structure (including the Fairtrade market itself), a minimum price is not sufficient to effectively assist those most in need. It should be noted that the producers involved in Fairtrade are usually not those at the bottom of the economic pyramid, due to the set of basic requirements a farmer is expected to meet in order to join Fairtrade. Most notably minimum level of organisationand access to additional resources are necessary prerequisites for incorporating the required changes. Many subsistence farmers find it difficult to make these changes. In light of persistent threats to the livelihood of poor smallholder farmers, and coupled with the growing economic potential of the continent, Fairtrade has initiated a shift towards also exploring local and regional markets. These markets carry the potential to include *all* types of producers, due to lower entry requirements. At the same time,engaging these new markets presents a good opportunity to promote Fairtrade principles among a new, broader section of producers and consumers.

Gender

Ensuring that women have access to and representation in farmer organisations through Fairtrade certification is a direct contributionto improving the position of women in these communities. Through their membership, women farmers are able to overcome crucial barriers and enjoy improved access to inputs, services, credits, training and markets (instrumental gender objectives). They have a direct voice in decision-making and policy debates within their farmer organisations and also externally, in lobbying and network efforts. However, the positive impact is not universally observed in all cases, and is heavily dependent on the specificities of the context and other factors (like age, marital status, economic status etc.) (Smith 2013).

Gender equality is promoted directly in the Fairtrade approach, by requiring the establishment and strengthening of democratic structuresin the participating producer organisations. Women members often benefit in Fairtrade set-ups from additional resources for programmes that address gender inequalities and capacity challenges. Currently, Fairtrade International is developing a gender strategy that aims to ensure the inclusion and additional support for women farmers, particularly in small producer organisations. In addition, also the impactof externalities (such as the prevalence of HIV/AIDS) on disadvantaged groups, especially women, is being examined.

In Nicaragua, the SOPPEXCCA cooperative has utilised a women-centred approach by supporting women coffee growers in various ways: helping them gain formal access

to their own land to cultivate, providing loans, and helping them with administrative tasks. As a result of this effort, a third of the cooperative's members are women, far higher than the average in the region (Dilley 2011). Although this intervention is principally driven by the cooperative's own values and mission, Fairtrade certification provided the foundation and the means to buildup and strengthenthe cooperative towards a more gender-balanced membership. Similarly, tea farmers in Uganda and Kenya reported better representation and participation of women in their organisations as a result of Fairtrade. More women members attended the meetings, and more women became involved in the governing committees and councils (Riisgaard et al. 2010). In Kenya it is reported that the Fairtrade emphasis on participation of women in the management of a tea factory has enhanced women's confidence, as demonstrated by greater attendance at factory meetings and increased contributions during those meetings. The women also noted that they have enjoyed more access to trainings on farming practices,once their organisation became Fairtrade-certified (Smith 2013).

Food security

By providing additional support, particularly through the stabilisation of prices, Fairtrade helps smallholders diversify their planting practices. The new crop varieties that are introduced help improve food security either by directly enhancing the availability of nutrition (new staple crops) or by easing access to nutrition through the introduction of new income sources (new cash crops, often sold at local markets). There is, nevertheless, a clear need to adopt a more targeted approach that encourages the introduction of food crops with a well-defined agenda to guarantee food security. A recent report by the Fairtrade Foundation (2009: 9) highlights this challenge: 'The recent volatility in food prices, coupled with the global economic downturn, has presented a massive newchallenge to smallholder farmers, as well as to the urban poor and landless around the world. According to the World Bank, average food prices rose 83% between February 2005 and February 2008'.

Food quality

From a market perspective, Fairtrade has stimulated the improvement of food quality as demands for higher standards in the international market have continued to increase. In particular, with the strong focus on environmental sustainability, Fairtrade production involves increased investment in high-quality inputs and ultimately better quality outputs. Additionally, growth in the Fairtrade market has contributed to making fair production systems more profitable and attractive for farmers. Farmers are now more likely to invest in improving the quality of their product, in order to differentiate themselves in the export-oriented marketplace.

The long-term relationshipsthat develop between buyers and producers in the Fairtrade value chain also provide producers with enhanced access to knowledge about export

quality requirements as well as the incentives to improve productquality. Several buyers, such as Traidcraft and Twin Trading from the UK, have been working with producer organisations across Africa. For example, Twin Trading provides quality support to producers in a number of different ways, including feedback on quality for export, in-country and UK-based training on capacity building, improving quality control systems and procedures, and recommendations for good agronomic practice at the farmlevel. In DR Congo TwinTrading, with support from other private actors, is planning to work with producers to install a professional cupping lab, to improve coffee quality.

It should be noted, however, that for producers operating in particularly marginal or remote areas—with limited access to technical support, labour, modernised farming techniques and inputs—securing entry into a Fairtrade value chain may pose a considerable challenge. The stringent quality and hygiene specifications, demanded by international Fairtrade buyers in consuming countries in the North, require significant investment, training and targeted technical support.

Infrastructure and governance

With the Fairtrade premium, producers have been able to invest not only in their business infrastructure but also in their community (though construction of roads, schools, etc.). In terms of institutional infrastructure and the creation of a conducive environment for trade, Fairtrade contributes to the development of local, and in some cases national markets, by promoting the position of producers: 'Some small-scale producer organisations increase their share of export, prices follow an upward trend on the national market, the quality of support services improves' (Laroche and Guittard 2009: 18).

Fairtrade supports the development and strengthening of producer groups' organisational capacity, which in turn contributes to improved governance and transparency. This is achieved both directly through the requirements of Fairtrade standards and premium investments, and indirectly through training and networking. The support and capacity building provided by Fairtradeas well as the contributions of its partner organisations and buyersalso play a part. For example, in order to participate in the Fairtrade network, Kasinthula Cane Growers in Malawi, put a functioning democratic structure in place (Committees, General Assemblies and the start of a Workers Union). Smallholder banana producer organisations in Ecuador, the Dominican Republic and the Windward Islands now have more democratic decision-making processes and enhanced communication and transparency, at both local producer group and umbrella organisation levels (Smith 2010). In the case of smallholder raisin producers in South Africa, the Fairtrade standards' organisational requirements have strengthened the group's abilities to operate as a professional, cohesive and competitive entity. Income from Fairtrade has been invested in improving the organisational infrastructure, including a permanent office and storage sheds.

Through producer networks, Fairtrade is providing a platform for producers to advocate their case and lobby their respective governments. Even though this is an initiative in its early phase, the goal is to ensure that by participating in the Fairtradevalue chain, producers can better influence governance processes at the local, regional and international levels.

Producer and consumer prices

Fairtrade is based on close relationship between producers and consumers. While producers participate in the process of setting the Fairtrade minimum price level, consumers and Fairtrade buyers choose to support the system by paying this premium price in final retail.An example from the general market for coffee serves to illustrate this point. As noted by Giovannucci and Koekoek (2003) (in Nelson and Pound 2009), the 'coffee commodity market is driven exclusively by economic factors and, like all commodity markets, does not recognise, much less internalise into its prices, the very real environmental and social costs of production'. Fairtrade is a response to this set-up of the marketplace.It seeks to ensure that producers in developing countries are able to 'trade themselves out of poverty' by receiving fair and stable producer prices for their products.

The Fairtrade guaranteed minimum price is particularly important when market prices fall below production costs. With the safety net of a fixed fair price, farmers do not have to migrate to seek alternative employment or use up valuable savings and assets during periods of hardship.For example, in West Africa, the Fairtrade minimum prices for cotton seed have been significantly higher than state prices for conventional cotton (27–49% higher for conventional cotton and up to 76% higher for organic cotton). Fairtrade cotton producers have received significantly higher prices than producers in the region that are not certified (Nelson and Smith 2011).

Arnould et al. (2006: 21)conclude that 'participation in Fairtrade is like a life jacket, a shock absorber, or a buffer against the effects of the volatility global market capitalism exert on the poor in developing countries...but...Fairtrade alone is not *the* solution to the problems of the rural poor'. Fairtrade must continue to evolve and adapt to the new realities on the ground. While the minimum price is an iconic component of the system and will continue to play a crucial role for many commodities, how it could best serve different products, different regionsand different farmers should be explored further.

Some studies have shown that non-Fairtrade farmers are also benefitting from the increased prices as a result of the competition for the produce induced by Fairtrade (see Jaffee 2007). This is an example of a 'multiplier effect', increased producer prices

for non-Fairtrade farmers in the same region, due to increased demand and investment. The effect is overall improved income from agriculture in the broader region.

Innovation and sustainability

The increased income from Fairtrade means that producer organisations have more funds to save and invest in the long-term sustainability of their businesses. This financial security also increases the likelihood that they will takerisks and invest in innovative technologies and alternative means of production. These initial steps can lead to a cycle of innovation. Access to new and more lucrative marketing channels provides additional revenue streams, which in turn lead to more investment and innovation. For example, in 2009, the Gikanda Farmers Cooperative Society in Kenya invested USD 4,000 from their Fairtrade premium in constructing modern,metallic coffee drying beds, which reduce drying time and ensure even exposure. Fairtrade encourages this type of investment through the development of targeted business plans and provides support through liaison officers and producer networks when needed.

Fairtrade also encourages environmentally sustainable farming practices, which in turn support the productivity of theland in the long term. Many farmers investin intercropping, planting of shade trees, reducing pesticide use and switching to organic production techniques. For example, banana farmers in the Windward Islands have been required by Fairtrade standards to reduce their chemical usage. This change has led to improvements in their families' health, confirmed by the annual health checks that indicated a marked decline in the levels of pesticides in their bodies (Smith 2010).

Abbreviations

FLO	Fairtrade International
FTA	Fairtrade Africa
CLAC	Coordinator of Fairtrade Latin America and the Caribbean
NAP	Network of Asian Producers

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3.9 Moving up in the export-oriented coffee value chain in Tanzania

Anna H. Makundi

Introduction

How an export commodity influences local food security

Although this case describes the export-oriented coffee value chain and as such is different from most of the other cases, which address local and regional markets, it does show that an export-oriented commodity can have an influence on local food security. This case study investigates to which extent the coffee value chain has had an impact on food security and household incomes of the people in Kilimanjaro region who are supported by TechnoServe Tanzania.

First introduced in Tanzania by German missionaries at the end of the 19th century, coffee has become one of the country's most important export crops. In 2010, a total of 35 tons of green coffee were exported, valued at USD 102 million (FAOSTAT 2010). Coffee is primarily grown in the Kilimanjaro region in the north, in Mbeya and Songea in the south; and near Lake Victoria in the north-west. According to the Tanzanian Coffee Board (TCB) more than 95% of the coffee produced in the country is grown by around 400,000 smallholder farmers (USAID 2010). There are two major coffee sorts, Arabica and Robusta. Arabica grows well in the highlands of Kilimanjaro, Mbeya and Mbinga, while Robusta does well in the lowlands of Kigoma.

Arabica coffee is a high quality sort that fetches a solid export price. Robusta is processed locally and marketed nationally at a relatively at low price (Mhando and Mbeyale 2010).

The Kilimanjaro region is one of the more heavily populated areas in Tanzania. In the Kilimanjaro highlands, coffee is a major cash crop. Usually, the crop is grown in home gardens where one finds a mix of various food commodities, such as yams, aerial roots, banana, vegetables, fruits (avocados, orange, and guava), shed trees (source of firewood, fodders and timber), maize, beans and others. Also animal keeping is widespread (goats, sheep, cow, chicken, rabbit and pigs), as a much-needed source of cash income, and less frequently as a source of protein for the local diet. Nevertheless, coffee is the most important crop, and the well-being of the local population is heavily dependent on the availability of land for its cultivation, on production volumes and the market producer price. In 2001, with the help of TechnoServe, local coffee smallholders formed the Association of Kilimanjaro Specialty Coffee Growers (KILICAFE). This farmer-owned company provides its members with assistance in the production, handling, financing, marketing and other necessary phases in the cultivation of quality coffee. The association has been growing continuously, reaching 9,000 smallholders by 2006 (TechnoServe 2006).

The main stakeholders in the coffee value chain

Of the 400,000 smallholder coffee farmers in Tanzania, around 250,000 reside in the Kilimanjaro region. After the fall of the international coffee price in 2000, many farmers abandoned their coffee farms and focused instead on food crops, animals and off-farm activities. The recovery of coffee prices precipitated their return to this trade; however, many of the farmers in the area are quite old. Only few youths are interested in coffee farming, preferring activities like mining, tourism and business instead. Smallholder production is plagued by several problems, poor processing practices, old average age of trees, low yields and others. The Kilimanjaro region has the oldest coffee trees in Tanzania (average age for some areas is even twice the age of trees in the southern growing regions). The results are lower yields per hectare compared to other regions and performance far below actual potential (USAID 2010).

Another actor are the suppliers of agro-inputs. Certified private and public suppliers offer the necessary agro-inputs, such as fertilisers, coffee seedlings and pesticides. The suppliers have contracts with the coffee cooperatives and deliver inputs on demand. Their prices are moderate, although some coffee farmers cannot afford even these moderate, necessary expenditures, which can have severe negative consequences on their production volumes and income.

In Tanzania, many smallholders are organised in associations of coffee growers, like KILICAFE, which help provide valuable assistance in production and marketing.

KILICAFE supports coffee growers in three ways: improving and promoting quality coffee; assuring access to finance, and linking farmers to premium coffee markets. The Tanzania Coffee Association (TCA) is an umbrella organisation, which was established in 1995. TCA's key activities include: promotion of measures that increase productivity (i.e. through appropriate technology, use of disease resistant varieties, application of organic fertilisers etc.); promotion of ecological wet processing of coffee; enhancing the commercialisation strategy of Tanzania's coffee industry in specialty markets; promotion of local markets; policy advocacy in coffee regulation and licensing, and others.

Coffee cooperatives buy about 60% of smallholder productions, and also link farmers with input suppliers, transporters, and financial institutions. On behalf of their farmers, cooperatives sign contracts with input suppliers. They pay transporters for collecting and transporting the coffee from the small processing centres to the curing company. The cooperatives check that only quality coffee is collected. They have training programmes in place to assists farmers in the processing of quality coffee. When the government subsidises inputs, it uses the cooperative structure to reach farmers.

The other portion of the smallholders' crop (40%) is being handled by private buyers. Due to competition among private traders, and the limited volume of coffee available during harvest time, private buyers tend to offer higher prices than cooperatives (usually cash payment at farm gate). However, the benefit of this higher price is offset by the drawbacks of dealing with traders—most of them do not supply inputs or provide loans as part of the business relationship.

Next, the coffee reaches the intermediary processors, who remove the outer hard cover of the coffee bean and pack the coffee into containers for export. Through the coffee auction, they sell the lower quality coffee to national buyers. The Coffee Curing Company, located in Moshi, is the main processor in the Northern Zone.

After purchasing the beans, roasters prepare the coffee in its final form for retail. In addition to roasting the beans, also grinding, instant coffee and other final processing is sometimes done by these companies. Most of Tanzania's coffee is roasted outside the country: by Peet's Coffee and Tea, Starbucks Coffee Company, and Dallis Bros. Coffee in the USA; by List & Beisler GMBH in Germany; and by Volcafe Ltd. in Japan.

Stakeholders who support the coffee value chain

Transporters move inputs from suppliers to farmers as well as coffee beans from farmers to the cooperatives, next to the coffee curing company and finally to the ports where the coffee is exported. Due to increased economic activities and improved infrastructure, the number of transporters is increasing in the country. Financial institutions, like the

National Microfinance Bank (NMB) and Savings and Credit Cooperatives (SACCOs), provide the necessary loans. Regulatory authorities (central and regional government agencies, extension services, local government and others) develop the laws, measures and regulations for coffee. They are also the main bodies in charge of ensuring adequate implementation of coffee-related legislation and regulation. The Tanzania Coffee Board (TCB) is a group of coffee specialists involved in policy development and price monitoring. In the past the marketing of coffee was controlled by the state, but today the price is formed on the open market. The TCB monitors that the coffee farmers are not being exploited, and sets annual minimum prices. Usually the cooperatives follow this price level, with private buyers paying a slightly higher price. For the 2007/08 season, producer prices were between 2.3 and 3 USD per kilogram, while for the 2009/10 season they were slightly higher (between 2.4 and 3.5 USD per kilogram). The TCB also plays an important role in ensuring that coffee standards are respected in national and international sales.

TechnoServe's contribution

TechnoServe plays a big role in supporting the Arabica coffee value chain in the Kilimanjaro region. Since 1968, TechnoServe has been working to address the challenge of development with a different, business-oriented philosophy. It focuses on helping people out of poverty and towards securing sustainable livelihood by connecting them to valuable information and market opportunities. The organisation has remained true to this vision and has continued to develop throughout the past four decades. In 2011, it was active in 29 countries worldwide, with half a million beneficiary households reached (TechnoServe 2011).

In Kilimanjaro, TechnoServe supports the coffee value chain in several ways. It provides business advisory activities, for example, trainings on quality coffee production techniques (including planting, management, processing and marketing). It engages in policy advocacy and lobbying. For example, TechnoServe advocates for policy changes, such as a reduction in coffee taxes and levies, by working closely with the TCB. Their effort is geared towards elevating the position of smallholders within the policy arena, and safeguarding smallholder interests (especially in the fight for fair producer prices). To assist the marketing efforts of the coffee growers associations, TechnoServe also collects and disseminates market information. With this insight into market conditions, smallholders can take informed decisions when and to whom they choose to sell their coffee (e.g. to private buyers or to cooperatives). The organisation also helps improve smallholder access to loans, by connecting farmers groups to financial institutions (banks and SACCOs). The ability to offer a superior product of proven quality is paramount for securing a strong position and good prices on the marketplace. Demonstration plots are used to inform smallholders on the latest agronomic practises and to attract more farmers to coffee cultivation. To improve quality, TechnoServe has

established communal coffee processing centres and organised trainings for farmers on methods for improving coffee processing.

Impact of the intervention

Pro-poor development

TechnoServe's support to coffee production, has improved the position of smallholder coffee farmers through various actions. Central to the approach is the organisation of farmers in farmers groups, which are coordinated under umbrella associations like KILICAFE. Being organised greatly improves the smallholders' ability to access grants and loans, secure inputs and quality seeds, and establish connections to relevant stakeholders. The trainings and demonstration plots have introduced new, more productive agricultural practices. Through its lobby and networking efforts, TechnoServe has managed to bring all key national coffee stakeholders on the same table. It has created a space for open discussion regarding the innovative ways to improve coffee production and increase the smallholder's share of the profits. The enhancement of the entrepreneurial capacity and the business skills of participating small-scale farmers is central to the approach. The results speak for themselves. In 2003, KILICAFE became the first association of coffee growers from Tanzania to directly export to a roaster abroad, at a handsome premium[15] for its members. It went on to sign contracts with other international buyers (like Starbucks), with direct export sales in excess of USD 500,000 (TechnoServe 2006).

> Our lives have changed so much... The biggest difference, though, is the confidence we have in our future and in our children's future. God blessed us with the soil and climate to produce quality coffee. TechnoServe has shown us how to protect and deliver that quality to a market that pays good prices for it. We know the road we're on and where it leads.
>
> *Cecilia Kapinga (coffee farmer)*

Gender

Coffee production involves both men and women, although in different roles. Men are mainly engaged in pruning, pesticide application, processing and marketing. Women do the berry picking, processing and weeding. The most fertile plots of land (*kihamba*) are handed down as inheritance to the male heirs of the family. The Kilimanjaro region is one of the most heavily populated areas in Tanzania where the kihamba system of land inheritance dominates, whereby the men of the family formally provide the women of the family with land to farm. The unequal distribution of arable and fertile land has deprived many of a source of livelihood and resulted in selective poverty (in particular of the middle sons and daughters) (Howard and Millard 1997). In the past, the money

15 Price premium is an extra percentage of the benchmark price, placed on top of the product's benchmark price. Often, it is also the extra price people are willing to pay for the specific perceived characteristics of the product (e.g., brand, quality, environmental impact etc.).

received from the coffee harvest was handled by men, but this is not the case today. Through group loans, women have gained some control over the proceeds from coffee and other socio-economic activities, such as dairy goat keeping and small businesses.

Food security

Compared to the income from food crops (e.g. maize), the revenues from coffee are more substantial and provide the main livelihood sources for many families. The income obtained from coffee selling is used for education, housing, clothing, and medical expenses. It is also the main source of financial means for purchasing food stuffs, such as meat, fish, cooking oil and sugar. According to a TechnoServe report (2006), participating coffee farmers have higher incomes compared to other farmers in the same regions. Farmers also cultivate a number of food crops for household consumption (e.g., bananas, yams, vegetables, maize and beans). Livestock rearing (e.g., cattle, goats, chickens, rabbits and guinea pigs) is another source of income and proteins. The farmers also learned how to do intercropping, the joint planting of cash crops and food crops, which helps improve their food security and household income.

Coffee quality

As this case is not about a food commodity but deals with an export-oriented product instead, this section will share a few words on the quality improvement measures. In order to improve coffee quality, TechnoServe[16] established communal coffee processing centres and organised trainings for farmers on how to improve processing, and thereby obtain a better price for a superior product. Through demonstration plots, farmers became acquainted with new agronomic practices, which provided higher yields and better quality coffee. Thanks to these activities, most coffee is currently meeting a good quality standard and fewer bags are being rejected by buyers. The extra funds smallholders receive for this quality coffee should contribute to increased household incomes and better nourishment.

Infrastructure and governance

In 2001, TechnoServe helped generate momentum for the founding of the Association of Kilimanjaro Specialty Coffee Growers (KILICAFE). The establishment and support of associations of coffee growers is central to the empowerment of smallholders. Associations also disseminate price information, search for the best marketing opportunities, and link farmers to the main stakeholder in the coffee value chain. KILICAFE was founded by 11 farmer organisations, called Investment Groups, which were already helping individual smallholders to organise. By 2006, KILICAFE had already grown to include 93 groups, with individual memberships surpassing 9,000 smallholder farmers.

16 Higher Coffee Incomes Transform Lives in Tanzania: Techno Serve works with coffee farmers to produce higher-quality beans for the premium coffee market: http://www.technoserve.org/work-impact/success-stories

TechnoServe has also established community processing centres that help poor farmers who cannot afford their own processing facilities.

Working closely with the government and other key regulatory stakeholders, TechnoServe has been lobbying for reform and streamlining of coffee policy. One of its studies (the Coffee Taxation & Benchmarking Initiative) focused on Tanzania's coffee taxation polices. It proposed a course of action for rationalising and harmonising taxes and levies (which can have a strong impact on rural productivity) As a result of these efforts, taxes in the Tanzania's coffee sector were reduced from 21% to 14–16% (TechnoServe 2006; World Bank 2007).

Producer and consumer prices

Coffee prices are vital for providing food security and livelihoods in the Kilimanjaro region. TechnoServe's intervention, particularly the promotion of entrepreneurial actions and the quality improvement measures, resulted in new marketing channels. For example, by upgrading coffee bean quality from a Class 9 to a Class 5, combined with the improved marketing, the KILICAFE-affiliated producer organisations enjoyed a 70% price premium. Another example is the much publicised success of the first direct grower-to-roaster transaction. Five grower groups (representing a total of 645 smallholders), with the help of KILICAFE, sold 10,000 kg of washed Arabica beans to Peet's Coffee and Tea, a specialty roaster from the US. The transaction earned a 150% premium for the participating smallholders (TechnoServe 2006).

Innovation and sustainability

The reintroduction of coffee production has allowed coffee farmers to adopt new business skills, agronomic techniques and processing technologies. Through demonstration plots farmers could become acquainted with new agronomic practices, which improved the quality and the yields of their coffee. Today the quality of the beans from the participation associations is quite good, and very few bags are rejected by buyers. The demonstration plots provide the opportunity to showcase the new techniques for coffee production. Farmers have also experimented with new livelihood sources (small fish ponds) and new technologies, such as maize hulling machines.

Lessons learned

Several main challenges remain in the cultivation of coffee in northern Tanzania: low productivity, shortage of land, poor coffee quality due to suboptimal post-harvest practices, ineffective extension services, dwindling farmer numbers due to new employment opportunities (e.g. tourism, transport and business). TechnoServe's experience in

Tanzania provides a few useful lessons for addressing some of these trends. A multi-pronged approach works best for providing livelihoods, and should be tailor made for the local context (i.e. mostly cash crop production, mostly food crop production or mixed farming systems). For instance food crop specialisation can improve food security and household livelihoods. Domestic markets can be a good outlet for smallholder output; however, for certain crops (like coffee) international markets will remain crucial. There is a marked absence of integrative policies in the coffee sector. These policy tools are essential for providing effective support for the growth of the sector and the production of quality coffee.

Abbreviations

TCB	Tanzania Coffee Board
TCA	Tanzania Coffee Association
KILICAFE	Association of Kilimanjaro Specialty Coffee Growers Association of Kilimanjaro Specialty Coffee Growers
NMB	National Microfinance Bank
SACCOs	Savings and Credit Cooperatives

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3.10 The campaign for fair cotton prices in Zimbabwe

Joel Musarurwa, Tsitsi Choruma, and Kirsten Hjørnholm Sørensen

Introduction

Inclusive smallholder cotton value chains

This case deals with a non-food crop, and thus differs from most other case that deal with food commodities for local and regional markets. Markets intended are, at first instance, local, regional or national and not export oriented. Cotton in Zimbabwe is mainly grown on 1-2 ha smallholder lots. Value addition at farmers' level is one of the central strategies for promoting pro-poor development. And, it is assumed that higher cotton prices will improve access to food.

The cotton industry has for a long time been an important sector for securing livelihoods and for Zimbabwe's foreign currency earnings. After tobacco, cotton is the country's main agricultural export commodity. In 2011, cotton lint production stood at 90 million tons, with an estimated value of USD 129 million (FAOSTAT 2011). Zimbabwe is known for its high quality cotton, with very strong yields for the geographic and climate conditions in the region. It is a very important but troubled sector. With the liberalisation initiated in 1994, and the accompanied land redistribution, production shifted from large-scale producers towards smallholders. This was initially a smooth transition, dominated

by two large purchasing companies, the formerly state-owned Cotton Company of Zimbabwe (COTTCO) and Cargill.

The political and economic instability in Zimbabwe before the emergence of a Government of National Unity in February 2009 was severe. Between 1998 and 2007 the economy shrunk by almost half (44%) (FAO/WFP2008). In 2001, with the start of the economic crisis, many smaller companies flocked to the cotton sector in search of export-oriented, hardcurrency profits. The increased competition and demand had a negative effect on seed and lint quality, and credit provision (due to side-selling of seed cotton). There was an increase in cotton prices, but smallholders did not profit much from it (Poulton and Hanyani-Mlambo 2009).

The Smallholder Cotton Value Chain Development project seeks to elevate smallholder producers from a vulnerable, buyer-dependent position and support them through a chain empowerment process. A baseline studyexamined the existing conditions in cotton production, ginning and marketing. Also a feasibility study was carried out, looking at the potential for establishing a small-scale cotton ginning project and a warehouse receipting system. The project was to be realised through a partnership between ActionAid International Zimbabwe (AAIZ) and the Farmers' Association of Community Self Help Investment Groups (FACHIG), in the Mount Darwin, Rushinga, Muzarabani and Guruve districts in the country. Farmers were organised in investment groups (IGs) so that they could explore various income generation opportunities together. Also, training in improved agricultural practices and entrepreneurships was provided; a warehouse receipt system was to be put in place; a pilot ginnery was to be established; and special actions focused on those most vulnerable (women and the youth) (ActionAid).

The cotton value chain

Almost the entire cotton crop in Zimbabwe (99%) is grown on 1-2 ha smallholder lots. The total land area dedicated to planting cotton for the 2010/11 and 2011/12 seasons was 380,000 ha and 450,000 ha respectively. However, it is projected that in the 2012/2013 season the total planted area will contract severely (as much as 150,000 ha), due to restrictive government policies) (USDA Foreign Agricultural Service 2012). Cotton is a major source of income for approximately 200,000 small-scale farmers, who produce cotton under rather restrictive contracts from large merchants,such as COTTCO, Cargill, OLAM, Grafax and many others. The remaining one percent is grown by large scale farmers. According to data provided by the two main ginning companies, average yields of smallholders are reported between 700 and 800 kilograms (SNV 2009). Some individual farmers may enjoy substantially larger yields, depending on agricultural practices, inputs and local weather conditions. Most smallholder farmers

are located in semi-arid parts of Zimbabwe with poor quality infrastructure, limited access to telecommunication services, banking facilities, agricultural support services, information and markets. Persistent droughts make it impossible to grow many of the staple food crops in these areas, highlighting the importance of cotton, which is very drought tolerant and provides the main source of income for food consumption.

Next to smallholder cotton farmers, other major stakeholders in the value chain are the cotton merchants, the government, the Federal Cotton Producers Association (FCPA), input companies, farmers unions (Zimbabwe Farmers Union, Zimbabwe Commercial Farmers Union), and merchant shareholders. The cotton merchantsconsist of fourteen registered cotton-buying companies. COTTCO is the largest, with almost half of all ginning capacity and nine ginneries spread across all the main cotton producing regions. Cargill is the second largest company, with three ginneries and 17% of total capacity. Also other smaller ginneries have mushroomed across Zimbabwe in the past 2 to 4 years. This diversification of processing capacity may be a sign that cotton ginning is becoming a viable business, thus offering new possibilities for small-scale cotton producers.

After ginning, the lint is sold to local spinners and weavers. Thirty percent is marketed locally and 70% is exported. While it is possible for farmers to rent ginning equipment, the companies offering these services are the buyers themselves, and they seek to minimise competition. Recently, with support of government legislation (Statutory instrument 142 of 2009), the big cotton companies have formed an umbrella organisation, the Cotton Ginners Association (CGA), which is lobbying for the promotion of their interests.

Due to limited resources and the absence of an open market for inputs, most smallholders are forced to grow cotton under disadvantageous contracts with large companies, which also serve as input providers. Farmers unions and associations should protect the interests and aspirations of farmers, and some—like FACHIG—have been successful. However, many unions have failedto negotiate viable producer prices, and some seem to have even sided with buyer companies during negotiations, instead of promoting the position of their members.The government provides the regulatory framework for cotton production and marketing through the Agricultural Marketing Authority (AMA). The authority was re-established in 2009, after a decade of neglect, with the mandate to help smallholder cotton farmers market their produce. However, it has not been very successful, and political interference is common.

As a result of the economic crisis and the political turmoil from 2001 onwards—compounded by the effects of the 2008 global slowdown—more than 60% of garment manufacturers had to close, and most textile manufacturers scaled down their operations. In addition, foreign currency shortages led to problems of sourcing production

inputs, machinery maintenance on the processing side, and problems of sourcing additional fabric for the garment manufacturing sector. The result is that increasingly raw cotton (about 70% of all lint) is exported before processing. The breakdown of the cotton ginning output is 51% lint, 48% seeds and 1% waste. Buyers process the cotton crop by separating the lint (which is exported) from the seed. Seed is processed into cooking oil with the cake turned into livestock feed. Farmers are only paid for the lint. They do not benefit from the processing of seeds and waste which, as already said, places them at the bottom end of the value chain.

The project's main activities

> We thought that we should reach out to farmers in other provinces in the country... and in a week we had registered 20,000 smallholder farmers countrywide.
>
> *Easter Kambira (Chairperson, FACHIG Board of Trustees)*

Value addition at farmers' level was one of the central strategies for promoting pro-poor development. It entails activities aimed at reducing farming costs, training in improved agricultural practices (especially quality crop) and promotion of cotton as a commercial business venture and market access. The project supports farmer access to cotton varieties that are more conducive to the local weather conditions. The project further intends to introduce a pilot ginnery in Guruve District. Eventually, the farmers will be able to secure full ownership of the ginnery through subscriptions and contributions. Such ginneries will help farmers secure additional benefits from value added processing of cotton lint and their directinvolvement in the further processing, like yarning, fabric and garment making. They can also market the by-products, such as seed, cotton oil, oilcakes, soap, etc. In areas that lack such ginning facilities, the project intends to establish a warehouse receipt system, which permits farmers to store their crop during the lean period and wait for a more favourable market price—while still having income to feed their families. To minimise transport costs such warehouses will be built closer to the farmers. Private investors will finance the system initially (through a 'build, operate and transfer' scheme), with the farmers later assuming full ownership. Farmers will be encouraged to join the FCPA, a national level cotton based commodity association, in order to better access training and advocacy activities.

A Gender Action Learning System (GALS) ensures gender balanced development and empowerment. Women smallholder farmers are a particularly important target group, as it is that they will constitute at least 60% of participating members by the end of the project. Unemployed youth are another special focus group, in order to reduce rural outmigration to the cities. The organisations presently involved in the project's activities include AAIZ, the FCPA, FACHIG, the Lower Guruve Development Association (LGDA), and the Zimbabwe Coalition on Debt and Development (ZIMCCOD).

Impact of the intervention

Pro-poor

The cotton sector in Zimbabwe is central to the country's efforts to reduce poverty in rural areas. However, an interlocked market, where buyers through contract farming control both input and output prices, keeps Zimbabwean cotton farmers in poverty. The answer was a consolidated, multipronged approach: facilitating collective action by cotton farmers from all over the country (through the investment groups and FACHIG), supporting the development of sustainable agricultural and business practices through capacity building efforts and the pilot warehouse, addressing gender inequalities, and other initiatives. With these combined efforts, smallholders have been able to almost double the price for their cotton from the 2009-2010 season. The introduction of the pilot ginnery is particularly interesting, because it seeks to move farmers up the value chain towards becoming processors in their own right.

> We are making losses. The exploitation is just too much. They [the government] should advise us whether to plant cotton or not, based on indications from international buyers. My children are suffering. I force them to wake up every morning, work the whole day in the fields, sweating and working on empty stomachs. At the end of season, I have nothing to give them to compensate for their sweat.
>
> *Mr. Lameck Mahlayeya (Chairperson, Manicaland Cotton Growers Association)*

Gender

Approximately 60% of smallholder cotton farmers are women, who usually perform traditionally assigned roles. Women and youth produce and harvest the crop, but when it comes to marketing, men are the main actors. Hence, men are in control of the income received from cotton production. Through the Gender Action Learning System (GALS) the project raises the awareness among the participating communities about these problems. Also through trainings and support actions, it seeks to empower women farmers to enhance their position in the value chain. Initially, when the farmers formed FACHIG, they recognised the need to secure a fair representation of women cotton farmers in the association. The results are evident in the numbers. In order to overcome the weak position of women smallholders, the project explicitly focused on enhancing their capacity (in the trainings women outnumber men two to one). Also in the IGs the women members dominate—nationwide FACHIG has 7,635 women and 3,088 male members.

Food security

The impact of the value chain initiative is aimed at improving the yields of small scale cotton producers and enhancing their bargaining power on the national marketplace (through warehouse receipt schemes and farmers organisations). The ultimate goal is to produce more cotton per hectare and to sell it at fair prices. Improving incomes from the

main cash commodity has a significant positive effect on food security and helps reduce poverty at household level. It has been reported that food is moving fromother districts (Mazoe) for sale in the cotton producing districts (Mbire, Muzarabani), which may be an indicator of increasing food security in these districts. Organisation of farmers is one of the key focus points, but the other activities—like the enhancing agricultural practises and business trainings—are naturally interconnected. The bottom line of higher producer prices is more money in the producers' pockets, more food on their tables, and children who are receiving education. More about the farmers efforts on price negotiating can be found below in the section on prices.

Photo: Joel Musarurwa

A family in Mbire District, Mashonaland Central, Zimbabwe sits on harvested cotton before bailing for sale.

Infrastructure and governance

There was a great need for fresh leadership and organisational capacity in the cotton sector. Across the country, smallholder farmers were not happy with the support given by their industry organisations. It was felt that the two main farmer unions—the ZFU and the Zimbabwe Commercial Farmers' Union (ZCFU)—were not defending farmers interests adequately. In 2010 a new body, the Federal Cotton Producers Association, was subsequently formed. By connecting and participating in the initiatives like the AAIZ and FACHIG project, the FCPA could quickly establish itself as the much-needed defender of smallholder interests. The success of FCPA clearly shows how important effective collective organisation is. FCPA convinced farmers not to sell their cotton in the 2009/10 season at below-cost prices, and provided them with information and proposed access to warehouse receipts. Ultimately the farmers could secure a much fairer price than without collective representation. The FCPA's bargaining efforts resulted further into two of the FCPA leaders being called to sit in the Agricultural Marketing Authority board, which deals with all agricultural marketing issues. The FCPA has been registered as a 'Trust', in order to keep assisting farmers, until its registration for 'Association Status' is processed.

Producer and consumer prices

Prices of input and the selling price of cotton are central to the smallholders' struggle to secure livelihoods. Poor communication systems and strong monopolistic tendencies in the industry make the situation even more complicated. The political chaos and economic meltdown in Zimbabwe has reinforced the buyers' control over input. The cotton

market is far from free. It is clear that strong organisations that can promote farmers interests, such as the FCPA,are needed to negotiate prices and make farmers aware of international prices (communicated through the Liverpool Cotton Price Index).

It took some effort for the farmers to obtain a fair price for the 2009/10 season. The initially announced price was 0.30 USD per kilogram. Thanks to the capacity building they received (which included trainings on costing and price calculation), farmers had already calculated the breakeven price to be 0.45 USD per kilogram. They decided to wait and not to sell their cotton at a loss. The farmers in Mount Darwin District stored their cotton at home , while they waited for cotton merchants to review the prices. In other parts of the country the FCPA and other community based organisations agreed that farmers should hold on to their cotton cropuntil prices became reasonable. In Mount Darwin, 750 cotton farmers (500 women and 250 men) sold crop for 0.50 USD per kilogram or higher. On the country level, about 8,000 farmers (out of 20,000 nationally) sold their crops for 0.50 USD per kilogram or higher (ActionAid).

Innovation and sustainability

The proposed establishment of warehouses can be seen as an innovation, as this concept is new in Zimbabwe. It allows farmers to bulk their crops, which enhances their negotiating power because they can offer larger quantities to a single buyer. The attention paid to gender-specific challenges and opportunities introduced a new approach to promoting equitable gender relations within the community and the household. Another innovation, this time in agricultural production inputs, is the new varieties of cotton seed from research stations that allowed smallholders to increase production per hectare. In terms of sustainability, the project has strong local ownership and is farmer-driven. The farmers themselves also execute the leadership positions at the Federal Cotton Producers Association. Previous projectshave demonstrated that strong farmer organisation is essential for farmers as producers and consumers to claim their rightful positions in the value chain. Furthermore, partnership with the private sector will ensure increased benefits for smallholder farmers along the value chain.

Achievements

Farmers realized that involvement in the value chain, through an association like the FCPA, can make a difference. FCPA's bargaining efforts resulted into two of the FCPA leaders being called to sit in the Agricultural Marketing Authority board which is mandated to deal with all agricultural marketing issues. This means that any issues discussed at the board will help in providing important support to farmers' problems at the association level. Further, the FCPA was able to be registered as a Trust which helped farmers to be represented while waiting for the normal registration of the Association. Farmers being represented brings them in a position to receive advice which will now help

them in moving the proposed project forward.The achievement of organised farmers getting a fairer price for their cotton is promising.

Persistent challenges

There are still some considerable long-term challenges to effective participation of smallholder cotton farmers in local and regional markets. One factor concerns the constraints with regard to the contracts with well-established, large companies (which often also enjoy high-level political connections that help their cause). At the macrolevel, the threats include international price fluctuations, the unpredictable exchange rate, and oversupply by the largest world producers of cotton (China, India and the USA).A more tangible/visible example is the sale of second hand clothes which is also undermining the viability of a local textile industry.

Governance related challenges lie in possible interference by politicians and elites, for example, in FCPA membership selection and decision-making processes. Possible political violence during election periods might affect participation of small-scale farmers in meetings organised by their commodity associations. Policy and legislative risks include the unpredictable changes in regulations on cotton marketing and the delayed registration of the FCPA. Selective application of cotton policies, in favour of large processing companiesleave smallholders in the cold. Looking at gender relations, unequal access and control over land and incomefor women is likely to remain a persistent challenge. At project level, issues that need to be addressed include access to funding and the reliance on external technical skills for designing and implementing some project activities.

Abbreviations

AAIZ	ActionAid International Zimbabwe
AMA	Agricultural Marketing Authority
CGA	Cotton Ginners Association
COTTCO	Cotton Company of Zimbabwe
FACHIG	Farmers' Association of Community Self Help Investment Groups
FCPA	Federal Cotton Producers Association
GALS	Gender Action Learning System
IGs	Investment Groups
LGDA	Lower Guruve Development Association
USD	United States Dollar
ZCFU	Zimbabwe Commercial Farmers' Union
ZFU	Zimbabwe Farmers' Union
ZIMCCOD	Zimbabwe Coalition on Debt and Development

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Extracts of text taken from: FACHIG: Cotton Fair Price Campaign – press reports and comments (written by Thomas Mupetesi).

Photo: ©FAO/Olivier Asselin / FAO

4

Opportunities for development through regional food commodity chains

Fred Zaal, Jacqueline Sluijs and Roger Bymolt

Introduction

In this chapter we will reflect on the lessons derived from the case studies. As discussed in the first chapter, this book provides a practical approach to examining development through value chains by focusing on regional food commodity markets. Value chain research often focuses on high-value export markets of tropical products. We find that food commodity markets are different from these export markets and have different—but potentially very beneficial effects—on the incomes of the rural poor and smallholders in developing countries. Through the detailed review of several case studies in the previous chapter, we systematically examined these effects for a range of products and countries.

One of the main issues we examine in this book is: How agricultural value chains in developing regions can be designed in such a way that economic, social and environmental goals are reached. The focus on the often neglected local food commodity value chains leads to questions regarding the impact on poor smallholders.

This chapter will analyse the dimensions introduced in Chapter 1, based on the case study examples of regional market value chains, presented in Chapter 3. The chapter will end with a theoretical reflection on the governance model designed by Gereffi et al. (2005) and elaborated in Chapter 1, and with a brief set of recommendations.

Pro-poor development

The discussion on pro-poor economic development, and agricultural development in particular, is guided by an urgent question. To what degree do local markets offer opportunities for poor, small-scale producers to engage in marketing and improve their incomes? The answer depends on how inclusive present power and governance structures in those markets are. Vital concepts to bear in mind here are the importance of smallholder initiatives, the ethics of development interventions as employed by actors, and the degree to which empowerment forms the basis of market development.

It should be emphasised that shifting the focus to regional markets is in itself not an immediate solution to the challenge of redesigning value chains for pro-poor development. Taking into account that a pro-poor approach should focus first and foremost on those most vulnerable, all the surveyed projects seem to follow this reasoning. Most organisations have the organisation of farmers, producers and smallholders at the core of their strategies. In the concluding part of this section we will come back to this point, and position the cases in a framework according to their pro-poor strategies.

Promoting small-scale producers implies the strengthening of their economic power and enhancing their position—at the household and value chain level. The NGOMA case from Kenya has chosen the image of a 'beating drum' to emphasise the point of giving a voice to the vulnerable. We specifically chose the NGOMA case due to its success of in assisting the formation of about 1,000 autonomous farmers groups, cooperative societies and farmers federations (average membership is between 25 and 30 farmers, but larger farmers groups can have as many as 200 members). The estimated number of smallholders across these groups has surpassed 50,000 members. With average family size around seven persons, the estimated number of direct beneficiaries climbs to an impressive 350,000. This is notably more than the number of beneficiaries typically reached in a project with an export market focus.[17] It is very challenging to organise such a large number of farmers in a real chain (for example, through formal contracts). NGOMA has been able to overcome this hurdle by working at the level of networks of member organisations, with a focus on lobbying, rather than working on production support and contracting. It aims to help farmers' organisations improve

17 In most cases, the number of famers involved in production for export market–oriented projects is less than 2,000. With outgrower schemes, cooperatives and policy-based interventions in niche markets, a larger number of people can be reached, as many as 14,000–15,000 farmers (KIT/ Faida MaLi/ IIRR 2006).

their capacity and meet the requirements for sustainable participation in local market chains. These efforts include access to extension and veterinary services, storage facilities, market information (through enhanced mobile phone use), opportunities to improve road infrastructure and transport.

In an environment full of challenges—droughts, inadequate infrastructure and price volatility, to name a few—the beating of the drum was heard. NGOMA has positioned itself as a strong smallholder-focused social movement, placing the interests of small-scale dairy and maize farmers on the political agenda. It has applied a broad participatory approach to ensure a farmer-led agenda for its lobby and advocacy activities. In the process, NGOMA established district-based action groups and a national steering committee, which ensure genuine representation of farmer interests. It has further established links with similar lobby groups in other agricultural sectors to scale up and deepen its lobby and advocacy work. NGOMA sought to empower farmers by linking their representatives with primary duty bearers (namely officials from the Ministry of Agriculture and the Ministry of Livestock Development). As a result, the farmers could benefit from technical support and capacity building. The private sector was also involved, and the revival of two dairy cooperatives did secure higher producer prices.

Another case involving large numbers of relatively poor producers is the case of cotton production in Zimbabwe. Zimbabwean cotton farmers face serious obstacles, and the cotton sector has a central place in the poverty-reduction strategy in many rural areas in the country. For 200,000 small-scale farmers, usually cultivating small 1-2 acre fields, cotton is their main source of livelihood. The Smallholder Cotton Value Chain Development Pilot Project found a locked market with monopolistic buyers determining input and output prices. Through collective actions, farmers could correctly calculate their input and output prices and press for negotiations with key local actors. Their effort resulted in the doubling of cotton prices for the 2009–2010 season and the recognition of the farmers' plight by the Ministry of Agriculture. Interestingly, the same ministry also issued statutory instruments that restricted the farmers' power to challenge contractors. In 2010 a new Federal Cotton Producers Association (FCPA) was established by smallholder cotton producers who did not feel that they were represented. The new FCPA had 20,000 registered members within one week. The trigger was the action taken by two large farmers' unions to abandon their constituencies and side with ginners and merchants during the cotton pricing negotiations. Despite the successful price increases since the 2009–2010 season, the cotton market is still far from a situation of free and fair competition. Strong monopolistic tendencies in the cotton industry are keeping smallholders in a marginal position.

If the two cases above stress the impact of social movements within economic processes, the case of banana production in Zimbabwe underscores the potential for mobi-

lising rural communities: once economic opportunities become available, farmers join in large numbers. The smallholder-based banana value chain in Zimbabwe started with two associations and 300 banana farmers, expanding to 2,500 men and women members within two years. Even despite the negative reputation of producer associations, many farmers were eager to join. The impact was even larger if we consider the spill-over effects of farmers who did not join, but obtained information and knowledge and improved their farm without being linked to the associations. All in all, 7,000 smallholder households in the area adopted the new technologies that were introduced, even though they were not all official members of the farmers organisations. Both larger-scale farmers (with gross margins of over USD 1,800 per year) and small-scale farmers (too poor to purchase fertilisers, chemicals and the irrigation needed to achieve maximum yields) benefitted. The poorer smallholders in particular enjoyed a marked improvement in their livelihood, reaching a gross margin of USD 700 per year without irrigation and inputs (compared to USD 200 at the start of the project).

Many organisations adopt a combined approach to pro-poor development: direct support to farmers for procurement of inputs and reduction of transaction costs, combined with a bottom-up approach, focused on local organisation and social movements. RUDI in Tanzania for example follows a similar track, working with 14,000 smallholder rice-producing households and 550 small-scale maize producers. Traditional smallholders usually have 1–5 acre plots; small irrigation farmers own 1 hectare (2.5 acres), and large irrigation farmers may have as much as 5 hectares (12 acres). RUDI focuses on tackling two main challenges: the low prices offered to farmers and their weak negotiating position. As crop markets are mostly absent—villagers lack marketing skills and market information is not readily accessible, if available at all—RUDI promotes the organisation of farmers and provides training (harvest technologies, marketing skills, branding, and farm gross margin calculations) to help them secure better prices for their commodities. Furthermore, farmers established associations in their respective areas to pursue collective marketing. They also started a warehouse receipt system, allowing farmers to receive immediate payments for their crops, while the association stores the grains to take advantage of higher grain prices later in the season.

Another interesting conclusion came from cases that focused on more than one (export or niche) crop. This mixed crop cultivation can provide a diversified and more secure approach to pro-poor development for small-scale, risk-averse farmers. In the Kilimanjaro region of Tanzania, TechnoServe supported smallholder coffee growers, as coffee production for export was more profitable than maize.[18] When coffee prices fell on the world market, many farmers abandoned their coffee farms in favour of other

18 Even though export-oriented coffee production falls outside of the main theme of food commodities for local markets, this case does show that focusing on an export-oriented commodity can have a very positive influence on local food security for poor producers.

activities, such as food crop production, animal husbandry and small and medium-size enterprises. Once the coffee market recovered, farmers returned to coffee production. The poorer farmers mostly diversify to spread the risks, often at the cost of reduced productivity but profiting from a more stable business model. In Tanzania more than 90% of coffee output is produced by 400,000 smallholders. In the Kilimanjaro region there are an estimated 250,000 coffee growers. Similar to other projects covered in this publication, TechnoServe focuses on smallholder farmers with limited resources, and employs a group-based approach, who rely on more than one market to profit from opportunities in export markets, without losing the safety nets of the local food commodity market. Taking into account that pro-poor development is about securing economic power and increasing producer control over their crops, the coffee case shows the effective combination of organisation, innovation and quality improvements.

Sometimes, the very same crop can be both an important food as well as a cash crop, and in exceptional cases farmers can shift between cash and food production, without incurring large risks. Such a low-risk situation allows impoverished farmers to engage in commercial value chains without risking becoming too dependent on cash crop marketing structures and volatile prices. C:AVA aims to develop new cassava value chains and thus create new market opportunities. Cassava is an important food security crop and a staple crop for vulnerable groups. As was demonstrated, C:AVA explores the possibilities of producing High Quality Cassava Flour (HQCF) as a competitive alternative for wheat flour on the rural food market. Striking a balance between quality, price and the continuously changing market demand is challenging, but the project continues to offer both food security and cash cropping opportunities. C:AVA expects the number of smallholders benefiting from sun-dried HQCF to reach 1,000 by the end of 2015, with a potential for expansion to 7,500. Another 6,000 smallholders are estimated to benefit from the artificially dried HQCF value chain by the end of 2015. This case shows the promise of linking poor producers to larger markets; however, involving smallholder farmers in new value chains may also increase the risk for private sector investors. The introduction of new products and new technologies (in this case HQCF and artificial dryers) carries higher risks and requires a careful balancing act between the windfall for smallholder and industry. Especially when large-scale industries and processors are involved in the value chain, it should be taken into account that a substantial part of the value addition might go to the private sector instead of the small-scale farmers.

A very similar case in terms of product type (dual purpose food and cash crop) and combined approach (seed provision, adding value by processing and organising farmers) is the groundnuts project in Senegal. The number of farmers involved is similar to the C:AVA case, although in Senegal they are primarily women smallholders. The Fatick and Kaolack regions are part of the former 'groundnut basin' where groundnut farming is the main source of cash income for farmers, but also

a key element of nutrition for people and livestock. On average, groundnuts are a much more profitable crop than cereals, the main alternative crop. The main objective of the programme is to help smallholders access quality seeds to improve their productivity. In addition, small processing and business units are being set up—with a particular focus on women—to add value to the groundnuts. It helps communities to combat poverty and progressively improve their lives and livelihoods. Also here, organising farmers into groups and associations, like the groundnut producers association CCPA (Cadre Concertation des Producteurs d'Arachide), yielded positive results. CCPA takes part in the negotiations to set groundnut prices and also influences the provision of subsidies by the state. As a result CCPA has become a credible farmers organisation (with over 5,000 members) and can access credit from the national agricultural development bank.

Also in Bangladesh, the mix of organising farmers, providing seed multiplication facilities, and adding value through processing and sales is the preferred strategy. FoSHoL aims to enhance food and livelihood security of poor and marginalised households in the Kurigram subdistrict. One of the key objectives is to provide quality rice seed by engaging smallholder farmers in seed production. FoSHoL ensures seed security and a stable local seed supply through participatory approaches. FoSHoL's members are small-scale farmers with less than 0.2 hectares. The initiative generates incomes for many different types of small-scale farmers: seed growers, seed processors and traders. Moreover, it also improves income and increases food security for the farmers who purchase and use FoSHoL seeds for rice cultivation. This increases the strength of the local production structure, and adds to local economic multipliers and growth.

The cases above demonstrate that the number of farmers involved can vary considerably. It seems that when the product and market requirements in the value chain become increasingly more sophisticated, the participation of smallholders drops, in favour of a smaller number of larger-scale farmers. This is a commonly noted process, even in these food commodity markets, as exemplified by the TAHA case. In the Kilimanjaro region of Tanzania, TAHA works with both urban and rural small-, medium- and large-scale farmers to improve household incomes through increased vegetable production and employment. With several international airports nearby it is an export-oriented operation, which in turn also explains the preference for working with large-scale producers who can take risks. Currently, small-scale producers are outvoted by a few large-scale farmers within TAHA. Nevertheless, TAHA is assisting their small-scale members to make the transition from subsistence farming to commercial production. It remains to be seen how easily poor and small-scale farmers will manage this transition.

We started this section with the question regarding the opportunities that local markets offer for the inclusion of small-scale producers. The initiatives presented did provide many

examples of smallholders securing and enjoying sustainable access to local markets, primarily through collective marketing. Unsurprisingly, organising farmers, producers and smallholders is at the core of the project's strategies. A pro-poor approach should focus first and foremost on the most vulnerable, and it seems that almost all the surveyed cases seem to keep this focus. It is clear however that a sustained multi-year effort is needed to secure smallholder access to power and governance structures. The level of organisation does differ, however, depending on local conditions. In some cases the organisation of small-scale producers is focused more on strengthening the position of smallholders (empowerment and capacity building). In other cases, the smallholders have advanced their position in the value chain, with adding value and developing commercial enterprises.[19]

Figure 4.1 illustrates the focus of the projects with regard to the level of market orientation. A position in the right hand means a high commercial focus, i.e. more emphasis on the financial aspects of participating in the market rather than on social aspects such as the organisation of producers as a goal (and thus a predominantly pro-poor strategy – low commercial focus). We chose to present the graph in a linear (one-dimensional) way, and will present the assessment of the cases on the other dimensions in a similar way for ease of comparison.

To briefly discuss some examples, NGOMA's market focus is more social – with an emphasis on producer organisation- rather than commercial. The Zimbabwean banana project is moving away from a producer organisation approach towards a more commercial strategy. TAHA is positioned towards the right, as the association has clearly a more commercial focus in its strategy.

4.1 Market orientation

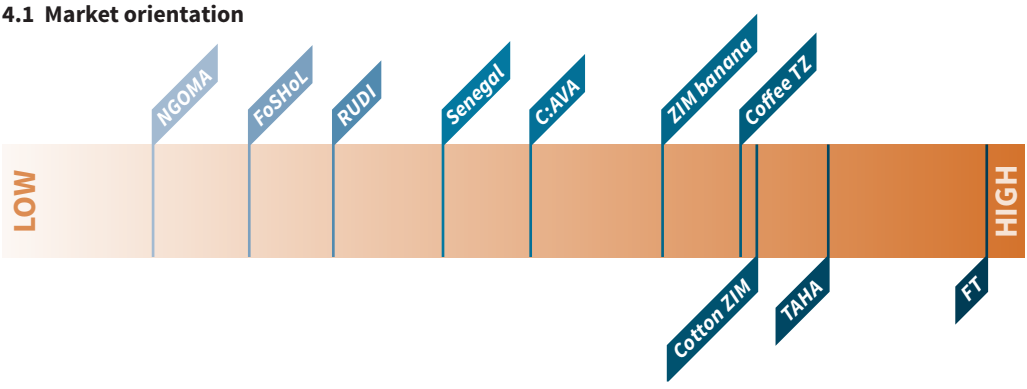


Fig 4.1 illustrates the focus on market orientation that the projects had at the time of the write clinic.

19 This section focuses on the pro-poor development aspect of the cases. It should be emphasised that pro-poor interventions are usually closely connected to many of the other focal points: gender, governance issues, food quality and security, infrastructure, pricing, innovation and sustainability. Indeed, most interventions work simultaneously on several focal areas.

Gender

A gender-sensitive approach seeks to examine whether men and women are affected differently by development interventions in a structural way. Women and men are participating differently in the value chain; there are different benefits for women and men. This is connected to power relationships in the broader societal and economic context. The difference plays out differently in regional market value chains (i.e. compared to export-oriented markets). Does a regional market focus support an inclusive strategy, especially concerning women? Due to the limited scope of this publication, it is not possible to fully answer this question here, but we will make an attempt to evaluate the impact of gender in the framework of regional market value chains[20].

Most small-scale farmers who produce food crops are women. Men are more frequently engaged in cash crop production, and even when men also participate in the main food crops they often retain control over sales of the crop. As this publication seeks to shift the analysis from cash crops towards food commodities, the gender aspect of agricultural production and development is important. The exclusion of poor, female producers from value chains—and especially from the associated benefits of access to innovation, increased incomes, knowledge as well as increased self-awareness and self-confidence—is a key challenge in value chain development. Gender considerations are not always given due weight in value chain research, but move to the centre of the discussion more often when food commodities are concerned.

We encounter two scenarios: approaches that are not gender specific, and approaches that explicitly promote local opportunities for women in regional markets. At the end of this section the relative position of the cases along the 'gender-sensitive approach continuum' is mapped graphically.

The most clearly gender-sensitive approach can be seen in the NGOMA case. In their intervention area, the livestock belongs to the men, who also control maize production. In practice, however, 80% of the women are involved in farming activities, which is why NGOMA explicitly works to have the voice of women smallholders heard and acknowledged. Two-thirds of the farmers groups are women's groups. NGOMA promotes gender parity in its governance structures at district level too, by having one woman and one man representative. Also, one out of the four members of the National Steering Committee is a woman.

In Bangladesh, the improved participation and involvement of women can especially be seen in the local centres set up by FoSHoL. These bio-diversity centres produce

20 For a more elaborate discussion see KIT, Agriprofocus and IIRR, 2012.

medicinal plants for sale as well as vegetables and fruits for both household consumption and sale on the local market. The women who participated in the project reported that their mobility was traditionally restricted and monitored by their husbands. After joining FoSHoL, they felt that their freedom of movement had increased, and that they were now participating in meetings alongside men as equals. They have been enjoying renewed respect within their families. With regard to rice seed production, women are employed in both local production and central processing.

In Senegal specific attention is given to empowering women by facilitating their participation in the entire groundnut value chain. Most women still do not have access to or control over land and other means of production. Credit and seed distribution are generally diverted to men who have control over land and natural resources. With support of Action Aid Senegal, women can gain access to and control over land and other productive resources. In the groundnut sector, women are now organising themselves to collect their harvests and to market their products themselves. Examples of major successes include the Taiba Niassene village, where the inter-village association of groundnut producers (GIPA) is almost exclusively made up of women (99%). In this village, women largely control the marketing and processing components (previously controlled by men), and actively participate in the decision-making process of CCPA.

The C:AVA case also shows that women have an important role in food production—especially staple foods such as cassava. The Malawi case explicitly mentioned that the majority of small-scale farmers who participated in the project are women. By integrating these producers and small-scale processors in new value chains, their economic clout in their communities is significantly enhanced.

On the other hand, RUDI in Tanzania, another intervention specifically focused on food crops, does not make any specific mention of a gender dimension in their work. The project talks about small-scale maize and rice producers in general, not making any distinction between men and women. The project may utilise some aspects of a gender-sensitive approach, but is not a prominent part of its strategy.

Cases that focus on food crops used as export cash crops, such as the banana case and the cotton case in Zimbabwe, reaffirm the observation that there is a strong link between male-dominated trade flows and cash crop production. Only 32% of the 2,500 smallholder farmers in the banana value chain are women, only a slight increase from the 24% before the intervention. Although women, in the Zimbabwean cotton case, make up approximately 60% of smallholder cotton farmers, they have traditionally been assigned certain limited roles. Women and youth produce and harvest the crops, but when it comes to marketing, men dominate and also control the income. In the cotton

case, there were some awareness raising efforts in the cotton producing districts and women have been empowered to run the entire process, from production to marketing. Nevertheless, the results are still limited, with only marginal structural improvement of the position of women smallholders.

The production of coffee in Tanzania, a valuable cash crop, involves both men and women although in different roles. Men play a major part in pruning, pesticide application, processing and coffee marketing, while women do the berry picking, processing and weeding. Most importantly, men retain the control over the proceeds from marketing. An interesting side effect of the loans provided through women's groups is that the women have engaged in other socio-economic activities, such as keeping dairy goats and establishing some small and medium sized enterprises. The diversification of livelihood sources has increased the family's food security and total household income and improved the economic position of women.

TAHA, the project promoting horticultural activities in Tanzania, estimates that 65% of the 30,000 participating farmers are women. However, this is a commercial export-oriented organisation, and it does not explicitly seek to address gender biases. Based on traditional practices, many smallholders who engage in horticultural activities are women, so it is expected that more women farmers will participate in the project. The ultimate intra-household gender effects are not specifically monitored.

Finally, Fairtrade is developing a gender strategy to ensure inclusion and support of women farmers. Gender equality is encouraged and supported by ensuring access to and representation in producer organisations through Fairtrade certification. Women farmers will also benefit from access to agri-services, training and markets. The policy is being developed and not yet implemented, which may be an indication that gender-sensitive thinking is still a novel approach in commercial, export-oriented value chains, and more research on this topic is needed.

Figure 4.2 shows the extent to which each case employs a gender-sensitive approach. As was expected, a small number of projects has a full-fledged gender-sensitive approach in their interventions. Working with food commodities implies primarily working with women farmers and addressing the challenges that they face. In many cases these may be gender-specific obstacles, sometimes heavily engrained in institutional and cultural norms, like land ownership in Kenya or participation in public spaces in Bangladesh (like markets and marketing opportunities). Even though there are also cases like the RUDI project where gender is not specifically mentioned, it is not possible to promote pro-poor development without addressing some gender-specific obstacles. A gender sensitive approach should be at the forefront of most interventions that work with food commodity value chains.

Figure 4.2 Gender

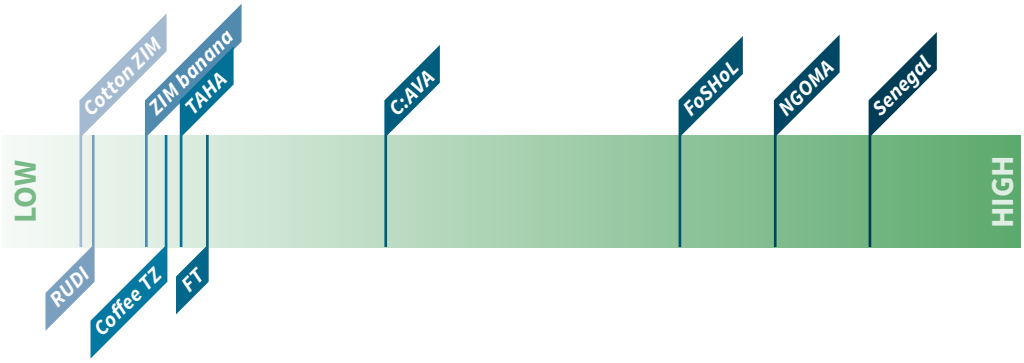


Fig 4.2 depicts the extent to which the projects applied a gender-sensitive approach.

Food security

In this section we will assess the extent to which food security—the availability and accessibility of food markets for local, poor producers and consumers and the degree to which they have control over the process of distribution and access—guides value chain development in regional markets. Food security can be examined at different levels, from individual households to the country as a whole. Most cases discussed food security primarily at household or local level, and rarely touched on food security at country level.

The case studies can be placed in two broad categories, according to type of crop, i.e. food crops or non-food crops. The cases that focus on food crops for cash are mainly concerned with improving smallholder production and usually do not mention food security as a primary objective. Increased food security is achieved indirectly through increased household income or additional consumption of food crops that can also be marketed. The Senegal groundnuts case and the Malawi C:AVA case are prominent examples of improving food security through increased incomes. C:AVA assumes that new, sustainable market-led livelihood opportunities will be created when large enterprises start using High Quality Cassava Flour and large numbers of small-scale farmers work to supply this new demand. In Senegal, increased production of groundnuts will also have a direct positive impact on household food security, because groundnuts (in the form of oil, paste and flour) are an important component of daily consumption for rural households. However, the main focus is on increasing groundnuts sales, and meeting dietary needs with this additional income.

As its name implies, food security is central for the FoSHoL project (Food Security for Sustainable Livelihoods). *Foshol* is also the Bengali word for crop. Food security is achieved through improved production and local marketing prospects. Indeed, most

of the food produced (rice, fruits and vegetables) remains within the local community, directly improving the availability of food on the local market.

NGOMA places a premium on food security; however, it approaches food security issues from a price perspective (access), rather than from a production perspective. Inadequate group cohesion and representation is thought to result in smallholder farmers lacking the ability to engage in group marketing. Individual marketing results in low prices for milk and maize, which can threaten food security.

Those cases that deal with non-food crops, such as cotton in Zimbabwe and coffee in Tanzania, also discuss food security more specifically as resulting from higher prices and increased income similar to the food crop cases, though the role of the market (in an abstract sense) is larger and so are the risks, e.g. price volatility and (other) external influences like tariff barriers and trade defence mechanisms. Likewise, risk mitigating strategies will differ (such as diversification with market system integration, as is seen below). In Zimbabwe, it is assumed that higher cotton prices will improve access to food, and in Tanzania the proceeds from coffee are expected to do the same. However, the Tanzania coffee and the Fairtrade cases also describe crop diversification efforts, which are used as a backup strategy for food security by small farmers. Hedging strategies are used, so if the market price of the main crop collapses, other crops can be sold to offset the impact. Often staple crops are used for diversification, which gives households the option to either market the produce or to retain it for household consumption (a direct improvement of food security).

Clearly marketing has a major role to play in food security in these cases. It increases household income, thereby improving household food security in general. Most cases in the writeshop focused on conditions at the production level, with little information regarding the other levels further down the chain. Contacts with customers still seem to be more focused on spot purchases at local markets rather than on establishing long-term relationships, with more formalised commitments and agreements between producers and buyers. RUDI is a clear exception, as it explicitly focused on building strategic partnerships and strong business associations, especially within farming communities. Building relationships within the value chain seems to be just as important as improving quantity and quality, when it comes to food security. Thus, strengthening positive relationships between value chain actors is a good approach to promoting food security at the level of producers. It is important to strike a balance between the interests of the different actors involved and thus transform the value chain from a hierarchical to a more network-based.

The question at the beginning of this section inquired to what extent food security is guiding value chain development in regional markets. We saw that the availability and accessibility of food for local, poor producers are important considerations, though

availability less so, and neither are nutritional requirements and habits addressed very much. Most cases focused on increasing incomes (by improving production, organising collective marketing or other means), as a strategy for improving food security. Figure 4.3 shows the degree to which the projects explicitly mention food security as a guiding principle for their activities. The label 'low' in this case means that food security in itself is not a stated goal but is rather implicitly achieved through increased productivity. This observation also holds true for the non-food commodity cases, such as cotton and coffee. The RUDI, FoSHoL, and NGOMA cases are labeled 'high' as food security is indeed central in their value chain development activities.

Figure 4.3 Food security focus

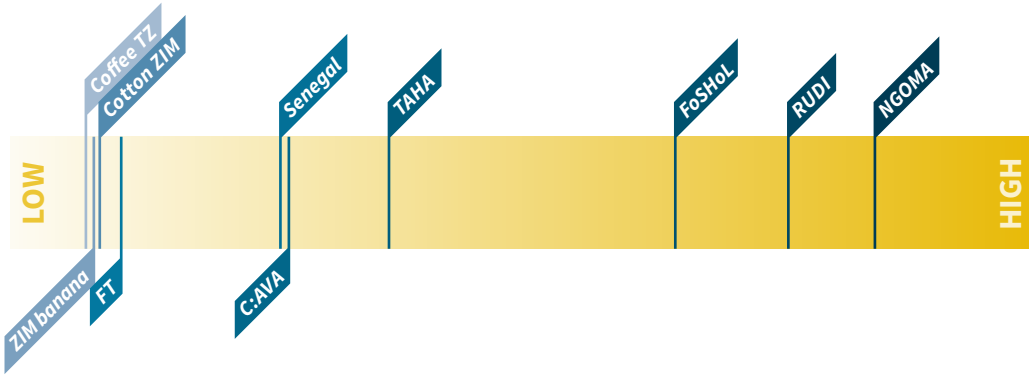


Fig 4.3 Continuum showing the extent to which projects explicitly mentioned food security as a guiding principle.

Food quality

Here we want to examine to which extent food quality considerations guide value chain development. Regional markets in developing countries are not always regulated rigorously and generally lack the stringent food quality standards found in mature markets, like the European Union. This difference may be even stronger when markets in developing regions are predominantly food commodity markets, while markets in developed areas are almost purely (imported) cash crops based. A balance then needs to be struck between facilitating engagement and participation of farmers in those regional markets and the necessary food quality standards for assuring adequate nutrition and general health of the wider public.

Questions considered beforehand were related to the role that quality requirements play in local and regional markets. Growing for local food commodity markets has implications for food quality: quality standards are generally less high for local and regional food markets. In that sense, quality control tools that come with developing export markets will have implications for smallholder producers, e.g. their possible future crowding out of the market, while their access at present is relatively easy.

In most cases there was an expressed concern about improving the quality of the produce, not just the quantity. It is difficult to scale up production and marketing without achieving a certain level of quality, especially when seeking to enter urban and competitive markets. The cases addressed the quality issue through different approaches: improving storage (milk coolers in the NGOMA case); improving post-harvest handling (the establishment of communal processing centres in the case of Coffee Tanzania); reducing harmful toxins (sensitising farmers on prevention and control of Aflatoxin in the Senegal groundnuts case); increasing vitamin and nutrient content (mentioned in both the FoSHoL and Senegal cases); and even improving the quality of the environment where the crop grows (Fairtrade).

There were different motivations behind each focus. Reducing post-harvest losses (through better storage techniques) both improves quality and the volume of the produce that can be marketed. The Zimbabwe banana case is a good illustration of how improving quality can lead to improved access to commercial markets. Its higher grade bananas easily found favourable markets in more distant cities.

However, little was said about two aspects of quality: certification and premium market prices, both often seen as strategies to improve the value accruing to small farmers in niche markets. With the exception of the Fairtrade case, little was said about whether certification was important for guaranteeing quality and gaining access to markets. For example, in the cotton case of Zimbabwe it is mentioned that farmers are effectively organic producers because they cannot afford fertilisers and pesticides. However, a link between certification and premium prices could not easily be established. The cases did not provide information on whether buyers were willing to pay a price premium for quality products. Producing good quality produce is generally presumed to be a 'good thing'; however, usually this requires additional costs which need to be recuperated in the marketing stage. The Zimbabwe banana case is a positive example of higher quality translating into better prices directly. With new, disease-free planting material and training to address quality determining factors (such as grading standards, improved transport logistics, and better packaging and ripening facilities) the produce did indeed become more attractive for both the trading company as high quality tradable goods and for producers as productive crop.

In the Fairtrade case it should be emphasised that the Fairtrade label stands for quality, for production that is fair, economically sustainable and environmentally friendly. For producers operating in particularly remote areas—with limited access to technical support, labour, production knowledge, farming techniques and inputs—it may be a significant challenge to enter into the Fairtrade scheme. International Fairtrade buyers in the Global North set very stringent quality and hygiene specifications. In these marginalised regions, farmers often need significant additional assistance with investment, training and targeted technical support to improve quality prior to engaging with Fairtrade.

The fact that improving food quality is directly connected to production investments—which ultimately need to be reflected in higher prices—raises the following question: Who is covering the cost of the investment? In many of the cases it was not clear who ultimately paid the additional costs, and whether these additional costs were worth the investment, i.e. whether producers could secure premium prices and sustainable access to profitable markets. If producers continue to rely on spot markets then quality differentiation might not bring significant added value. And the question is also: 'Is the food commodity produced worth the effort of going through such a process of investing in quality, premium prices and certification'?

Quality through certification and premium prices does not seem to be a focus in the framework of regional market development, in contrast to most export-oriented initiatives with their stringent quality criteria. Looking at the cases, quality concerns were indeed mostly taken along for exported products only, such as bananas from Zimbabwe to South Africa.

In the continuum below (Figure 4.4) we looked at the extent to which these quality criteria were considered important. Not surprisingly, those commodities that partly also supply export markets (e.g., the cotton and banana cases from Zimbabwe, and coffee produced in Tanzania for the export market) are guided by food quality in their value chain development. 'Low' in the graph implies that the project has a low focus on quality. 'Medium' indicates a broadening towards supplying the national market with less quality considerations and 'high' points to a willingness to serving export markets with high quality demands. Not surprisingly, the coffee case of Tanzania and the Fairtrade cases are found at the right end side. TAHA with its horticultural produce and the Zimbabwean banana project are moving towards that direction.

Figure 4.4 Focus on quality

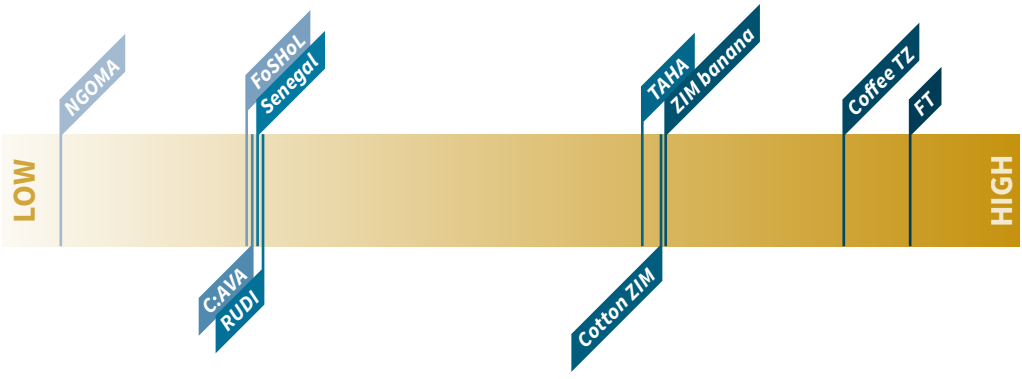


Fig 4.4 Continuum showing the extent to which quality criteria were considered important.

Governance and infrastructure

Both aspects of governance and infrastructure reduce transaction costs, a crucial condition for sustainable growth. If markets cannot be reached effectively, incomes for inputs and productivity will stall. As the cases showed, all organisations expended a significant effort to address both issues. We will first take a look at governance and then consider the impact of infrastructure on the development of local market value chains.

Transaction costs: Governance

The questions in this section focus on the regulatory framework of the value chain. What are the institutional arrangements in regional market value chains, and how important are they for the functioning of these value chains? What are the main differences compared to more export-oriented cases? All interventions focus on governance issues to a certain degree, and mostly at the level of producers by organising farmers groups and seeking to address power imbalances between farmers and traders and processors, with some difference in the approach. Some are explicitly bottom-up; for example, NGOMA is a network of farmers groups managed directly by smallholders. In other cases inclusive mechanisms exist alongside other more traditional power structures; for example, TAHA has a broad-based membership but is managed and controlled primarily by a limited group of large farmers.

There are also differences in the types of organisational structures established. FoSHoL is very much focused on group development, centred on economic functions. Institutional infrastructural development is stimulated by forming women's and men's farmers organisations. The sense of ownership as well as the clearly defined roles and responsibilities enhanced the farmers' self-confidence, coordination and cooperation. Institutional development is clearly visible in the Senegal, C:AVA and Zimbabwe cases as well. The efforts of organising farmers into groups, associations and cooperatives bring benefits. Some interventions are very pragmatic, focusing on short-term efficiency gains. For example, C:AVA assumes that working with already established farmers' groups rather than with individuals is more effective for increasing project efficiency and reducing transaction costs. Over time, the organisation efforts may become more structured, especially if there is a perceived need to institutionalise associations into the wider governance system of the value chain.

Other interventions have a more long-term view to developing institutional infrastructure. The cotton case of Zimbabwe shows the importance of farmers organising themselves into self-reliant farmers' associations and farmers' unions, capable of providing platforms for research as well as technical and marketing support to members. The establishment of such associations and government recognition as a strong partner does not happen overnight. Also in the coffee case in Tanzania, the strong influ-

ence of the institutional infrastructure, policymaking, and governance bodies is evident. TechnoServe seeks to provide advice on these issues and link individual farmers to coffee boards, associations and cooperatives. By strengthening the cooperative unions and exploring the possibilities of domestic markets, TechnoServe aims to establishing a new—more equitable—power balance in the value chain. Finally, the Fairtrade case provides examples from different countries where the position of producers is promoted through organisational development. Portions of the premiums from fair trade have been invested in both institutional and physical infrastructure.

Looking at the questions of how institutional arrangements are organised in regional market value chains, and their effects on the functioning of these value chains, we notice that relatively widely different approaches are utilised. Figure 4.5 shows the level of organisational structure or governance modalities of the various projects. 'Low' in this graph signifies that the intervention did not consider the reduction of transaction costs through (infrastructure and) institutional (group) development a high priority. 'High' indicates the opposite.

Figure 4.5 Focus on organisational development

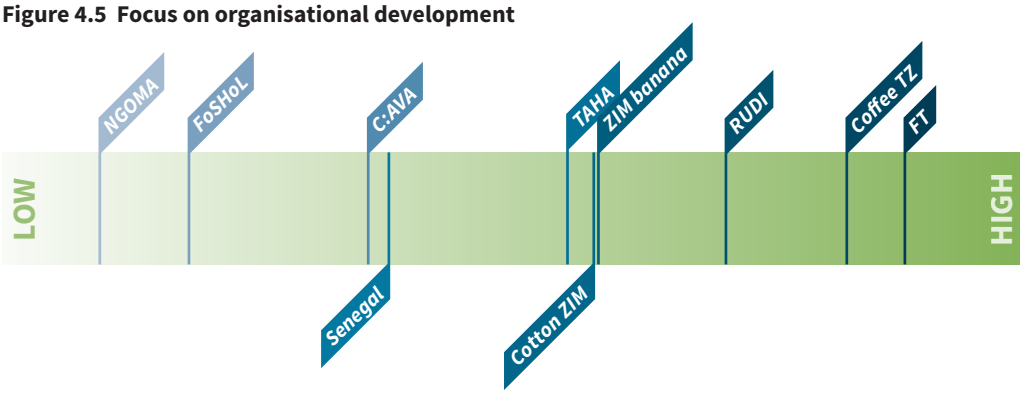


Fig 4.5 shows the relative extent to which organisational development aimed at reducing transaction costs was prioritized.

Transaction costs: Infrastructure

The issue of (physical) infrastructure in the context of regional markets is closely connected to the regional networks for mass-transport and local producers' access to market information. In export-oriented chains a different type of actor is involved, often operating large-scale operations in a longer supply chain. The different needs of export-oriented value chains pose specific requirements for economies of scale in logistics and organisation (governance at the higher level).

Road infrastructure affects the performance of the value chain directly and is critical for producer prices. Both central and local governments invest in road networks, to reduce transaction costs and improve their regional competitiveness. The banana case

in Zimbabwe reveals the direct effect of physical infrastructure on pricing. During the 2009–2010 season, producer prices in Honde (a community accessible by a tarred road) were more than twice the producer prices in Rusitu (which only has gravel road access). In the FoSHoL case, poor road infrastructure was a key bottleneck to providing farmers with the new seed varieties and ensuring seed quality control in remote villages. In another case, RUDI's baseline survey recommended different strategies for transporting produce from the different intervention areas. The easy access to frequent transport opportunities and the cheaper backhaul rates make truck transport an easy choice in Mbeya. In Ifakara, on the other hand, larger traders transport their rice laboriously by train, as the town lies at the end of a long, poorly maintained dirt road.

Processing capacity is another crucial element, especially as it enables smallholders to move up the chain by engaging in value addition. The groundnut case in Senegal and C:AVA in Malawi focus on building up local processing infrastructure. With direct support, the women's groups are encouraged to establish small-scale processors among their members. This capacity enables smallholders to produce dry, shelf-stable products. One of the reasons for the poor quality of coffee produced by small-scale farmers the Kilimanjaro region in Tanzania was the handling and processing stage. The coffee beans were dried in a dusty and dirty homestead environment, causing an unpleasant odour. In response, TechnoServe constructed coffee processing centres that meet adequate hygienic standards in a number of villages. TechnoServe further trains farmers on improved coffee production techniques, and disseminates price information and marketing options to link smallholders with other actors in the coffee value chain. In another case, FoSHoL established a seed processing centre near the smallholder communities, to facilitate the dissemination of the improved rice varieties.

Storage capacity is also important for local and regional markets, not only for distant, export markets. Enhanced storage life was mentioned in a non-food commodity case, cotton production in Zimbabwe. Through a warehouse system (including both physical infrastructure and financing) farmers had the opportunity to keep new cotton seed varieties of better quality and thus increase their production. NGOMA, because of the network and lobby focus of its activities, invested less directly in infrastructure. Nevertheless, by organising farmers they were able to help secure needed investments, for example, by having two milk cooler plants built. Towards the more extreme side of the continuum, TAHA allocates part of its fund to infrastructural development. The association has contributed to the improvement of roads, storage and freight facilities, mostly for their export-oriented, large-scale members. Technological support to improve the processors' operations is provided as well. Small-scale producer members also benefit from this set-up, but reap limited benefits due to their limited production in absolute terms. Most farmers supported by TAHA reside in the Arusha and Kilimanjaro regions, which already have very decent road and airport infrastructure.

Although none of the projects interventions specifically aimed at development of ICT or mobile phone infrastructure, the emergence of mobile telephones was occasionally mentioned as contributing to a reduction of transaction costs (and an increase of at-the-gate prices). In Kenya, for instance, most smallholders can use their mobile phones to exchange information on prices and production volumes, or to make deals with local traders – the number of trips that traders make to remotely located suppliers is reduced. Besides, thanks to mobile telephony, several farmers can now coordinate and bulk their produce, and can transfer money through M-Pesa.

We have seen that enhancements in the quality of physical infrastructure (roads, processing, storage and mobile infrastructure development) lead to value chain development and improve the position of smallholders. Clearly, also for regional market systems, investment in physical infrastructure is a priority issue. Figure 4.6 shows the relative extent to which the projects allocated priority and resources to infrastructure.

Figure 4.6: Focus on infrastructural development

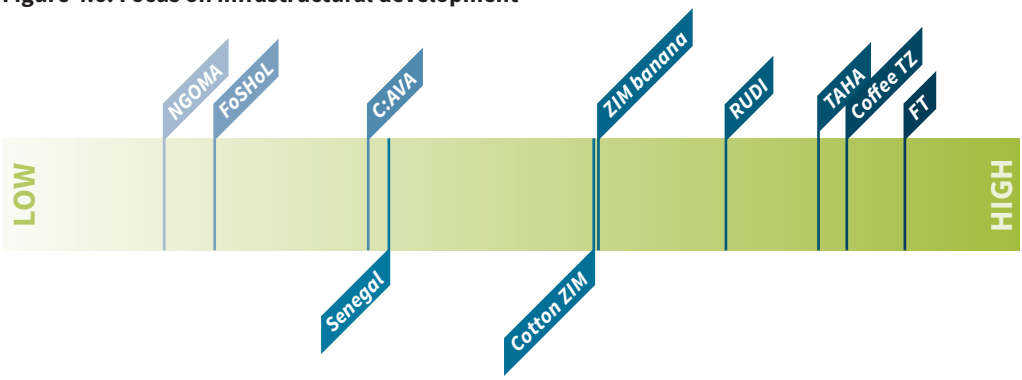


Fig 4.6 depicts the relative extent of projects' investments in infrastructure.

Producer and consumer prices

Due to the complexity of value chains, it is often difficult to assess whether the individual actors and their behaviour directly contributed to increases in producer prices. The question we seek to answer is whether the project's potential impact on prices was specifically connected to production for local markets. Market prices are volatile—with or without the project's actions—due to macroeconomic factors, proximity to markets, or climate factors (to name just a few variables). However, sometimes a direct link can be established between higher produce prices and farmers participating in production for specific traders and wholesalers. Initially we hoped to gain insight into the impact of the projects on both producer and consumer prices; however, due to lack of quantitative data we cannot draw firm conclusions, least of all on consumer price development (as this was often furthest from the level of intervention of the organisations discussed

here). Nevertheless, as most projects focused on improving the income of smallholders, there is some documentation of the changes on the producer side.

In most cases price setting was seen as beyond the control of smallholders, except when they cooperated with actors higher up in the value chain, usually through the support of external agents and donors. There are several reasons that can explain this effect. In some cases farmers lacked strong organisational capacity for group marketing and still negotiated with buyers (traders, processors and exporters) individually. In cases where farmers organisations or other collective action agents were stronger, there were reports of improved producer prices (FoSHoL, NGOMA, the cotton case in Zimbabwe). NGOMA reported that farmers received better prices for their milk after the revival of two dairy cooperatives. The FoSHoL seed initiative generated increased incomes for multiple actors involved in the value chain, seed growers, seed processors and traders.

Poor market information was another source of insecurity for farmers during price negotiations (mentioned in the RUDI and coffee cases in Tanzania). Asymmetric market information—compounded by poor financial literacy and incomplete cost calculations—makes it very difficult for farmers to negotiate effectively on prices. In other cases, prices were directly set by other actors altogether. The Senegal case described price setting by the state (in supposed consultation with farmer organisations), and the coffee case in Tanzania indicated that the Coffee Board set minimum prices. In the cotton case in Zimbabwe, in a rather chaotic market place, buyers have all the power to set prices on a 'take it or leave it' basis. Here the smallholders' collective actions did make a difference, resulting in higher prices for the 2009–2010 season. Still, the cotton market is far from free. It is hampered by poor communication systems and monopolistic tendencies in the cotton industry.

In the Fairtrade case there is more confidence that the interventions resulted in higher prices for producers. Fairtrade certification may even have multiplier effects, raising producer prices for other non-Fairtrade farmers as a result of competition introduced by Fairtrade elsewhere in the chain. The Zimbabwe banana case did explicitly link prices with quality, and improvements in production did bring in higher quality premium prices (although, it should be noted that this effect is primarily seen in export-oriented value chains). RUDI's report, stating that mislabelling and mixing of rice is a common practice used to increase rice prices at point of sale, does emphasise that special value is attached to known high-quality types and brands of rice in the regional Tanzanian market.

The overall conclusion is that the situation with producer prices in local chains is slightly different from the conditions found in regional export-oriented chains. Increases in producer prices are clearly evident in a number of export-oriented cases, but are less

visible in local and national markets (at least there is no direct link). Figure 4.7 illustrates the estimated or recorded improvements in producer prices in the different cases. Looking across the cases, it would seem that there is some room for improvement in transparency and availability of information in regional markets. Price transparency can build stronger relationships between producers and buyers in the value chain, as each actor comes to understand the circumstances of the other. Fair prices and strong relationships are necessary ingredients for a sustainable chain. This goal requires a slow development of these value chains, from a mostly hierarchical structure to one that is more network-based.

Figure 4.7 Focus on price policy as an instrument

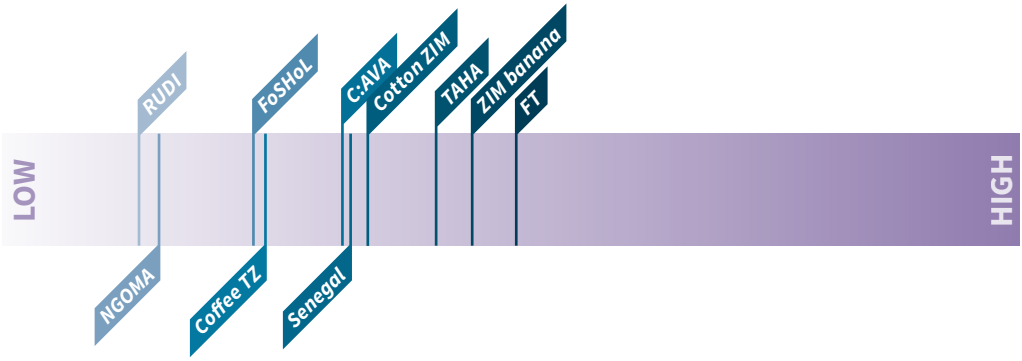


Fig 4.7 illustrates the estimated or recorded improvements in producer prices in the different cases.

Innovation and sustainability

How can indigenous knowledge, research and development assist sustainable production systems in the context of regional markets? Production and marketing innovations that are lucrative for all actors in the value chains—especially smallholders— need to be introduced without external donor support to make the chain sustainable (more efficient compared to the competition). This question is commonly considered when looking at export-oriented production, and we anticipate that it is also very relevant for regional and local markets. Innovation and sustainability do not necessarily go hand in hand. Some of the cases expressed sustainability concerns—economic, social or environmental—but the majority of the innovations focused first and foremost on economic concerns, such as improving yields and boosting incomes. In that sense, they were not very different from innovations in export market value chains.

Non-economic innovations were also utilised, ranging from organisational innovations to targeted trainings and new marketing approaches. In fact, many of the studied cases discuss the implementation of several complementary innovations. For example, RUDI complements its technical trainings with marketing skills, to both increase

the quality and quantity of production as well as to enable farmers to find an outlet for the increased production volume. FoSHoL combines the provision of improved seeds with more sustainable environmental practices, such as soil and water conservation. NGOMA is another case that combines investments in technology (dairy cooler plants) with innovations in group organisation, to help group marketing and service provision. Improvement of crop varieties was a prominent feature in several cases (Senegal, FoSHoL, as well as the cotton case and banana cases, both in Zimbabwe). It was generally utilised to increase yields or to produce varieties that are more in demand. The case owners in the writeshop believed that the introduction of new varieties had been successful in boosting yields and allowing the establishment of a marketing outlet. For unknown reasons, 'recovering traditional knowledge' did not feature in any of the project activities, even though the case owners themselves felt that it is very important. Environmental sustainability did not feature prominently in the discussion on sustainability either. This does not necessarily mean that the projects are not environmentally conscious. Fairtrade is one case where environmentally sustainable practices are explicitly encouraged.

The case owners believe that innovations have been important for expanding the impact of the intervention. While they generally think that innovations lead to enhanced economic opportunities, some also mentioned the associated higher equipment costs: dryers (C:AVA), processing units (Senegal), and milk coolers (NGOMA). The return on these investments needs to be carefully weighed against the associated risks especially in a local market with limited elasticity. Other small businesses may seek to learn from these experiences, and it is essential to show the best lessons learned (especially as some of these budding initiatives may not enjoy donor support). Making correct cost-benefit analyses when considering innovation investments is essential for the sustainable economic development of small-scale producers. This may be even more important for cases where poor farmers are engaged, as their risk profile is even more constraining than exporters' may be. Interestingly, the case owners did not explicitly mention sustainability in the context of building relationships with other value chain actors. Taking advantage of such opportunity to establish durable business relationships can go a long way in helping smallholders secure a larger portion of the profits from the final marketing of the produce and thus reduce risks overall.

As stated above, although most innovations focused on economic concerns, such as improving yields and boosting incomes, it seems that most cases also considered innovations at social, organisational and—maybe to a lesser extent—environmental levels to be important when developing regional market value chains. Figure 4.8 shows the importance that cases attach to innovation. We would like to stress that nearly all cases discuss the implementation of several complementary innovations, i.e. economic as well as non-economic. Figure 4.9 illustrates the extent to which the projects' interventions

seem to contribute to smallholder needs based on a sustainable value chain development focus. Looking at the position of the non-food commodity cases of coffee and cotton as 'Medium' means that these projects have advanced somewhat towards promoting a broader definition of sustainability. C:AVA and FoSHol are taking steps in that direction. It seems that currently none of the projects is nearing full sustainability.

Figure 4.8 innovation

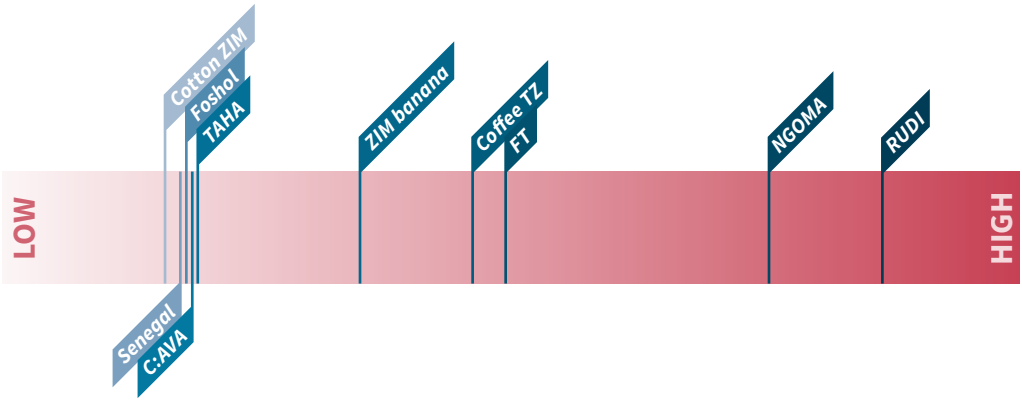


Fig 4.8 shows the importance that the projects attached to innovation.

Figure 4.9 Economic sustainability

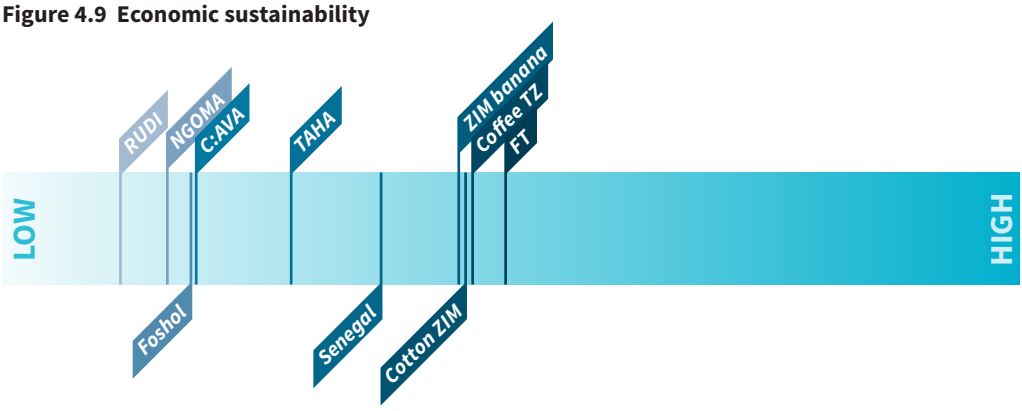


Fig 4.9 illustrates the extent to which the projects' interventions contributed to smallholder needs based on a sustainable value chain development focus.

Value for smallholders: Regional food commodity value chains

After the analysis of the different categories of impact across the various case studies of local value chain projects, it is time now to turn back to the theory. The Value Chains as a concept (initially mostly in a manufacturing context) has its theoretical roots in the works of Gereffi, Humphrey and other authors. Especially the work of Gereffi et

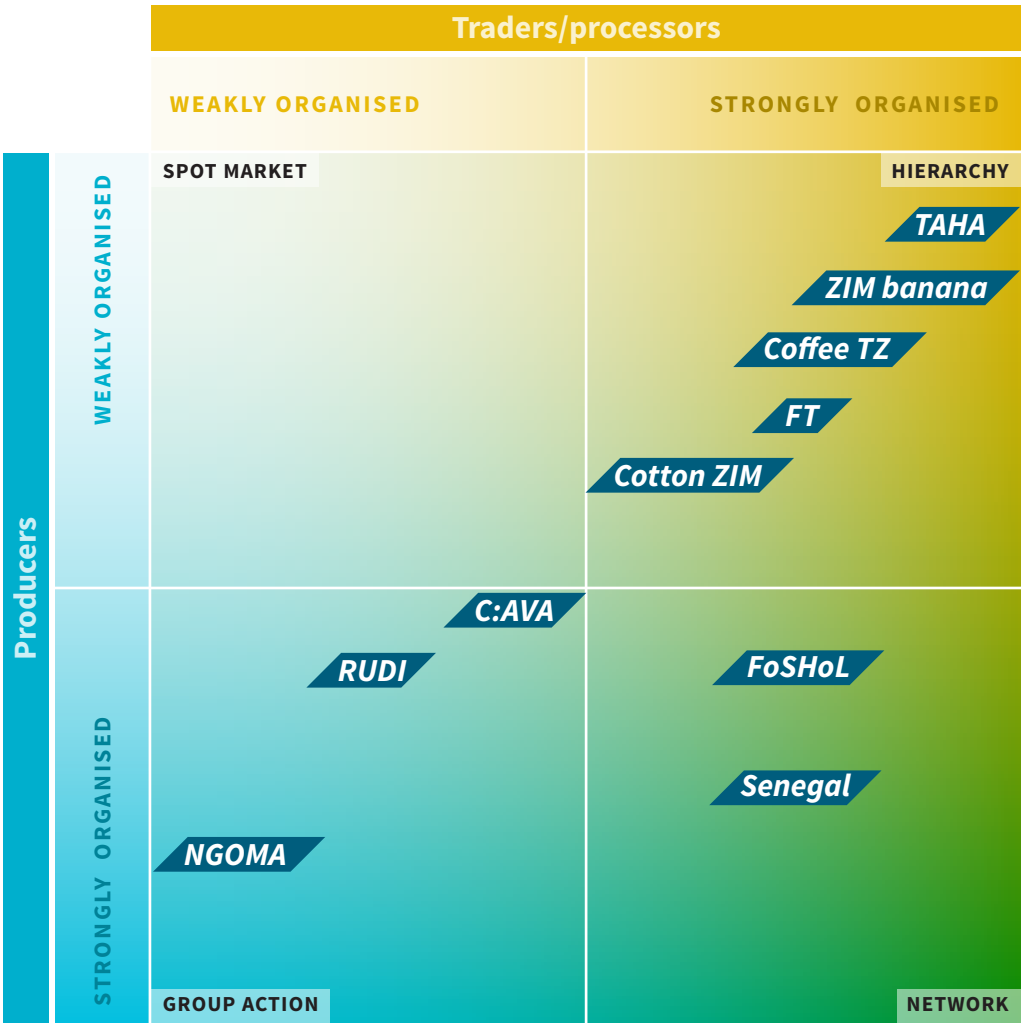
al. (2005) was a seminal piece that established a set of possible models for structuring value chains. Several variables were outlined as crucial for determining the path of development of the value chain: the complexity of transactions taking place between actors in the chain, the codification of these transactions, and the capabilities of the actors in the supply base.

When one considers local markets, regional value chains, food commodity crops and small-scale producers, the expectation is to find relatively simple and well codified transactions as well as high supply capacity. In other words, a large number of producers engaged with a large number of traders and processors in a market-based (or spot market) model of a value chain (see also Chapter 2). This multiplicity of actors was also observed in the field cases, even though sometimes only a limited number of traders, processors and/or well-organised farmers groups was involved at the procuring end of the chains.

However, the theory does not accommodate this variety. Gereffi et al. provide for only one model of governance where the complexity of transactions is low and the ability for codification high. They do not provide for a case where the complexity of transactions is low, but where there is no tendency for codification, as in an agricultural spot market for food commodities in a local/regional market in Africa. The rest of their argumentation is based on analysis of situations where there is only one or a few turn-key suppliers of a certain product, i.e. a (quasi-) monopoly. In such situation one can indeed standardise (codify) production processes to make transactions less complex (vertical chain coordination). This reflects their orientation towards industrial production processes.

In agricultural chains in Africa, the conditions are far more diverse. Theoretically, this is breaking new ground in this area: not only are there many customers who are dealing with producers at spot markets, but also numerous traders/processors, positioned at different points along the chain with various degrees of control. We have seen that there is a systematic difference between the cases that are more narrowly focused on food commodities and those that are more focused on food cash crop commodities. The 'governance matrix' (see Table 1.1) together with the graphs/figures presented in this chapter after each section describing the different dimensions (gender, food security, innovation, etc.) form the basis of the discussion we will present here (see Figure 4.10).

Figure 4.10 Matrix of case study analysis and scores of cases.



Not surprisingly perhaps we see that the upper-right and lower-left quadrants are well-represented. We see a narrow 'cloud' in which NGOMA is at one end and TAHA at the other. There are very few cases that work purely in the framework of a policy that tries to develop spot markets, nor are they working to develop highly organised markets ('Networks') as such. Most cases can be characterised as being either hierarchical (the farmers are not so very strongly organised, but the traders or processers generally are), or one of 'group action' (farmers are well organised, though traders are less so).

Of course, the interventions presented here as cases most often try to change the situation found on the ground and deemed unsatisfactory for poor farmers. Most cases show a tendency to shift to the quadrants marked by improved organisation generally: from market to group action, or from hierarchy to network. Moving from the right to the left (i.e. weakening of organisation) does not seem very plausible and does not appear in the figure. Also, we did not record any shifts from left to right in our set of cases—even though in real life this may happen often—when processors and traders start to dominate the market and control the producers (regardless of their degree of organisation).

A shift from one quadrant to another implies changes in more than one aspect (organisation of farmers, stronger position of producers etc.). Considering the scores of the cases on the themes described above, we would expect that other aspects also change when cases develop in a certain dimension. For example, improving infrastructure and improved links to export market facilities will not remain an isolated change. Other aspects will also change, such as governance, gender, etc. How this change happens is dependent on individual circumstances—each change in the value chain will yield expected and unexpected consequences.

In most cases, ironically, NGOs assisting value chain actors to improve their position and income have focused interventions at the level where there is limited value addition: most often, attention is being placed on the role of and benefits for small-scale producers at the start of the value chain. Similarly the cases in this book largely reflect the view of these networks or organisations that see it as their task to make markets accessible and profitable for small-scale producers. At the producer level, the cases show a strong focus on small-scale producers (usually owning less than 2.5 hectares, and quite often less than 1 hectare). In practice small-scale producers dedicate some of this limited land to food production for domestic consumption. Because of their small volume of production, individual farmers are not in a very powerful position in relation to processors or traders. Most projects, therefore, focus on improving the negotiating position of these producers (rather than on increasing productivity), usually by organising producer groups to improve market presence and strengthen negotiating position. Ironically therefore, most effort is put in a situation where the position of producers is weakest, and improving along dimensions that imply the largest effort.

This effort is undertaken with different degrees of sophistication, and it remains to be seen whether it is possible to achieve the goal of empowering smallholders without massive and extended external funding. In the examples where the external funding was relatively small, the NGOMA case in western Kenya for instance, we see persistent but only limited impact. Without external support, it seems to be quite difficult to build up a strong farmers organisation that can successfully lobby against established forces in the market in any short period of time.

In the Bangladesh case, the external support is considerable, and there are more substantial changes at both the level of organisation and the impact on smallholder income. The farmers unions that are set up also own the facilities. Groups of farmers are upgrading their activities within the value chain through acquiring ownership of processing capacity through their farmers organisations. This shows the usefulness of these unions in organising farmers not only to have a stronger position in the market, but also a qualitative change in the role of farmers as processors. However, it also shows the external dependency. On a positive note, this means that improving farmers' roles in a commercial environment can still be achieved with the support of public (external) money.

A third example is the groundnuts case in Senegal. Here, the participating women dedicate most of their land to this one crop and operate on a very small scale (as access to land is a problem). They are being organised into groups and supported by the ActionAid project in Senegal to strengthen their negotiating position. In this case, productivity is being improved and the position of the women producers is being upgraded within the value chain, in the sense that groups have access to and control over processing and trade.

These cases underscore the strong focus placed on farmer organisation as a tool for achieving impact (economies of scale, innovation, social goals, etc.), both at the level of the individual members and community. Farmers groups can reap substantial benefits from engaging in activities higher along the value chain, in an upgrading process aimed at increasing their control over trade, processing and retail sales.

Facilitating the upgrading processes at the level of farmers organisations—establishing the organisations, improving member productivity, but also increasing the control these organisations have on the later stages in the chain—can be challenging. When producers upgrade they also encounter increased competition, which often complicates their further development. In the TAHA case for example, this challenge seems to be internalised within the organisational structure. Both the larger farmers, who export directly, and the small scale farmers, who rely on the large farmers' processing and export channels, are members of the same organisation. Even though there is a clear policy of supporting all members, the large farmers have a clearly stronger position within TAHA.

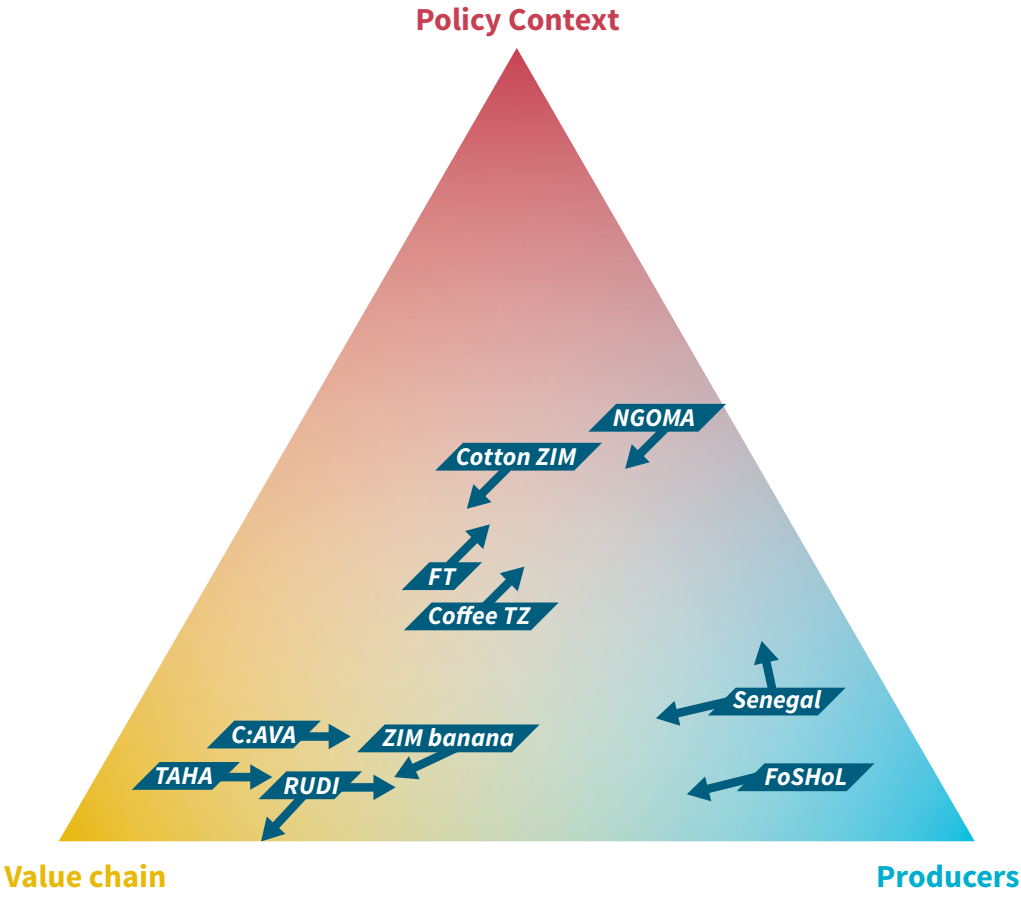
Upgrading farmers may put them in competition with each other therefore, but also with existing processors. This may take place even when their improved produce finds only one processor to supply to (in the matrix, the upper right cell labelled Hierarchy). We assume actually that this situation is found: a company supports farmers to upgrade their production, but is (or wants to be) the only processor to which the farmers can (or must) supply. This dilemma is particularly evident in the case of the banana subsector in Zimbabwe. Matanuska wanted to capture a larger share of the unmet market

demand in the urban sub-sector for bananas. It took the initiative to improve productivity of a group of farmers by introducing new technologies: disease-free, tissue-cultured bananas; better plantation management; improved access to inputs; better storage and ripening facilities and transport; and the introduction of grading standards that have improved both productivity and prices (though at increased production costs). Matanuska is a private company, and as the only large-scale buyer of bananas, there is a risk of monopoly in this sub-sector. Matanuska actually demanded the exclusive right to buy from the communities involved in the project; however, with the aid of external organisations like SNV, a balance was struck. The farmers were aware of the monopoly risk and demanded the right to sell to alternative traders and exporters, when not producing under out-growers contracts. This had the impact of increasing the price offered by Matanuska, because if its prices were seen as too low, side-selling could no longer be prevented. Also, competing banana trading companies could enter the value chain. These additional parallel arrangements improved the small-scale producers' position in negotiating prices with Matanuska.

In the case of the women groundnut farmers in Senegal, another example, the processors' traditional strong position also indicated potential threats. Dating from the period of parastatal involvement in the markets, the largest companies retained a strong position. Together with a number of large trading houses, they dominated the market and offered such low prices that farmers could not recover their costs. In a national roundtable discussion, the government agreed to increase the price offered to farmers by 30%, in order to kick-start the sector after it had ground to a halt due to unchecked liberalisation. The role of Action Aid Senegal in this case, providing the impetus for farmers to organise themselves and get recognition, was extremely important. There was a delicate balancing act between the farmers' organisations and their supporting service providers (the government, the groundnut oil industry and the traders) to allow all parties to recover their costs, make a profit and continue to participate in the value chain. Whether the costs of topping up the price by the government can be sustainably maintained against the rising revenues for all parties (including the state through collected taxes) is an interesting question. This arrangement mirrors the situation in the EU where support programmes for the agricultural sector provided by the EU have indeed resulted in the creation of a strong and very profitable export-oriented agricultural sector.

These reflections can be visualised in a triangle graphic, where we position the cases in relation to three aspects (producer context, the value chain context, and the policy context). NGOMA for example is focusing on both the government context (lobbying for the position of producers) and on the producers (to strengthen their position in the chain). Thus, NGOMA appears in the right hand part of the triangle, and seems to move towards the left-hand corner of the chain.

Figure 4.11



In summary, in a continuum of cases that ranges from NGOMA to TAHA, most cases seem to converge towards the middle of this triangle. This suggests that they aim for some form of multi-level approach, striking a balance between the various actors in terms of interests and power. This goal is very similar to the goals of many export-oriented value chain projects, but the points of departure of the above cases are different for the commodity cases . The strategies employed are also different.

What we see emerge from the consideration of the theoretical review and the case studies presented above is the need for a wider focus when considering food commodity markets. The strongly reductionist approach often adopted for niche or cash crop value chains is inadequate for the larger food commodity chains. The tools and approaches (see 'recommendations' section below) presented in this book can help deal with this complexity and assist the development of adequate policy tools that can help large numbers of small-scale farmers (rather than improving the position of a smaller

group of large farmers, who are already well-connected and benefiting from the value chain). Understanding the challenges and working with smallholders in the framework of food commodity value chains can bring substantial benefits and can significantly contribute to achieving the goal of pro-poor development.

Regional food commodity value chains for development

This publication sought to examine the challenge of designing alternative agricultural value chains that meet sustainability goals in developing countries, particularly in Africa. We turned our attention to the neglected area of the study of regional (food) commodity value chains, contrasting them with export-oriented value chains, which have received so much attention over the years. This shift in focus towards regional (food) commodity value chains yielded additional questions regarding the impact on poor smallholders:

- Are regional food commodity value chains systematically different from the export oriented value chains?
- Do regional types of chains have a different impact on the dimensions we have identified, such as pro-poor development, gender, food security and others?
- What do the specific benefits of food commodity value chains imply for the design of intervention strategies?

Throughout the study—especially in the careful consideration of the case studies—we have examined the difference between the two value chain types, and sought to distill the main lessons which we have reflected upon and tried to translate into the following recommendations.

Recommendations

- The needs of smallholders—and women farmers in particular—can be and need to be at the centre of agricultural development policies and decision making.
- Careful consideration of the situation on the ground is needed, in order to adequately understand the needs at farmer household level, even when an intervention is focusing on only one of the farms products (a cash crop).
- Attention should be paid to capacity building, especially improved organisation of small-scale farmers, in order to address power imbalances between producers and processors and social/economic injustice and exploitation in the value chains.

- The value chain power analysis needs to be strengthened in any intervention, in order to improve regulation and facilitation of inclusion, policy and practices, productivity, social and economic justice, and finally sustainability.

- National policies are a crucial regulatory tool, which should be adjusted to accommodate and develop regional value chains and markets, in addition to supporting large-scale, export-oriented agricultural production.

- Local and regional food commodity chains are a very important aspect of agricultural and rural development policies. More than is the case with niche export markets, they have the potential to improve production and productivity of large numbers of farmers, the share of value added obtained by farmers, and the development of a commercial environment in which farmers can continue to provide produce to the consumer while sustaining their families.

- Temporary public support given to various (locally determined) types of private value chain services can allow private actors to take up the responsible role of processor and trader profitably, without monopolising the value chain too much.

- Building on this model in light of the field experience from the cases, we propose a wider focus in considering food commodity markets. A reductionist approach often adopted for export niche or cash crop value chains seems inadequate for larger food commodity chains. The value chain models previously developed for niche crops may be too limited, not adequately capturing the complexity of food commodity value chains nor the potential to engage larger numbers of poor producers.

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Contributors' profiles

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Jacqueline, CEO of TAHA, is an experienced business and trade professional who has worked through TAHA to promote and develop the horticultural industry, which is now the most effective agricultural sub-sector in the country. She is an MBA graduate of the Eastern and Southern Africa Management Institute & Maastricht University and holds a BSc in Forestry from the Sokoine University of Agriculture. Under her leadership, TAHA has successfully branded the image of the horticultural industry in Tanzania and received the commitment and support from both local and international stakeholders, growing the industry from US $ 1.4 million in 2004 to US $ 358 million today. Her efforts have resulted in the horticultural industry achieving significant development and positively impacting the livelihood of Tanzanians, including the nearly 230,000 women who form more than 65% of workers in the industry. Ms. Mkindi has promoted the mentoring of Tanzanian women pursuing economic activities and linked them with women from around the world to facilitate both knowledge exchange and cultural understanding.

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Regional Markets for Local Development

Smallholder engagement with agribusiness in practice

Editors: Fred Zaal, Jacqueline Sluijs, Aad van Tilburg, Roger Bymolt and John Belt

In 2050, there will be 9 billion people to feed. The world - and particularly developing countries - need to find ways to guarantee food security for all. Can small-scale agriculture contribute to these goals? This book highlights the role of increased smallholder engagement in local staple food markets and bundles the experiences of field practitioners exploring innovative solutions for smallholder market engagement.

It is the outcome of a 'writeshop' with stakeholders from Africa and Asia in which the central question was: to what extent are smallholders able to engage in local and regional markets? Ten cases – on grains, tubers and horticultural produce – reflect the challenges they encounter in practice. On the basis of their stories we map growing local and regional market opportunities. By combining theoretical analysis and practical know-how, we demonstrate the potential of these vibrant and well-functioning markets. The result is a route to achieving sustainable economic development and food security.

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