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Paper:

Under what conditions are value chains effective tools for pro-poor development?



Designing trading relationships that reach and benefit small-scale producers in a sustainable way can be a challenge for practitioners who engage directly with women in agriculture. Understanding the benefits, costs and risks when connecting small-scale producers to formal markets is critical to informing companies, farmers, NGOs and donors in their decision to invest in supply chain opportunities. Key questions include: Who are the rural poor? Under what conditions do they benefit? What are the implications of these lessons for our strategies in setting up 'pro-development' value chains? What do we most need to understand next? This paper seeks to address these questions from not only a review of literature, but from experience with a cluster of value chain projects run by development organizations and businesses in Africa and Latin America. The research conducted by the Sustainable Food Lab and the International Institute for Environment and Development was supported by the Ford Foundation in 2010.

For further information see:
www.sustainablefoodlab.org/projects/ag-and-development and
www.linkingworlds.org

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Part I

Introduction

“Agriculture remains the best opportunity for the estimated 1.5 to 2 billion people worldwide living in smallholder households to work and trade their way out of poverty.”

Agriculture remains the best opportunity for the estimated 1.5 to 2 billion people worldwide living in smallholder households to work and trade their way out of poverty¹. About 85 per cent of the world’s farms are run by small-scale farmers, whose output supports a population of roughly 2.2 billion people (Singh 2008). About three-quarters of the world’s poor (small-scale farmers or producers and wage laborers) are based in

rural areas. Studies show that growth generated by agriculture is up to four times more effective in reducing poverty than growth in other sectors (Båge 2008). Recognition of this fact has brought agriculture back onto the international development agenda. Linking smallholders with well-functioning local or global markets – ranging from local ‘street markets’ to formal global value chains – plays a critical part in long-term



strategies to reduce rural poverty and hunger. Understanding how to link poor producers successfully to markets, and identifying which markets can benefit what kinds of producers, are critical steps for the development community.

This is a dynamic time for agriculture, with competing narratives about the market context for small-scale farmers. One narrative claims that small-scale farms are an anachronism that cannot compete with world markets and large farms in terms of productivity, quality and efficiency. In this view, small-scale farms can compete only with niche, value-added products. Another narrative states that we are headed towards a perfect storm of frequent supply shortages and increasing commodity prices because of a growing population and emergent middle class, climate change and environmental limitations such as diminishing water supplies. Such crises will lead to more opportunities for small-scale farmers. A third interwoven narrative suggests that small-scale farmers in either scenario are critical for local food security and are managers of key environmental services that need to be supported. These narratives highlight important questions about the future role of small-scale producers in global food systems. The questions inform our choice of interventions to increase benefits for the poor.

In this context, one of the areas of market access that many nongovernmental organizations (NGOs) and companies are working on is linking small-scale producers to regional and global formal markets. Formal markets have requirements – including quality, consistency, traceability, food safety and third-party certified standards (Fairtrade, Rainforest Alliance) – that necessitate direct communication and coordination along the supply chain. While these requirements of formal markets raise the barrier of entry for new producers, particularly those with fewer assets, they also present potential opportunities for diversification, income generation and

professionalization. Some poor households can benefit from participation in formal supply chains not just as smallholder producers, but also as wage laborers in production or processing, and as providers in the service markets that support value chains.

Nevertheless, connecting small-scale producers to formal markets is not simple. While small-scale farmers can supply primary and processed produce into local and global supply chains, ensuring that investment in the supply chain delivers both commercially-viable products and value to the smallholder presents several structural challenges. Decades of under-investment mean that small-scale producers in low- and middle-income countries often operate in areas with inadequate infrastructure (roads, electricity, irrigation and wholesale markets). They lack access to skills and services (training, credit, inputs) and are highly dependent on favorable weather. Their scattered locations and varying circumstances require creative solutions to aggregating production and supplying the consistent quality that formal markets require. Due to these challenges, buyers have been biased towards the reliability and consistency of large farmers and suppliers. Ways for small-scale producers to attract buyers, however, can include securing supplies, enhancing corporate social responsibility (CSR) reputation, gaining legitimacy in local markets and creating 'ethical' products.

Third-party voluntary certifications are currently one of the most highly visible efforts to link farmers to markets while creating incentives for environmental and social progress. Certification programs offer best practice standards that simplify a company's engagement in ethical procurement. They also provide a credible communication channel with customers. Impact assessment trails implementation, however. It is important for donors, NGOs, farmers' groups and companies to understand the role of third-party

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certification and the necessity of complementary strategies that can increase the benefits to the poor.

Given the challenge of formal market requirements, a number of questions arise. Can poor producers participate and capture the value in these supply chains? Do small-scale producers really benefit, given the additional costs and risks in these markets? Under what conditions do poor producers benefit? What are the implications for our strategies in setting up 'pro-development' value chains? What do we most need to understand next?

Recent research raises further questions. Humphrey and Navas-Aleman's 2010 review highlights the limited number of quantitative studies able to demonstrate any impact of donor interventions in value chains on the poor. The authors observe that lead firm interventions in particular (those that 'funnel assistance by partnering with lead firms in the value chain') have less impact than market linkage projects (those that 'work with chains without a lead firm'). Furthermore, lead firm interventions focus primarily on business development, with poverty impacts as a mere corollary (Humphrey and Navas-Aleman 2010, 3). In an extensive study, Bolwig *et al.* (2008) find that few interventions and theoretical approaches successfully integrate analyses of 'stand-alone' value chains, livelihoods and environmental factors to understand how value chains affect poverty and sustainability. The analysis by Bolwig *et al.*, integrating the

'horizontal' (the value chain analysis) and 'vertical' (the poverty and household analysis) elements, strongly influences the strategy outlined here.

The purpose of this paper is to draw together preliminary conclusions and open questions based on our own experience and a broad literature review of the impact of participation in formal value chains on the livelihoods of poorer producers. This is a critical topic for donors and NGOs as they consider the effectiveness of investment strategies. This discussion is also relevant for companies seeking to contribute to the Millennium Development Goals through their sourcing practices.

The paper is organized around the following focal questions:

- Who are the rural poor?
- What conditions affect how producers interact with formal markets?
- Do poor producers benefit from participation in formal value chains?
- What are strategies for leveraging market access opportunities to increase development impact?
- What have we learned about the processes with the best results?
- What conclusions can we draw?
- What outstanding questions remain?

Part II

The case for development impact through formal market value linkages

2.1 Defining ‘the poor’

Small-scale farmers are a large subset of the world’s farmers, although clearly not all small-scale farmers are poor (Murphy 2010). Roughly 75 per cent of the 1.2 billion poorest people in the world live in rural areas. Small-scale farmers are a large subset of the rural poor.

Small-scale producers and poor farmers are often characterized by a large degree of marginalization, lacking access to natural resources (both land and inputs), technologies (including irrigation), capital markets and credit. Geographic marginalization restricts the ability of these producers to buy inputs and sell produce, an isolation deepened by lack of access to motorized transport. Low levels of skills also may restrict opportunities for individuals and households.

A recent study looking at the rural poor in Africa highlights the heterogeneity of situations facing rural households (World Bank 2010). Food insecurity persists for the poorest households and household investment capacities are extremely limited. The study finds that adaptation strategies must include diversification of activities and incomes. Although the study identifies important roles for non-farm activities (wage labor and self-employment), on-farm activities continue to provide the main share of household incomes.

The location of small-scale producers within the spectrum of rural poverty has been described using the ‘rural worlds’ rubric (Vorley 2002). The Organisation for Economic Co-operation and Development – Development Assistance

“Adaptation strategies must include diversification of activities and incomes.”

Committee (OECD-DAC) reference document on pro-poor growth in agriculture (2010) describes five rural worlds:

Rural World 1 – large-scale commercial agricultural households and enterprises.

Rural World 2 – traditional landholders and enterprises, not internationally competitive.

Rural World 3 – subsistence agricultural households and micro-enterprises.

Rural World 4 – landless rural households and micro-enterprises.

Rural World 5 – chronically poor rural households, many no longer economically active.

Understanding these rural worlds is critical when developing appropriate value chain opportunities and in implementing strategies for leveraging those opportunities to increase benefits. For example, in a study of east African grain markets, researchers found that over 50 per cent of the grain production came from just 1 to 2 per cent of the farmers (Jayne *et al.* 2008).

Thinking strategically about rural worlds and assets

Segmenting these different rural worlds through a markets lens helped Ferris and Seville (2010) to propose segmentation of development interventions (see Figure 1):

A detailed understanding of the different rural worlds in a particular context can help identify opportunities for improving incomes that are targeted towards necessary producer upgrading and realistic supply chain adaptation. Further insight into characteristics of the rural poor and who participates in markets can be gained by looking at livelihood assets.

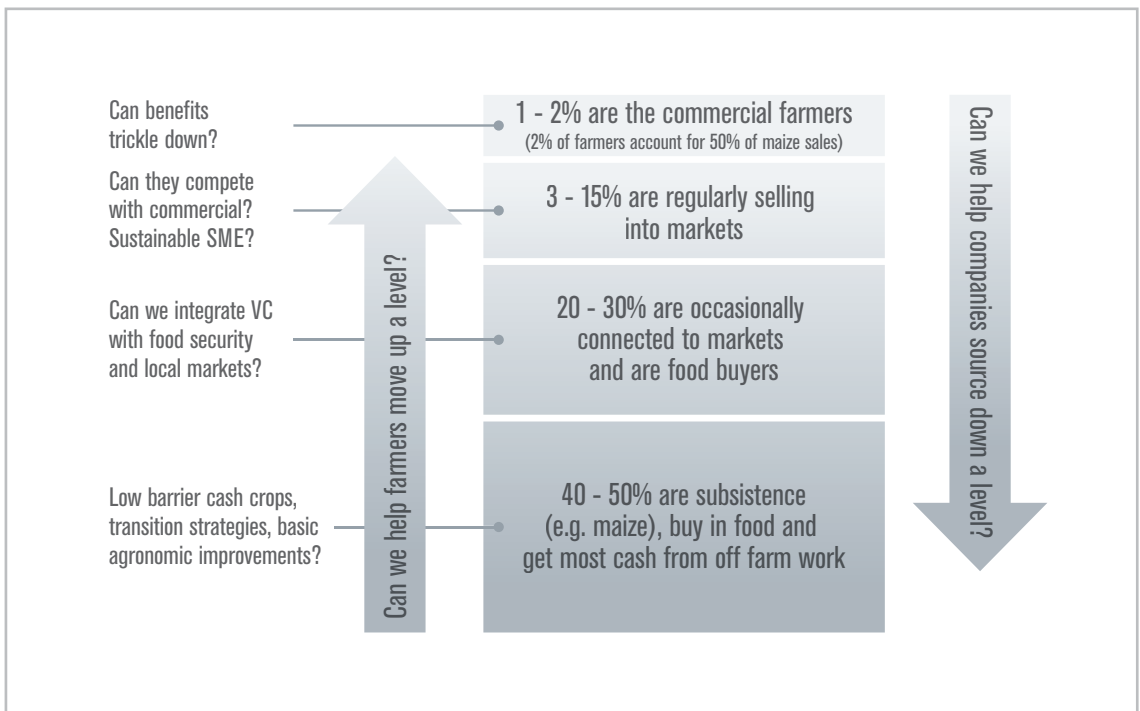
Livelihood assets

Studies on the benefits of supply chain participation suggest that a producer’s assets are a critical factor in their ability to participate in and

benefit from formal markets. Assets can be seen through three lenses. First, identifying pre-existing assets is important for evaluating the likelihood of a producer benefiting from a trading opportunity. Second, understanding the gap between available assets and those necessary to successfully benefit in the long-term in a particular market is critical to designing the upgrading strategy. Finally, assets themselves are an indicator of poverty and thus a useful metric for evaluating and monitoring the impact of value chains on poverty.

‘Assets’ cover all the livelihood capitals including human, physical, social, cultural, natural, financial and political. Certain ‘productive assets’, such as natural, financial and human capital, are widely regarded as key to inclusion in value chains. The Sustainable Livelihoods Framework reminds us that both the use and effectiveness of these capitals is mediated through social, environmental

Figure 1. Market participation classes of farmers



and economic processes and institutions (see Figure 2 below). Livelihood strategies thus should be considered holistically and interventions in value chains should be context specific.

2.2 Who participates in formal value chains?

Formal markets can reach poor producers in two ways. The first mechanism is active, whereby a producer or producer organization will seek to supply products or labor in a new supply chain. The second is involuntary, occurring when an existing market that a farmer has been supplying – usually a domestic market – starts to modernize and restructure, and adopt new conditions of market participation. There is debate around the active mechanism centering on inclusion. The debate regarding the involuntary mechanism is mainly about exclusion. Both mechanisms,

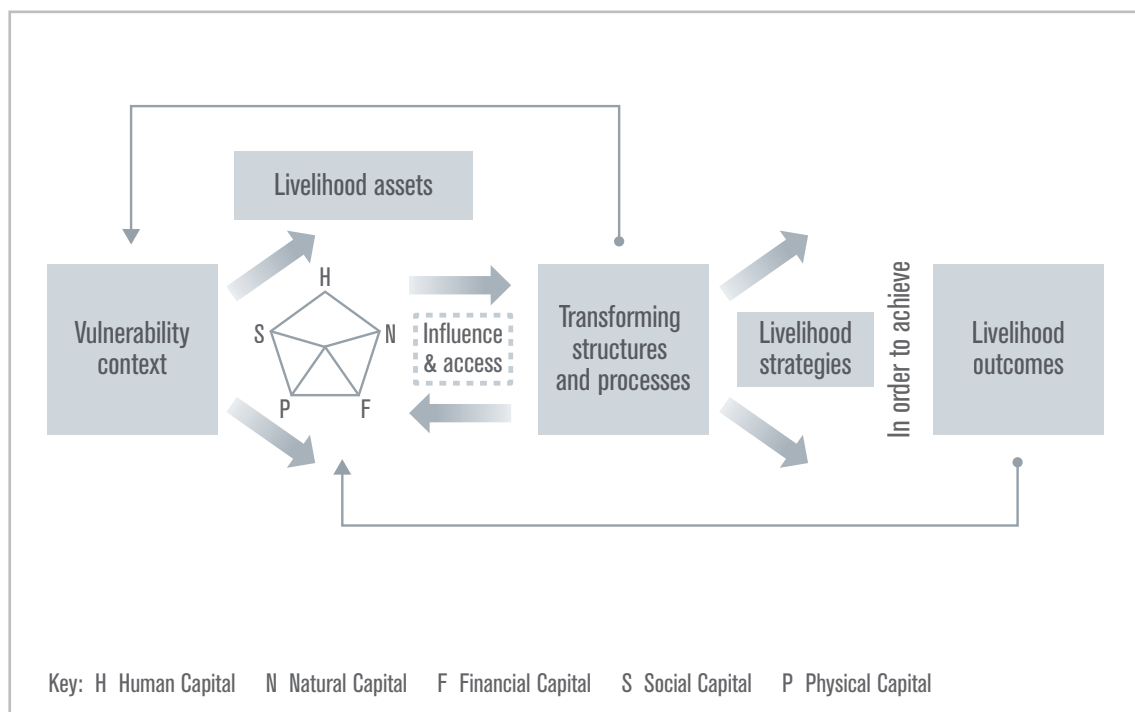
however, present producers with options to ‘step up’ (to formal markets), ‘hang in’ (to informal markets) or ‘step out’ (Dorward 2009).

2.2.1 Formalization and exclusion

Data on who is excluded from formal and restructured chains was produced by the *Regoverning Markets* program, coordinated by the International Institute for Environment and Development (IIED).² An empirical analysis of 10 domestic chains in eight countries gives the following insights (Huang and Reardon 2008):

- Overall, the evidence of excluding small farms measured by farm size (e.g., land area for crops and herd size for livestock products) from market restructuring was mixed. Four cases (out of ten) showed evidence of small farms being excluded from emerging modern markets.

Figure 2. Department for International Development’s Sustainable Livelihoods Framework



- There was substantial evidence of non-land assets determining the participation of small-scale farmers in restructured channels. This was strong for productive capital/assets such as irrigation for crops or cooling tanks for dairy.
- Only half of the studies showed that farm associations or cooperatives facilitated their members' participation in modern markets; the other half showed either no impacts or negative impacts.
- Generally, better road and marketing infrastructure facilitated participation of farmers in modern market channels.

A more recent study on market conditions in Africa suggests that the spread of integration and contracting processes, linked to the global restructuring of agrifood markets, remains limited (less than 5 per cent of farms in sub-Saharan Africa). However, strong processes of economic differentiation among rural households are related to market access, natural resources and assets of the economic agents.

Export markets may exclude small-scale producers through new buyer standards. In Kenya, between March 2005 and September 2006, after the introduction of compulsory GLOBALG.A.P. (Good Agricultural Practice) certification, a survey carried out by Graffham *et al.* (2009) found that 10 exporters controlled over 50 per cent of the Kenyan export horticulture market. The survey found a 60 per cent drop in formal participation of small-scale growers in these companies' supplier networks. The authors suggest that the primary reason for this decline is financial, rather than technical. GLOBALG.A.P. certification requires far more capital than many small-scale farmers can afford on their own (Graffham *et al.* 2009).

Exporters and chain intermediaries can play a significant role in influencing inclusivity. In the Kenya study, the most successful exporters (measured in terms of numbers of small-scale

grower suppliers) provided a significant share of the costs of GLOBALG.A.P. compliance. Although evident that costs are associated with standards, it is striking that the meaningful inclusion of small-scale farmers is still a possibility. We need to re-think our idea of the 'costs' of adherence to standards. Sharing the costs and benefits of standards and certification between two private sector investors – producer and exporter – can create a sustainable trading relationship (Blackmore and MacGregor 2010). In Senegal, this story of standards and rural incomes has increasingly become one of wage labor on estates, which challenges the use of the term 'exclusion' (see Box 1).

Box 1

Standards and smallholders

Maartens and Swinnen's (2006) extensive study of the impacts of standards on green bean producers in Senegal found that despite increasingly strong EU food standards, Senegal's exports to the EU had grown sharply over the previous decade. They found that tightening standards had induced structural changes in the supply chain, including a shift from smallholder contract farmers to large-scale integrated estate production. Participation in contract farming was increasingly biased towards households with more land and labor. Poorer producers were able to participate as wage laborers and gain significant benefits compared to those not participating in formalized markets and value chains.

Maartens and Swinnen 2006

2.2.2 Formal value chains and inclusion

In some cases, companies reach out to include small-scale producers. Walmart and Unilever have recently made such public commitments. Many of

these efforts of inclusion reach significant numbers of the poor.

A scan of active projects where access to household data was available shows the range of producers engaged in these markets. For example,

Box 2

Comparing formal and informal markets within Kenya

Neven et al. (2009) surveyed 115 farmers (49 supplying the supermarket channel in Kenya and 66 supplying traditional channels). The two leading supermarket chains in Kenya together sold 90 per cent of the produce distributed through supermarkets in 2004. It was estimated that only 400 farmers supply this market directly.

Key findings:

- *Supermarket-channel farmers are within 100 kilometers of Nairobi, whereas traditional market suppliers are clustered in areas specific to a given item of produce.*
- *Supermarket-channel farms are five times larger, on average, than traditional-channel farms (9-18 hectares versus 1.6-2.4 hectares). Both are distinct from the large-scale, plantation farms in Kenya. Smaller farms within this channel tend to have higher levels of organization for aggregating produce. They are confined to supplying stores close to their farms rather than into the main procurement system of the supermarkets.*
- *Supermarket-channel farmers have less land under cultivation but a larger proportion under irrigation. In this case, supermarket farmers have 75 per cent under irrigation while traditional farmers have only 18 per cent. This finding equates with the demand of the supermarket channel for year-round supply. Supermarket-channel farmers are also more diversified, producing twice the number of crop types than traditional farmers.*
- *In terms of physical capital, supermarket-channel farmers all have mobile phones, 90 per cent have their own means of motorized*

transport, and a large percentage have advanced irrigation systems and a packing shed. This high capital-to-land ratio can be linked to the more demanding requirements of supermarkets in terms of quality standards, volumes and consistency.

- *Supermarket-channel farmers use far more hired labor on average. In kale production, for example, 79 per cent of the permanent farm workers on traditional farms are family members, while on supermarket farms, 79 per cent are hired employees.*
- *Supermarket-channel farmers have higher levels of education (often a secondary education) while traditional farmers only have a primary education.*

The authors conclude that a 'threshold capital vector' – which includes physical (especially transport, irrigation, and information and communication technologies), financial, human and organizational capital – influences farmers' ability to successfully produce and market in the supermarket channel.

Only 15 per cent of those farmers supplying to supermarkets also supply to export markets.

Neven et al. 2009

a 2007 study by Green Mountain Roasters looking at coffee producers in Central America – cutting across all certifications – shows that at least 50 per cent of the producers struggle with three or more months of hunger each year. In an ongoing New Business Model project in Ethiopia, a household analysis of over 10,000 producers of navy beans for export shows producers living in a declared food-insecure zone, with annual incomes ranging from US\$300-900 per year (Sustainable Food Lab 2009). A recent baseline study of producers in Côte d'Ivoire (part of the Sustainable Food Laboratory New Business Model Project looking at Rainforest Alliance certification of 37,000 producers in Côte d'Ivoire using the COSA framework) shows they had incomes around US\$360-376 per year, with 40 per cent of the certified and 55 per cent of the uncertified households reporting food insecurity. On the other hand, a more technically demanding value chain, linking smallholders in Kenya to retailers in the UK for the cut flowers market, measured financial assets of US\$7,000 per household.

So, while there is great variability in the assets, incomes and food security of producers engaged in formal markets, this set of examples certainly demonstrates that the poor – at least as defined by food insecurity and dollar a day income – can participate in value chains.

Assets are key to positive participation

Both the literature and project experience tell us that access to assets by poor households, and their ability to accumulate and use those assets effectively, are critical to their participation in value chains and their ability to benefit from participation (McKay 2009). This has two major implications when it comes to creating inclusive markets. First, pre-existing assets improve the likelihood that producers will benefit from a trading opportunity, raising the importance of appropriate matching of capable farmers with market opportunity. Second, understanding the gap between available assets and those necessary to benefit successfully in the

long-term in a particular market is critical to designing a strategy to expand participation to those with fewer initial assets.

Bolwig *et al.* (2008) consider the range of ways in which poverty can be assessed, including livelihoods (incomes and assets), incomes and resources (cash and assets), capabilities, experiences, meanings, expectations (a subjective

Box 3

Participation in the organic coffee chain in Nicaragua

A study (Donovan 2010) exploring the effects of certifications in the Nicaraguan coffee market found that producers starting with relatively high levels of assets (natural, financial and human capital) received significantly positive benefits from organic certification. These producers made up a minority (20 per cent) of the sample group and were relatively well endowed with:

- *natural capital (more than 10 manzanas (about 7 hectares) in coffee production)*
- *financial capital (income and access to larger credit for investing in fertilizer and labor)*
- *human capital (ability to experiment and learn for increased productivity).*

Producers starting with lower asset endowments benefited only marginally from participation in organic certification. These producers made up the majority (80 per cent) of the sample group and were unable to take advantage of the opportunity provided by the interventions. Producers transitioning from conventional to organic production methods faced a period of asset de-accumulation resulting from declining productivity and lack of access to financing.

Donovan 2010

assessment by producers themselves) and the existence of chronic, persistent or structural poverty. Elements of each of these can be seen across the range of evidence-based studies employed in the report. We will focus primarily, however, on the assets and livelihoods approach to poverty in an effort to understand the extent to which different asset configurations enable access to and benefits from value chains.

Poor households may not be able to participate in or benefit from participation in value chains unless they have access to and the ability to use (and accumulate) certain assets effectively (McKay 2009). Market linkage projects often seek to build or strengthen weak assets. Assets may be substitutable and it may be possible to design interventions to compensate for weak or non-existent assets. Unorganized farmers can benefit significantly from contract farming schemes (Gibbon *et al.* 2009; Minten *et al.* 2005). Value chain interventions often offer a range of ancillary benefits and services that build human and natural capital (see following sections on human and natural capital below). It is further important to consider the impacts on labor of those employed by producers and other chain actors (Maartens and Swinnen 2006; McCullough and Ota 2002; Neven *et al.* 2009; Hendriks and Msaki 2009).

Box 2 outlines the findings from an extensive study comparing participation in traditional markets with domestic supermarket channels in Kenya in 2004 (Neven *et al.* 2009). The study's quantitative findings highlight some of the key differences between formal and informal market participation.

From the literature, it is possible to draw a number of conclusions and trends on the profile of producers that benefit from formalized market participation.

Beneficial value chain participation tends to be linked to strong levels of natural capital

Natural capital includes size of landholding, access to water, type of crop, level of productivity

and other factors. Barham and Chitemi's 2009 study of smallholder farmer groups in Tanzania found that access to a reliable water source was strongly correlated with market improvements for 84 per cent of groups. The evidence clearly shows that groups relying solely on rain-fed agriculture have fewer opportunities to exploit market potentials and improve their situation.

Commodity type may influence whether smallholders benefit, since certain crops have greater market potential. For example, while cereals and legumes are the traditional staple food crops for many smallholders, these crops tend to offer regional and international market potential only when grown on a large scale (Barham and Chitemi 2009). In this study, only four out of 14 groups promoting cereals/legumes as an agro-enterprise improved their market situation.

Low natural capital may lead poor producers to participate as wage laborers in value chain activities

A comparison of formal (supermarket) markets and informal (traditional) markets in Kenya showed that farms supplying to formal markets were on average five times larger than those supplying to informal markets (Neven *et al.* 2009). However, at 9 to 18 hectares and 1.6 to 2.4 hectares respectively, these farms were still distinct from large-scale commercial farms. Moreover, supermarket-channel farmers had less land under cultivation but a far greater percentage under irrigation. A lack of access to land often means that poor people participate as workers, leading to increased human capital with increasing employment opportunities (Mitchell and Shepherd 2006).

Improved access to credit and income from value chain participation can lead to increased natural capital

Donovan's (2010) study of Nicaraguan coffee producers demonstrated an increase in average total area under coffee production of 6.34 per

cent for organic growers. The two major contributing factors identified were increased income from the sale of coffee and increased credit from the exporter in the form of long-term loans with a three-year grace period.

High levels of social capital can support links to formalized markets through aggregation and facilitate scale-up

Social capital, through associations or through group-savings schemes, can be used to help accumulate the funds necessary to enter export markets (Mitchell and Shepherd 2006). Evidence has shown that more mature groups (already existing before a market intervention) with strong internal institutions, functioning group activities and a good asset base of natural capital are more likely to improve their market situation and take advantage of market opportunities (Barham and Chitemi 2009).

In situations where most farmers are unorganized, additional social organization is needed to facilitate access to a value chain. Contract farming systems also exist to work with unorganized farmers, however, and it is not always necessary to force organization onto producers. In a Madagascar case study, where only 27 per cent of farmers were part of a farmer organization, an extensive contract farming system was implemented with high levels of monitoring and enforcement of good agricultural practices (Minten *et al.* 2005). This led to significant benefits for the farmers involved.

High levels of geographical marginalization necessitate co-investment in road and transport infrastructure

Strong transport links or proximity to market hubs is shown to be important in a number of cases. In Kenya, most of the vegetables sold in

Box 4

Paying too much for income security?

A recent study by Michelson et al. (2010) argues that too much weight is placed on the value to the producer of reduced risks in contractual relationships with international retailers. A comparison of prices offered by Walmart and traditional markets in Nicaragua indicates that the mean price offered by Walmart was significantly lower than the traditional market and thus ‘farmers may be paying too much for this implicit insurance against price variation’.

Farmers selling to supermarkets are shown to incur the same standard transaction costs as they would selling to traditional markets, in addition to the cost of processes required specially by the supermarket, including sorting, grading, cleaning and packing. The gap in mean prices between the Walmart and traditional market price was 34 to 54 per cent (as a per cent of the Walmart price). Walmart’s supply

network facilitates participation by farmers who would otherwise lack the capital to transport product to the central market in Managua. This means the company can take advantage of the significant price margins separating the city from the countryside (spatial segmentation).

Walmart therefore assumes the transportation costs and logistical risks of sourcing the crop in the field. One concern is that farmers who cannot secure funds to rent or purchase transportation do not have direct access to central markets and, in the face of limited competition among farm gate wholesalers in rural output markets, often have little option but to accept the lower prices offered by Walmart traders at the farm gate.

Michelson et al. 2010

supermarkets in Nairobi are produced within a 100-kilometer band around the city. By contrast, traditional markets are clustered around certain areas for a given produce item (Neven *et al.* 2009). Good physical capital (in the form of transport links) was necessary for inclusion in export markets in the Madagascar case (Minten *et al.* 2008). Bad road infrastructure was regarded as a significant constraint to increasing the number of farmers engaged, as only farmers within a 120-kilometer radius were able to participate. Lecofruit, the exporter intermediary, often engages in road maintenance itself. McCullough and Pingali from the Gates Foundation (2010) make the point, however, that 'infrastructure costs are high [and] not all donors have a role to play in addressing rural transport infrastructure constraints'.

Indeed, in their study of guava farmers in Mexico, Berdegué *et al.* (2006) found that the most important determinant of access to more modern markets was 'territorial (spatial) context and the way in which those territories interact with different markets'. Having fixed capital assets was also a key determinant. In contrast, access to land, education and participation in organizations were shown to be less significant determinants of market interaction.

Financial capital is key to the ability to use and apply a range of capitals, particularly in modern value chains where investments in standards, certifications or other product requirements are necessary to gain entry to the market

A lack of financial capital has been shown in Kenya to prevent smallholders from participating in global value chains because they lack the means by which to certify their produce, as required by European retailers (Mitchell and Shepherd 2006).

The study of the impact of GLOBALG.A.P. certification on exporters in Kenya suggests that the primary reason for this inability to participate in

Box 5

Benefits of supermarket- versus traditional-market channels in Kenya

Neven et al. (2009) conducted a study based in Kenya comparing the profile of producers and benefits of participating in local traditional-market channels versus local supermarket (formalized) channels.

The traditional channel was found: (1) to be much longer (with more intermediaries along the chain); (2) to give a smaller proportion of the marketing margin to the farmer; (3) to have higher transaction costs (produce changes hands many times via spot markets); and (4) to give brokers stronger market power, leading to significant power imbalances.

By contrast, the supermarket channel was shown (in the case of kale): (1) to be direct; (2) to allow the farmer to capture a greater share of the marketing margin; (3) to be more efficient, with reduced transactions (generally consisting of contractual relationships); and (4) to be controlled by supermarkets rather than brokers.

The positive effects of supermarket participation are shown by the high growth in participation between 1999 and 2004, with participating farmers increasing by 104 per cent, compared to only 10 per cent increase for traditional-market farmers.

Neven et al. 2009

GLOBALG.A.P.-compliant export markets is financial rather than technical (Graffham *et al.* 2009). GLOBALG.A.P. certification is likely to require far more capital than many small-scale farmers can afford on their own.

Human capital in the form of skills and education was a key characteristic arising in comparative studies on participants versus non-participants in formalized value chains

Relatively high levels of education characterized the farmers engaged in export in both the Madagascar (Minten *et al.* 2005) and Senegal (Maartens and Swinnen 2006) case studies. The Kenyan comparative study of traditional- and supermarket-channel farmers showed the latter as higher educated, with secondary as opposed to primary levels of education. Low human capital leads to high training costs and slows down growth and expansion, according to Minten *et al.* (2005) in their study of a contract farming scheme in Madagascar.

Finally, it is necessary to consider the impact of fixed capital assets on market participation. Hernandez (2009) shows that irrigation – which allows farmers to supply all year and attain greater productivity and consistency – is a key determinant of participation in supermarket channels for tomatoes in Guatemala.

2.3 Do poor producers benefit from participation in formal markets?

Poor households can be incorporated into, and often benefit from, formal markets in three primary ways: (1) through product markets as producers, (2) through labor markets as wage laborers, and (3) through service markets as providers of services to the chain.

Most of the available literature focuses on rural poor as producers, with a limited number of studies on the potential of labor markets linked to value chains (Maartens and Swinnen 2006; Neven *et al.* 2009; Minten *et al.* 2005) and the role of poorer households as providers of services to the chain. As such, the following sections focus primarily on the role of the poor as producers, although we

include reference to some studies on labor impacts. Less is said about the role of producers as service providers. This is currently a gap in the knowledge and literature, which is of increasing interest to both practitioners and researchers.

The greatest common body of work has focused on the impact of Fairtrade certification. Many of the broader value chain studies do not include baseline data or propensity scoring. It is therefore not possible to draw conclusions and identify trends based on quantitative evidence. Humphrey and Navas-Aleman's (2010) study of the pro-poor impacts of donor interventions in value chains highlights the limited number of quantitative studies of the impact of these interventions on the poor.

2.3.1 Impacts on the rural poor as producers

Many assumptions are made in the literature about the benefits to producers of participation in formal markets. These usually point to improved access to markets, improved income security and increased returns through participation. A review of the literature suggests that while some producers certainly experience these benefits, there are situations where other benefits are even more critical for improving the livelihoods of producers in the long-term, and yet other situations with complex and seemingly contradictory mixes of benefits.

2.3.1.1 Income security and stability

Many studies based on farmer perceptions point to increased stability as the primary driver for engaging in contracts and formalized markets (for example Singh 2008; Minten *et al.* 2005; Neven *et al.* 2009). Minten *et al.* (2005) found that although 61 per cent of farmers believed that the contract price was on average lower than on the local market (though this was untrue), they continued to

sell through the contracted channels with minimal evidence of side-selling. In fact, evidence of 'selling in' was more common, with farmers using additional plots to supply the contract.

Formalized market suppliers tend to have greater certainty about when the sale will take place and at what price. As a result, they have increased income security through contractually defined payments or guaranteed income. These markets also tend to involve bigger volumes (Neven *et al.* 2009).

In Madagascar, seasonality smoothing was shown to be a key benefit for green bean contract farmers, with lean periods shortened (Minten *et al.* 2005). The importance of this to farmers is shown by the fact that 75 per cent of farmers said that access to a source of income during the lean period was a major reason for signing the contract. A higher income was mentioned as a reason by a relatively low number of contractors.

Michelson *et al.* (2010) show that farmers in Nicaragua suffer from significantly less price volatility in supplying to Walmart (though they are paid on average lower prices; see Box 4).

As would be expected, Fairtrade results in greater stability through its guaranteed minimum price and longer-term trading relationships. This was reported in 27 of 33 cases reviewed on the impact of Fairtrade (Nelson and Pound 2009). In seven case studies (Murray *et al.* 2003), Fairtrade improved the wellbeing of farmers and individuals, protecting them against highly volatile price fluctuations.

Jaffee (2007) notes that Fairtrade farmers, though still affected by market fluctuations, receive positive economic benefits from the guarantee that a fair price is available to them, which enables them to make longer-term investment decisions.

2.3.1.2 Higher returns

Higher returns for farmers can result from

increased prices for cash crops, higher productivity or both. In some cases (though not the general rule), poor producers are offered better prices for their products in formalized markets (Gibbon *et al.* 2009). An analysis of Fairtrade impact studies over the last decade shows higher returns and more stable incomes as clear benefits to producers (Nelson and Pound 2009), with 29 of the 33 cases examined reporting higher incomes from the Fairtrade price.

However, as detailed above, many studies show that higher incomes are not as important as income stability (for example Singh 2008 and Minten *et al.* 2005) or ease of selling with reduced transaction costs and reduced market risks (Neven *et al.* 2009).

In examining the impacts on farmers of participating in modern channels, the Regoverning Markets program included two cases (dairy in Poland and strawberries in Mexico) that found that participating farmers had more overall market channel choices, which had a positive impact on their net income. The other case (tomatoes in Indonesia) also found that modern channels had positive impacts on capital inputs. The impacts were not statistically significant in six cases and statistically negative in one case (Huang and Reardon 2008).

Neven *et al.* (2009) found that supermarket-channel farmers in Kenya have the opportunity for greater forward integration along the value chain, which allows them to capture more of the marketing margin (see Box 5). This is seen particularly in the case of access to transport; traditional-market farmers lack access and must rely on intermediaries. Neven *et al.* also found that for individual farmers currently supplying to the traditional market, no positive net income would result from a move to the supermarkets because, given the small volume, the transport costs would be prohibitive. Although traditional-market farmers might have an option to supply collectively, these groups suffer from a lack of experience in

marketing produce. Risk aversion deters these farmers from selling to buyers further downstream. Greater vertical integration in this case led to higher margins but was restricted by the level of assets that the producer had access to.

In Senegal, green bean contract farmers have incomes 2.4 to 4.1 million FCFA (about US5000-9000) higher than non-participating households (Maartens and Swinnen 2006). Participants in horticulture export production (as wage laborers or producers) have incomes that are 50 to 130 per cent higher than the average income in the research area.

A recent study by Gibbon *et al.* (2009) on the revenue effects of smallholder participation in a contract farming scheme for organic cocoa shows how farmers can be incentivized to undertake more of the value-added, processing activities within a chain through price premiums. The study is based on an ESCO Ltd contract scheme in Uganda that had over 1700 smallholder cocoa farmer suppliers in 2005. ESCO employs various incentives to enable and induce growers to comply with its organic and quality standard, including a price premium. The price premium is paid only for cocoa that has been fermented. The study shows how this incentivized upgrading led to increase in household revenue compared to non-participation in the scheme. Moreover, 97 per cent of farmers undertook the fermentation process, compared to 47 per cent of farmers in the conventional market, despite the increased risks and investments needed at the producer level.

Donovan (2010) demonstrated an increase (6.34 per cent) in area under coffee production for Fairtrade and organic coffee growers in Nicaragua due to increased incomes and credit in the form of long-term loans.

2.3.1.3 Improved productivity

Participation in formal value chains with standards or certification can lead to improved productivity.

Minten *et al.* (2005) show that participation in contract farming with standards led to increased on-farm monitoring and improvement in the use of compost and fertilizers. In Madagascar, farmers benefited from information on how to make compost and improve the long-term fertility of the soil (many farmers did not know how to use compost before this). Other benefits arose from changing the way they cultivated their other off-season crops (93 per cent) and using compost and inputs on these (90 per cent), doing more weeding (70 per cent) and increased productivity of neighboring crops such as rice (64 per cent) (Minten *et al.* 2005).

Neven *et al.* (2009) show that farmers supplying Kenyan supermarkets use, on average, twice the amount of inputs (fertilizer, manure, chemicals) per hectare as traditional channel farmers. Yields per hectare and per worker are therefore higher in the supermarket channel. No difference, however, in the production costs per unit of harvest between the two groups of farmers was found. Although traditional farmers incur only limited market costs (selling to brokers at the farm gate and not incurring transport costs), supermarket-channel farmers receive a price that is more than three times the average farm gate price, giving a 40 per cent higher profit.

The study shows that higher capitalization leads to greater land productivity and greater labor productivity, respectively 59 and 73 per cent higher for supermarket- than traditional-market farmers. Traditional-market farmers use more labor per hectare in production because of the abundance of family labor relative to small farm size.

A comparative study of the impact of Fairtrade on coffee and banana producers in Costa Rica, Ghana and Peru by Ruben *et al.* (2008) shows that, in most cases, involvement in Fairtrade increased output and/or yield of their key crops. They also found a positive effect on average net household income for most Fairtrade situations.

On the other hand, Donovan's (2010) study of

Nicaraguan coffee growers demonstrates reductions in productivity for organic producers where fertilizer is not used. In this study, producers transitioning to organic practices suffered from serious reductions in productivity and asset de-accumulation. While productive improvements are often associated with participation in formal chains, they cannot be assumed.

2.3.1.4 Improved quality

Suppliers to formalized markets are often required to provide higher quality produce than those supplying to informal markets. Many buyers therefore combine purchase contracts with farmers with extensive technical assistance and provision of inputs to improve quality. This is seen clearly in the Madagascar case study (see Box 9).

Moreover, many contract schemes provide incentives for quality and performance; the firm will only pay for products that fulfill the quality specifications (Minten *et al.* 2005; Gibbon *et al.* 2009). Produce not sold is used for home consumption, sold on the local market or used as animal feed.

The evidence, however, is mixed in the case of coffee. Nelson and Pound (2009) found that in only 4 of 33 Fairtrade cases did involvement with Fairtrade lead to quality improvements. While the Fairtrade market offers long-term relationships with roasters that emphasize quality and provides support for quality improvement, the structure of the Fairtrade system (including how prices are shared among farmers) lacks emphasis or rewards for quality.

The relative lack of evidence of certification and formal chains leading to improvement in quality is interesting given the evolution of Fairtrade to focus on more specialty markets. Quality performance is critical to market access in many crops; if quality improvement does not come about as a result of market participation, it needs to be addressed clearly in the upgrading strategy.

2.3.1.5 Access to services, including credit, inputs, and technology

The studies included in sections 1.3.1.3 and 1.3.1.4 above, under the headings of 'Improved productivity' and 'Improved quality', highlight the positive benefits associated with improved inputs and access to services. The provision of these services is seen in many cases in which smallholders are linked into formalized markets through contracts. For example, increasing access to credit, inputs and technology was shown as a clear benefit in the Madagascar case, leading to improved productivity as well as technology spill-over in other crops (Minten *et al.* 2005). Donovan (2010) also demonstrated a 50 per cent increase in access to fertilizer through access to credit provided by the exporter.

Fairtrade case studies show that this mechanism has performed very well in terms of increased access to credit. Fairtrade requires longer-term contracts and a right to request pre-shipment credit. In addition, several socially responsible lenders are focused on serving the Fairtrade community.

2.3.1.6 Reduction in vulnerability and risk

Reduction in vulnerability is linked closely to increased income security and stability. Researchers often assume a link between increased income stability/security and reduced risk for households. The literature, however, is beginning to question this widely held assumption (e.g. Michelson *et al.* 2010) and the extent to which risk-diversification strategies can be built into value chains. For example, innovative pricing structures (whether based on fixed or dynamic pricing) can be integrated into supply chain practices. This offers benefits to farmers through reducing risk, providing access to credit and enabling long-term planning (Buxton *et al.*, forthcoming).

Variability has been found in the impact of Fairtrade supply chains on reducing vulnerability. Some studies show that having more stable trade and access to credit has led to increased investment in land and other stable assets. Some case studies report that increased incomes have led to investments in diversified economic or home gardening activities. Other studies show that increased income from the Fairtrade crop has led to increased investment in that household activity, with increased dependency on the success of that market and therefore higher vulnerability (Nelson and Pound 2009).

Certification schemes can act as financial safety nets in times of low market prices through improved buying relationships and minimum price guarantees (in the case of Fairtrade) (Blackmore and Keeley 2010). Value chains also can act as a social safety net and source of credit, as shown in Donovan's (2010) study of organic and Fairtrade certified coffee producers in Nicaragua. The exporter, Soppexcca, provides a number of 'vulnerability reducing services', including access to higher-value coffee markets, access to technical and wider project support (such as healthcare and education scholarships) and access to credit and emergency credit. These benefits were a result of the exporter's practices, not Fairtrade certification requirements. The clear benefits felt by producers was demonstrated by the fact that most producers continued to sell to the contracted buyer despite intense competition for green coffee on the open market.

Presumptions of reduced risk associated with increased income security have not been tested and measured extensively in the literature. For example, much of the literature does not test decreased marketing risk following a contractual relationship with a supermarket. Michelson *et al.* (2010) have recognized this gap and undertaken a study on mean income and risk based on contracts offered by Walmart in Nicaragua. They found that farmers were receiving a fixed price below the mean price of the traditional markets

and may be paying too much for the income security provided by the contract.

Much of the evidence on risk is based on surveys of farmer perceptions. For example, Hernandez *et al.* (2007, 34) found that supermarket-channel tomato farmers in Guatemala prefer the more demanding wholesale-supermarket channel 'because it offers a lower risk and lower transaction cost outlet for the variety of their qualities and grades, all year'. Many of the perceptions on income security also support this conclusion (see section 2.3.1.1. above).

2.3.1.7 Food security

Positive spill-over effects on food security crops is demonstrated in Madagascan contract farming of French beans for export markets (Minten *et al.* 2005). Rice productivity is 64 per cent higher on plots with a contract compared to those without. This may be linked to improved agricultural practices.

Hendriks and Msaki's (2009) study of the impact of smallholder commercialization of organic crops shows significant improvements in food diversity and sufficiency in sourcing household food for farmers participating in commercial, certified markets (see Box 6). Méndez *et al.* (2010) found that the results are complex for coffee producers in Central America. In this study, higher crop incomes are clearly the dominant experience for the Fairtrade communities, yet the authors found no improvement in food security. Rather, income diversification in conjunction with Fairtrade certification was shown to have a significant and positive effect on reducing food insecurity.

2.3.1.8 Social premiums

One of the defining mechanisms of the FLO certified Fairtrade system, and one that is often used in private chains to increase returns to producer communities, is a social premium. A

Box 6**Food security in South Africa**

The Ezemvelo Farmers' Organization (EFO) is a group of traditional organic farmers that produces and markets certified organic produce to South African supermarket chains. EFO pools green beans, baby potatoes, sweet potatoes and amadumbe (taro) grown by its member farmers, and sells these products to a pack house, which markets fresh organic produce to a major retail chain.

The average farm size is 0.7 hectares. The average household income is R2809 (US\$449 in 2004) per month, of which R449 is generated through farm activities. Farm income for certified organic farmers is higher than that for non-certified farmers.

Household food is sourced through purchases, gifts, food given as payment and/or own production. More than 70 per cent of food is purchased. Despite increased production and the active sale of agricultural produce, only 7 and 26 per cent of food consumed came from farmers' own production in November and March 2004 respectively.

Key findings:

- *Certified member households benefited from increased agricultural income in terms of food diversity and adequacy, showing that increased agricultural incomes directly affected dietary diversity and nutrient intakes.*
- *Comparisons of dietary diversity and the adequacy of nutrient intakes showed that engaging in commercial production of organic produce led to positive consumption changes for EFO members over non-members, and even more so for certified members over the partially certified members. Further, this was particularly true in the second survey round, performed at harvest time for the key root crops sold to the niche market.*
- *Concerns remain over seasonality and its impact on nutritionally adequate diets. This highlights the importance of EFO and the Embo community investigating crops and production improvements to smooth consumption and incomes, in particular, improvements through diversification of crops and investment in technology such as irrigation to extend production into the drier periods of the year.*

Hendriks and Msaki 2009

social premium is a flow of money that is returned to producer communities, usually through a producer cooperative, with a governance structure to invest that premium to benefit to the community of producers. This premium is frequently cited as one of the major development advantages of Fairtrade, but studies of the impact of the Fairtrade social premium are typically limited to reporting the amounts of the social premium. Those amounts are impressive, but it is difficult to assess what difference these premiums make in the lives of producers (Nelson and Pound 2009).

Questions arise in the impact literature about the 'capture' of the social premium and the use of the premium among production and social priorities. A 2008 collection of studies on the impacts of Fairtrade reveals that use of the Fairtrade premium funds is not always widely distributed among cooperative members (Ruben *et al.* 2008). Questions are also raised about whether the social premium was meeting the highest priority needs. Many farmers expressed a preference for using Fairtrade premiums to improve individual household welfare, which could be done though

programs in microcredit, school fees, health insurance, input provisions and technical assistance activities (although these are limited mostly to Fairtrade farmers). Some problems of perception also appear in the literature. Ruben's study shows that many producers were unaware of the social premium and thus very few claimed to receive any benefit from it. By contrast, study data demonstrates high levels of satisfaction with prices, technical assistance, trade management and an improved level of bargaining power at the cooperative level. Thus, the positive impacts on attitudes related to risk, long-term planning and a willingness to invest in production may be attributed to the long-term market assurance based on contracts, a stable market, and a minimum price for produce that is above the costs of production, rather than the price premium.

2.3.1.9 Organizational capacity

Participation in value chains can lead to increased human capital through the accumulation of new skills, whether as laborers or producers (Donovan 2010; Maartens and Swinnen 2006).

Blackmore and Keeley (2010) undertook an extensive study of the evidence-based impacts of certification, concluding that it is generally learning that has a greater impact than price premiums or market access. They find significant benefits in terms of internal management and control systems, which are developed as a result of certification and help to attract funding and financing and improve the delivery of community-based projects.

Nelson and Pound's (2009) literature review shows strong connections in Fairtrade cases (22 of 33 cases in the Nelson 2009 study) between participation in value chains and increased human capital. They found that 22 cases indicated positive impacts on organizational strengthening, 13 of the studies identified improved market knowledge and negotiating skills, and 19 of the 33

studies found positive impacts in relationship to increased democratic workings.

One frequently reported limitation in the capacity development of the cooperatives is that linkages to external bodies typically involve only the existing leaders (Nelson and Pound 2009). This was raised in a study of the La Voz coffee cooperative in Guatemala, where leadership had become entrenched as the position of the manager was strengthened through contact with importers and exporters keen to deal with one individual. Illiteracy, limited language skills, other civic responsibilities and cultural pressures mean that in some cases, competition for positions in cooperative management is not very strong (Lyon, 2002 cited by Nicholls and Opal, 2005, 212).

A study by Parrish *et al.* (2005) of Fairtrade's impact on coffee growers in Tanzania demonstrates that Fairtrade built human capital, skills and expertise at the organizational level but did not undertake sufficient capacity building at the farmer level.

2.3.2 Impacts on the rural poor as wage laborers

While research and our own projects have focused on including small-scale producers in formal markets, a number of studies suggest that the poorest rural households may benefit more from inclusion in labor markets.

In a Senegal case study on green beans, employment opportunities increased when tightening food standards induced structural changes in the supply chain. This included a shift from smallholder contract farming to large-scale integrated estate production. Households characterized by lower levels of livestock and non-land assets benefited (Maartens and Swinnen 2006). McCulloch and Ota's study (2002) on export horticulture in Kenya found that landless women tended to find employment on large farms. Neven *et al.* (2009) found that

supermarket-channel farmers used far more hired labor on average than traditional-market farmers in Kenya. Hendriks and Msaki (2009) found that farmers converting their farms to organic production (typically a three-year conversion period), and not yet able to sell their certified produce, earned income primarily from providing labor to certified farmers within the farmer organization. Wage labor thus provided a diversified income stream to support conversion to certified and formalized markets.

In the Senegal case, estate farm workers had higher incomes than non-participating households (though not as high as the incomes of producers). Moreover, the equitable distribution of gains increased due to these changes, as the poorest benefited relatively more from working on large-scale farms than from contract farming.

While substantial evidence suggests that labor opportunities can provide livelihood benefits to the rural poor, particularly those with minimal or no access to land, the evidence of the ability of the certification, donor or NGO community to influence returns to labor is less clear. For example, the results from a much larger body of studies looking at the impact of Fairtrade plantations on improving livelihoods through labor improvements are considerably more mixed (Lyon and Moberg 2010).

2.4 Reflections on participation and benefits

This section has outlined the range of benefits to producers from participating in formalized markets. The capitals/assets section in particular highlights the fact that benefits are not confined to increased incomes and financial capitals. Rather, the range of benefits impacts the full spectrum of livelihood capitals in differing and complex ways.

The particular assets that poor households have access to, and are able to use effectively, are important to consider in assessing their ability to

benefit from formalized markets and therefore the nature of interventions. It is crucial to understand the ways in which existing assets can be employed in value chains as well as the ability to substitute capitals and employ value chain strategies that compensate for the inadequacies of some asset profiles.

Some of the conclusions from the literature support commonly held assumptions on the benefits of participating in formalized markets. For example, producers value improved income security more highly than increased incomes. Contract farming and formalized markets give greater opportunities to provide these benefits to producers, along with improved access to inputs and credit facilities. Other studies raise a number of more complex and challenging points, such as the relationship between food security and formal market participation, risk and reward, and economic aims and social and environmental aims. Evidence on these points is both conflicting and scarce. Action research to fill these knowledge gaps will need to be planned carefully in advance and will be most useful if open to continual adaptation in response to circumstances and learning.

Some of the greatest wins shown in the literature include the mix of opportunities for both producers and wage laborers created in a value chain that includes packing and value-added processing. For example, fresh fruit and vegetable estate farming in Senegal has contributed to poverty reduction by creating employment opportunities more accessible to the poorest households. Increasing standards and a shift away from smallholder to plantation-based production merely changed the mechanism through which poor households benefit: through labor markets instead of product markets.

Another important benefit shared by producers and laborers is the potential to leverage access to one market through a formal value chain in order to access additional local, regional and global

markets. Leveraging the commercial track record, improvements in production, and organizational strength and systems in this way can increase and diversify market opportunities. For example, in nine cases (including Killian *et al.* 2004; OPM/ IIED 2000; Murray *et al.* 2003), involvement in Fairtrade, through the mechanisms of certification and capacity building, has increased access to new export markets, including lucrative niche markets in Europe. The ability to access more lucrative markets can be a result of the improved quality of producers' products, their improved confidence, negotiating and commercialization skills, their exposure to potential export partners and/or their access to market information.

Concerns about tradeoffs in formal market participation cited in the literature include the impact on food security, environmental sustainability, risk and vulnerability. Companies and donors/NGOs are concerned that increased trade in agricultural products, particularly global trade, can have negative impacts on food security. While producers within formal supply chains can struggle with food security, there is little evidence of increased investment in cash crops making food security worse. Most producers use only a small portion of their land for cash crops and those often return higher value than food crops. For example, the flower study within the New Business Models project shows that a small proportion of land dedicated to flowers can earn four times the amount of export earnings than the equivalent size of tea.³ This is a critical area of strategy and research to ensure positive food security from trade and to measure and communicate these benefits.

Environmental sustainability is an important concern, since many value chain projects promote more intensive agriculture. In an extensive study, Bolwig *et al.* (2008) found that few value chain interventions affect both poverty and sustainability. Many value chain interventions have a strong focus on economic improvement, while the social and environmental impacts are seen as

ancillary. Although some projects increase sustainable agricultural practices and improve human capital through skill development, few of those interventions take into account the full diversity and multiple aspects of poor producer and household livelihoods.

Participation in formal value chains also has the potential to increase risk and vulnerability. Risk can be reduced through longer-term trading relationships, contracts and investments in organizational and infrastructural assets. An inherent risk, however, arises from participation in more limited and demanding markets of higher-value specialized products. For example, demand can change rapidly, leaving producers trapped with limited choices of alternate buyers for a specialized product.

Vorley's (2002) framework of 'rural worlds' gives a systemic understanding of asset capitals. In addition, this framework allows the support of different types of farmers by using context-specific strategies to account for differing skills, capabilities and resources. One key strategic conclusion coming from this research is that producers with very low levels of natural, human and financial capital are more likely to participate in and benefit from formalized markets as wage laborers.

To what extent do value chains contribute to a reduction in poverty? Humphrey and Navas-Aleman (2010) outline a framework for considering the success of interventions that includes the following questions: (1) Did the expected improvements for the beneficiaries actually occur? (2) Were these improvements attributable to the project? (3) Are these interventions cost-effective and superior to alternative policies? Value chain interventions clearly offer significant benefits in those aspects of household and producer wellbeing that are central to participation in the value chains. This is an aim of many lead firm and market linkage interventions. Not many of these interventions,

however, have adopted poverty reduction as a central and targeted goal, as Humphrey and Navas-Aleman (2010) shows. Some value chain interventions have the benefit of introducing private actors to the concept of support for development. Nevertheless, we need to consider the ways in which value chains can adopt a more holistic approach to producer wellbeing and how this can be incorporated into value chain interventions and strategies and the delivery role for different actors.

As the Nelson and Pound (2009) study, looking at 10 years of impact studies in Fairtrade chains, concludes: *'a thorny issue is the degree to which Fairtrade alone can enable producers to escape poverty. Whilst a few of the studies mention*

dramatic improvements in livelihoods, most emphasize that producer families are still only surviving and covering basic needs. Those within the Fairtrade movement would not claim that Fairtrade can solve all the problems of rural development, and it is important not to expect too much of Fairtrade. But in assessing impact it is important to consider the relative contribution that Fairtrade can make to tackling poverty, the cost effectiveness of the approach compared to other kinds of intervention and what else needs to be done in a particular situation to tackle poverty. . . Several studies indicate that Fairtrade needs to be supplemented by changes in development policies and co-ordination with other development actors, funds and initiatives to raise rural livelihoods to a more sustainable level.'



Part III

Strategies for leveraging a market access opportunity to increase development impact

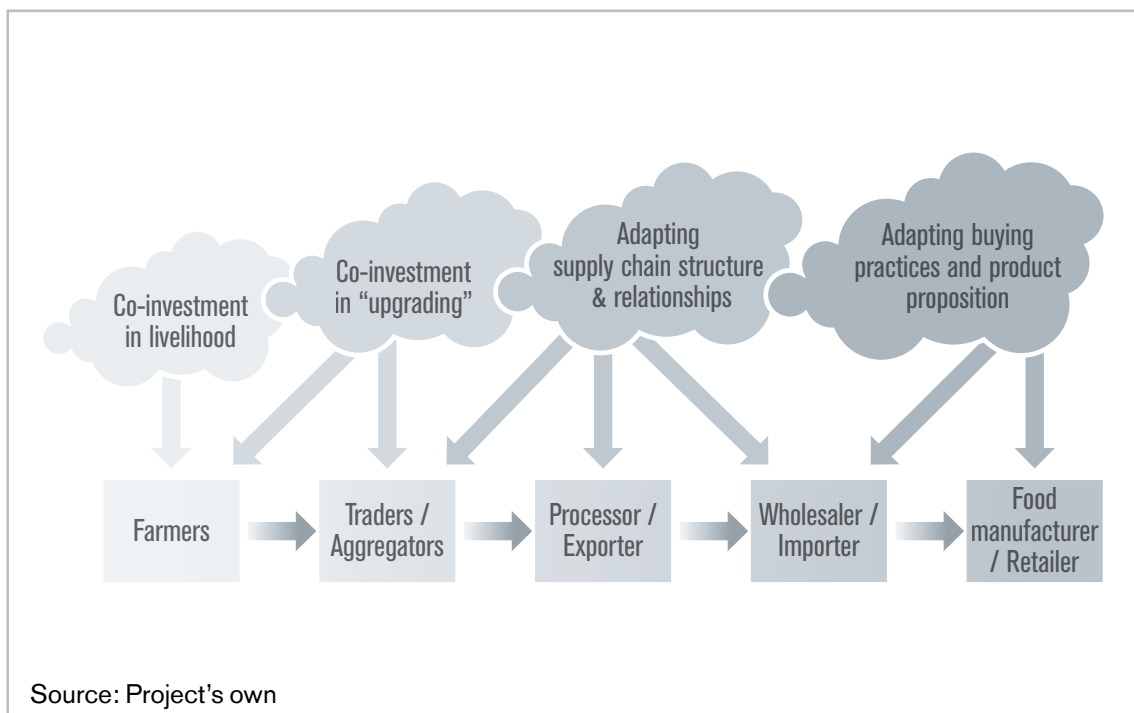
Although formal value chains offer an economic engine that has the potential to reach and benefit the poor, experience has shown that the full benefits – whether provided via a third-party certified chain or based on private company standards and relationships – require that private sector initiatives be complimented by targeted investment in producer and community assets.

From the evidence and practitioner experience, we see strategies for increasing benefits to the

poor from: (1) investing in upgrading to meet production and processing requirements; (2) adapting trading relationships and supply chain structure for smallholder sourcing; (3) adapting the product proposition and buying practices of the lead firm; and (4) investing in broader sustainable livelihood strategies.

The actual decisions about investing in a market participation opportunity, as well as designing the product proposition and value chain upgrading

Figure 3. Leverage points in a supply chain



strategy, must come from the stakeholders in a system. The decisions will be based on their goals and the market opportunities before them. It is critical to ensure that producers and producer organizations are making informed choices about what they engage in and that they understand the costs, risks, benefits and necessary investments.

3.1 Co-investment in upgrading

Small-scale producers, particularly marginalized poorer producers, and their intermediary business partners (such as farmers' associations or cooperatives), often need investment to capture a market opportunity.⁴ Investments are typically needed to:

- upgrade producer skills, producer organizations and intermediaries to meet the requirements of the market (quality, consistency, production standards, processing capacity, infrastructure and the like)
- utilize existing assets and invest as needed to ensure that the poor are able to participate in a beneficial way and enhance the rewards and/or reduce exposure to risks of chain participation (increasing productivity, increasing producer business and sustainable farming skills, increasing business capacity of the intermediary and more).

Bolwig *et al.* (2008) distinguish between value chain interventions 'from below' and those 'from above'. Changes from above include value chain restructuring and changes in governance, standards, certification and other performance-based requirements. Changes from below look to actors' capabilities to assess the potential to upgrade (make a positive or desirable change in participation or the terms thereof to increase rewards or reduce risks).

Co-investment in the upgrading process is often required; although firms are often willing to work with smallholder supply chains, they cannot justify the full cost of upgrading the least-advantaged

producer to the market requirements when a significant practice and infrastructure gap exists. Buying companies may become primary investors in upgrading supply. This may occur in the relatively rare situation of an absolute supply shortage that can only be fulfilled by smallholder producers, for example in cocoa production. Such circumstances, however, are exceptions.

By 'co-investment', we generally mean private or public sector investment from outside the immediate cash flow of the supply chain, which is invested over a period of time. It is important that the investment is structured to lead to eventual independence and competitiveness of the chain and does not persist as a long-term subsidy.

Humphrey and Schmitz (2002) have identified four types of upgrading:

- 1 process upgrading (achieving a more efficient transformation of inputs into outputs through the reorganization of productive activities)
- 2 product upgrading (moving into more sophisticated products with increased unit value)
- 3 functional upgrading (acquiring new functions or abandoning old ones that increase the skill content of activities)
- 4 inter-chain upgrading (applying competences acquired in one function of a chain and using them in a different sector/chain).

To this, Bolwig *et al.* (2008) add upgrading the capacity to:

- 5 deliver larger volumes (even at lower quality)
- 6 comply with standards and certifications
- 7 deliver on logistics and lead times
- 8 negotiate better prices for the same product (for example Fairtrade).

Training and co-investment to comply with

international food safety or sustainability standards is a classic form of upgrading to access a higher-value market. The literature suggests that certification can be most successful as a development strategy for poor producers when it is targeted to producers with the best pre-existing assets. A successful strategy also requires that needs for investing in upgrading, in combination with certification, are designed carefully to benefit poorer producers.

3.2 Adapting trading relationships

A key to success in reaching and benefiting small-scale producers is ensuring that the trading models of the lead firm and intermediaries are adapted for smallholder sourcing. The commercial goal is to ensure that the trading structure is adapted to the reality of diverse smallholder production and is capable of aggregating and ensuring the quality and standards of performance (for example, see Ponte 2007; Riisgaard 2008). The development goal is to build systems into the trading model that help ensure long-term performance and benefits to the producer (with an appropriate balance between risk and reward). The exact goals will depend on the nature of the supply chain, the product proposition and the agreements among the stakeholders. Typical goals in adapting trading structures in smallholder sourcing projects include ensuring effective and transparent intermediaries, access to services, on-going innovation, risk sharing and fair pricing structures.

A wide variety of approaches may be used to help small-scale producers access and benefit from markets. They include third-party certification, contract farming, business service hubs, farmer-owned intermediaries, private intermediaries, direct lead firm buyer and lead farmer models. There is not one 'right structure.' For example, contract farming can be a particularly effective way of linking poor

Box 7

Recommendations for maximizing benefits of certification

As a key benefit of certification tends to be learning rather than financial gain, farmers need to be realistic about the short-term benefits of premiums. Market access should be established first, as certification is typically most successful when farmers are already linked to markets and can utilize these links to obtain support and co-investment to cover costs of training and auditing.

External support from governments, NGOs or the private sector is often necessary to provide the investments and support necessary to attain and maintain certification.

Group organization is key for certification. Although group organization is not compulsory for all certification schemes, the costs of compliance and certification can be prohibitive for individual farmers. Group organization allows for economies of scale and reasonable transaction costs. Internal management and control systems within producer groups are vital for data management and successful engagement with certifiers.

Domestic markets can be valuable markets and should not be ignored, particularly as the process of 'supermarketization' continues and standards become increasingly important. The systems employed for export markets can serve a dual purpose of increasing domestic competitiveness.

Blackmore and Keeley 2010

producers into value chains as well as providing a range of ancillary benefits to producers (see Gibbon *et al.* 2009; Minten *et al.* 2005). Contract farming systems that involve close monitoring and supervision, as well as transparent terms of payment, have been shown to offer clear benefits

to producers (Minten *et al.* 2005). In one example, Parrish *et al.* (2005) find that both Fairtrade and free trade – as employed by Technoserve assisting farmers in producing and aggregating consistent, high-quality coffee and then identifying new, better-paying markets – yield valuable results for smallholders, but each is distinctly suited to specific market conditions. Conditions requiring increased supply-side production efficiency are better served by Technoserve's free trade approach. Conditions requiring demand-side creation are well suited to the Fairtrade approach.

The following conclusions about trading relationships from the literature and practitioner interviews are organized in the framework of New Business Model Principles outlined by Bright *et al.* (2010).

3.2.1 Supply chain coordination

A consistent theme in the literature is the value of supply chain coordination for ensuing durable trade and benefits. In this context, the concepts of governance and coordination are closely related. Governance defines the terms of inclusion and exclusion within a chain and determines the allocation of activities and therefore division of functions (Ponte 2007). Coordination refers to the relations between actors at nodes.

Many studies point to a lack of information and capacity at the producer level, which weakens producers' ability to respond to market signals. Such asset deficits can make hierarchy and contracts favorable forms of coordination for poor producers. Alternatively, producers may strengthen their supply and negotiation capabilities, thus increasing their human capital and ability to coordinate a response to market signals.

Decisions on performance requirements, functional divisions of labor and pricing are, in most cases, undertaken by downstream actors (buyers). As such, failing to work with these actors

Chain-wide reviews

Del Cabo, a US-based organic vegetable wholesaler, holds annual chain-wide meetings in Mexico to analyze market trends, plan planting and harvest schedules, and develop support strategies for organic production. This network works proactively to solve problems and includes internal funding mechanisms to offset losses due to changes in market conditions or field crop losses.

means failing to engage with the so-called 'normal functioning' of the chain, which may reduce benefits or cause harm to poor producers (Ponte 2007).

The shift toward buyer-driven chains, led by branded manufacturers and retailers, has led to a shift away from 'economies of quantities' and toward 'economies of qualities', where quality is an increasingly important aspect of competition. In the Kenyan cut-flower industry, this is seen in a move away from selling into the Dutch auctions and toward selling into direct supermarket chains. Direct sourcing increases the demands for compliance with social and environmental standards and retailers seeking to reduce risks and assert greater governance over the chain (Riisgaard 2008). When all the costs of compliance are borne by the supplier, then standards can serve to reinforce retailer dominance and adversarial supply chain relations (Riisgaard 2008).

Interestingly, the general presumption that smallholders are excluded from chains with food safety concerns and requirements for high levels of vertical coordination is not supported. In fact, much evidence points to the benefits to poor producers of engaging in these demanding value chains. The conditions for success include mechanisms such as contract farming, which include provisions for farm monitoring, input supply and extension services.

Gibbon *et al.* (2009) studied a contract farming case with an international commodity trading house, Schluter SA, buying organic cocoa through its subsidiary ESCO Ltd in Uganda. ESCO employs various incentives to enable and induce growers to comply with organic and quality standards, including regular farm inspections, training of lead farmers (who run demonstrations in the field), rejection of sub-standard cocoa, a price premium and a procedure for de-registering farmers who consistently or grossly violate project rules. The authors conclude that 'the effect of scheme participation supports the view that contract farming schemes can correct classic market failures in developing country agricultural context, thus yielding positive welfare effects' (22).

3.2.2 Effective market linkages

Effective market linkages are at the heart of successfully marrying the world of disparate and heterogeneous small-scale producers with the needs of modern markets for consistent reliable supplies. No firms in formal markets can afford to source directly from thousands of small-scale producers without effective intermediaries. Intermediary structures include producer cooperatives, private processing companies, lead farmers, independent trader networks and buying hubs. These market linkage intermediaries serve not just to aggregate and process goods to meet the needs of the buyer; they are also essential hubs for services, inputs or quality assurance. In the best cases, they help farmers meet their marketing needs. The role of the intermediary is nested in context, depending on what other services are available, as in the case of agricultural extension services.

The issue of private traders is typically a contentious one. They have always been part of the supply networks and farmers, but NGOs often try to eliminate independent traders (coyotes) to shorten the value chain. While this can be a way of

increasing the value accruing to farmers, such a shift in value chain structure can eliminate the critical services provided by the traders. It can also overlook benefits within the existing network of relationships through the chain.

Issues of reliability in delivery and achieving scale through aggregation often point to the need for producer organization. At the same time, multiple failures have occurred from trying to create market linkages only through farmer cooperatives.

In cases where social capital is low and producer organizations do not already exist, evidence points to the success of contract farming in working with smallholders and poor producers (Ruben 2010). This is shown in the Minten *et al.* (2005) study on French beans from Madagascar, in which only 27 per cent of farmers were organized.

One of Minten *et al.*'s primary conclusions on the conditions for success in bringing poor producers to markets was having policy incentives in place (in the form of tax incentives or export processing zones, for example) to support enterprise development. In the Madagascar case, Lecofruit was established within an export processing zone and now works with over 9,000 smallholders for export markets.

The Donovan (2010) study on producers of coffee for export in Nicaragua also highlights the important role of the intermediary within value chains. The producer organization, Soppexcca, played a key role in transmitting benefits to producers as well as mitigating risks to producers of being involved in formalized markets. In this case, the intermediary provided access to higher value markets for product, technical and community support (such as healthcare and education scholarships), and credit.

The lesson from the literature is that a wide variety of intermediary models can work, but it is critical to adapt a model that fits within the existing context, trading relationships and service needs. Contract farming can be effective, but it also can

exploit producers. Cooperatives can be democratic and equitable, but they can also be vulnerable to bureaucracy and elite capture.

An example of a new kind of intermediary being piloted by the Shell Foundation in a situation where other models have been unsuccessful is described in Box 8.

Box 8

The Better Trading Company

The Better Trading Company (BTC) works to connect international retailers with producers in low- and middle-income countries to supply goods to international markets. To achieve scale in alleviating poverty while developing commercial returns, BTC was created to act as an 'ethical agent to bridge the gap between developing country producers and the mature retail markets' (Shell Foundation 2010, 15). BTC provides market intelligence, business skills, technical skills and training to help producers deliver products that meet market and retail requirements. They 'facilitate transparency in trading relationships by encouraging fairer information flow around costs and margins and add a human factor by connecting producers face-to-face with retailers' (ibid., 16).

Shell's work with BTC has helped small businesses sell niche agricultural and horticultural products such as wildflowers, Rooibos tea, chilies, tea tree oil and honey. In so doing, they have created over 492 new jobs, directly increased 2150 incomes, and improved 8600 livelihoods.

BTC has been able to achieve scale by influencing retailers and demonstrating the success that is possible when organizations are willing to address global development issues through the supply chain.

Shell Foundation 2010

3.2.3 Fair and transparent governance

Fair and transparent governance of the supply chain is important in ensuring better quality and consistency of production and more stable benefits for producers. Fair and publicized terms of trade, quality standards and pricing structures (such as premiums for high quality and penalties for poor quality) enable farmers to improve returns. Clear on-farm management standards and incentives are important to promoting sustainable social and environmental practices on the farm. Dispute-resolution mechanisms – either formal or informal – are hallmarks of well-functioning governance structures.

Box 9 gives details of a scheme for exporting fine French beans from Madagascar to European markets. The quality of these beans is regarded as superior when compared to their industrial-produced counterparts in Europe. The quality is needed to meet a series of food safety and agricultural health standards. The contract farming scheme offered multiple benefits to participating producers.

The chain wide 'Transparency Contract' of the company Intelligentsia Coffee and Tea is a successful example of fair and transparent governance (Interview with Geoff Watts, 2009). The 'Transparency Contract' contains individual quality-based farmer premiums – agreed upon during pre-harvest strategy meetings and signed by all producers and supply chain intermediaries – documenting costs and profits across the chain of custody. Intelligentsia has implemented a

Confidence about prices

Cuatro Pinos, a Guatemala-based cooperative, offers non-member producers a 'turn-key' advanced, fixed-price contract and provides inputs on credit and technical assistance. This fixed price contract has been shown to consistently return 7 to 10 per cent above the spot price market.

peer-controlled system to ensure that premiums reach the farmers. Communication channels are established between Intelligentsia and the individual farmers to ensure that they are receiving their premiums. During post-harvest meetings, payments are further discussed with individual groups.

Evidence from the Fairtrade system underlines the usefulness of the minimum price and longer-term contracts. Ruben's (2010) extensive study of the

impacts of Fairtrade on producer welfare and livelihoods at the household level reveals that the direct and tangible effects on income of the guaranteed minimum price are fairly modest. This study points to high prices in conventional markets for produce over the time of the study and the fact that many Fairtrade producers continue to sell a large proportion of their produce to non-certified markets as reason for not demonstrating statistically significant differences in price. By

Box 9

Contract farming and green beans in Madagascar

In Madagascar, large, mechanized farms are rare (occupying less than 2 per cent of the cultivated land of the country as a whole). The smallholders in this case grow green beans that are handpicked and sorted for export to European supermarkets. In 2005, exports from Madagascar accounted for around 10 per cent of the processed French bean market in Europe.

Contracts to farmers are awarded through the intermediary, Lecofruit, which signs a yearly contract in advance with most of its European clients. The delivery conditions and product standards are specified for the year as a whole. Lecofruit manages its 9,000 small-scale farmers through a series of micro contracts – written contracts (though unlikely to be judicially enforced) that are standardized with identical inputs, credit conditions and prices by product. Signing these contracts requires the farmer to meet the rigid requirements set by Lecofruit, with strict instructions on production times and applying compost. As part of the contract, seeds, fertilizer and pesticides are distributed by the firm and paid back in kind as product during the harvest.

As part of this system, Lecofruit has put in place a hierarchical system of extension agents who visit the farmers on average more than once (1.3 times) a week. This intensive monitoring serves

to reduce side-selling and ensure correct production management. As such, 99 per cent of farmers say that the firm knows the exact location of the plot and 92 per cent say that the firm knows the number of plants on the plot. These agents will intervene to ensure that things are done correctly, with 34 per cent of farmers reporting that Lecofruit extension agents will themselves apply pesticides on the crops to ensure it is done properly.

Benefits to the farmers include increased productivity (associated with increased use of fertilizer and supervision in application), higher quality product (incentivized through the contract) and increased income security (the primary reason given by farmers for entry into the contract).

Key finding:

A rigorous contract system, with close monitoring of production activities, led to high levels of commercial and livelihood success. Production standards played a key role in creating benefits to poor households. Extensive farm assistance and supervision programs ensured that complex quality requirements and phytosanitary standards were met.

Boslie 2008

Fairtrade mechanisms

intended to improve economic returns:

- Buyers are required to pay at least a minimum price calculated to cover costs of production.
- Buyers are required to pay a social premium to producer organizations.
- There are opportunities for pre-financing.
- Producers are offered contracts to allow for long term planning.
- Producers gain increased access to export markets.

contrast, study data demonstrates high levels of satisfaction with prices, technical assistance, trade management and an improved level of bargaining power at the cooperative level. Moreover, many producers are unaware of the social premium and very few claim to receive any benefit from it. (*ibid*). Positive impacts on attitudes related to risk, long-term planning and a willingness to invest in production may be attributed to the long-term market assurance rather than the price premium per se. (*ibid*). The long-term market assurance is based on contracts, a stable market and a minimum price that is above the costs of production.

3.2.4 Sharing of costs and risks

Agricultural markets have a long history of pushing costs and risks onto the weakest players in the supply chain. Even new social and environmental standards have the risk of excluding small-scale producers when the growers are expected to bear the costs of implementation. Finding ways to spread the costs of new requirements for upgrading through the supply chain is important for long-term viability.

Equally important is the need to assess both the

risks and rewards to both producers and lead firms when linking small-scale producers to formal markets. For risk-averse producers, interventions to reduce the shocks from downstream actors may be preferable to interventions to increase the rewards for participation or the terms thereof. Improving buying practices (and codes of conduct) or increasing use of contracts within a chain are considered key risk aversion strategies (Bolwig *et al.* 2008). Formal markets can have higher risks of rejected product, which translate to financial losses. This is caused by higher standards of production causing more wastage and delivery problems.

Reducing the risks

Cuatro Pinos (Guatemala) and LA Salad (USA) jointly manage an innovative risk-management mechanism. By taking a fixed percentage of all sales, this allows the companies to guarantee payment to farmers, even when they do not receive the goods ordered due, for example, to logistical or weather problems.

Supply chains engaging marginalized farmers, particularly those without irrigation and dependent on rain-fed agriculture, are clearly vulnerable to weather fluctuations. Strategies to share some of the costs and risks through the supply chain can be accomplished through implementing better communication about supply and demand, financial risk-management programs, micro-insurance schemes against bad weather, supply chain risk-management funds and shared investments in chain-wide improvements.

3.2.5 Equitable access to services

Equitable access to services is an essential component of a successful trading relationship between buying companies and small-scale producers, particularly where public infrastructure

is weak. Smallholders need access to technical expertise, business training, inputs such as fertilizers and high-germinating seed, and appropriate financing. Smallholders need assistance to develop best practices for managing soil, water, chemical inputs and conditions for farm workers.

Selling to formalized markets can offer more stable prices but requires that farmers have access to affordable credit and are willing to invest in capital requirements like irrigation (Neven *et al.* 2009). Micro-finance has not filled this gap.

Moreover, in several studies certification was shown to have particularly strong pro-poor benefits where contract farming was the trading model and support was provided in the form of financing, loans, technical advice and guaranteed

market access (Blackmore and Keeley 2010).

3.3 Adapting product proposition and buying practices

The product proposition and buying practices of the lead firm have three key elements:

- 1) Profitability: The value proposition of the goods from the smallholder chain to the lead firm and then to the consumers ultimately needs to be able to cover the operational costs of the supply chain. The ongoing costs and practices of the supply chain – services by the intermediary, risk sharing mechanisms, price premiums, etc. – all ultimately need to be covered by the value of the product.

Box 10

Kenya case study

Equator Products Ltd is a Kenyan company established in 2004 to export processed fruits and vegetables. Currently it works with about 6,800 contracted smallholder farmers (about 50 percent women) to produce premium quality African Bird's Eye Chilis (ABEC). The company obtains all its produce from contracted smallholder groups.

The small-scale growers on average cultivate 1,000-2,000 square meters (one half to one quarter acre). They have been organized into 280 formally registered groups. The majority of those groups (150) are organized under an umbrella of three network/producer organizations.

Equator Products provides its suppliers with a broad range of services including: seeds, micro-credit, guaranteed market outlets, and training programs. Equator has built a network of strategic alliances and knowledge institutes to provide this range of services. The

aim is to contribute to poverty reduction of rural families by improving accessibility of high quality agricultural inputs at affordable prices and knowledge on sustainable production

Equator cannot finance all the investments which support this model and therefore works with donors on a project basis. For example, to assist farmers in their process of empowerment Equator encourages SHGs (Self Help Groups) in which farmers organize into independent cooperative societies. The company will continue strengthening the producer groups, beyond project periods, by dedicating a portion of its earnings (roughly 1.5-2.0 percent of income from produce delivered) to cover the costs of producer group facilitators and producer network activities.

Boslie (2008). Equator Products Ltd. Kenya: A New Business Model Case Study.

- 2) Development focus: The practices within the supply chain are more likely to be durable and competitive within the lead firm's purchasing practices if the overall buying practices of the firm adapt to development objectives. For example, the long-term necessity of technical assistance to farmers is inconsistent with sourcing approaches like reverse auctions that only account for cost.
- 3) Value: Where there is the potential to embed the 'value' of smallholder sourcing or pro-development projects in the product proposition, there is potential for building the merits of smallholder sourcing directly into what consumers value. This, in turn, can create value to the lead firm (through reputation gain, etc.) with the potential for a more durable relationship all the way through the chain. Corporate commitments to certification (For example, Mars' commitment to 100 per cent sustainable cocoa, Cadbury's to Fairtrade for their dairy milk) are examples of embedding development goals in brand value.

Certification as a value proposition

Third party certification – Fairtrade, Rainforest Alliance, Utz certified, organic – is a package made up of practice requirements, specific trading mechanisms to support smallholders and/or incentivize sustainable production, and product value propositions to consumers (for the ones that have consumer facing labels). Certification can be very attractive to companies; trusted NGO labels can directly connect with customers and standardize or simplify their ethical sourcing strategies.

Internal lead firm approaches

Starbucks C.A.F.E. (Coffee and Farmer Equity) Practices and Unilever's commitment to 100 per cent sustainable sourcing (including involving 500,000 new poor producers in their supply chains) are examples of different lead firm

approaches to third party certification. Unilever has partnered with Rainforest Alliance to brand the sustainability upgrading of Lipton Tea, yet will not immediately use a certifier when engaging suppliers of soybean oil. In the case of a bulk commodity like soybeans, certification is not necessarily the most efficient path to reach their goal.

Starbucks C.A.F.E. Practices were developed to ensure quality as well as to improve the social and environmental aspects of coffee production. They reflect 'the acceptance of increased corporate responsibility for the progressive improvement of key elements of worker and producer well-being' (MacDonald 2007, 802).

3.4 Co-investment in livelihoods (beyond the value chain)

Value chain projects focus first and foremost on a successful commercial relationship between smallholders and markets around a limited number of cash crops. The trading relationships focus on commercial viability and more equitable and sustainable trading practices in those crops. Upgrading focuses on building the capacity of farmers and intermediaries to meet the needs of the market in terms of quality, consistency, production standards and business practices. All of these interventions help increase net income from the targeted crop, which contributes positively to livelihood improvement.

Beyond upgrading, trading relationships and buying practices, evidence from many of the impact studies points to the high potential for increased benefits from additional investments in livelihoods and food security. These sort of horizontal investments leverage the relationships and opportunities created by formal value chain market access.

Poverty is complex and multidimensional

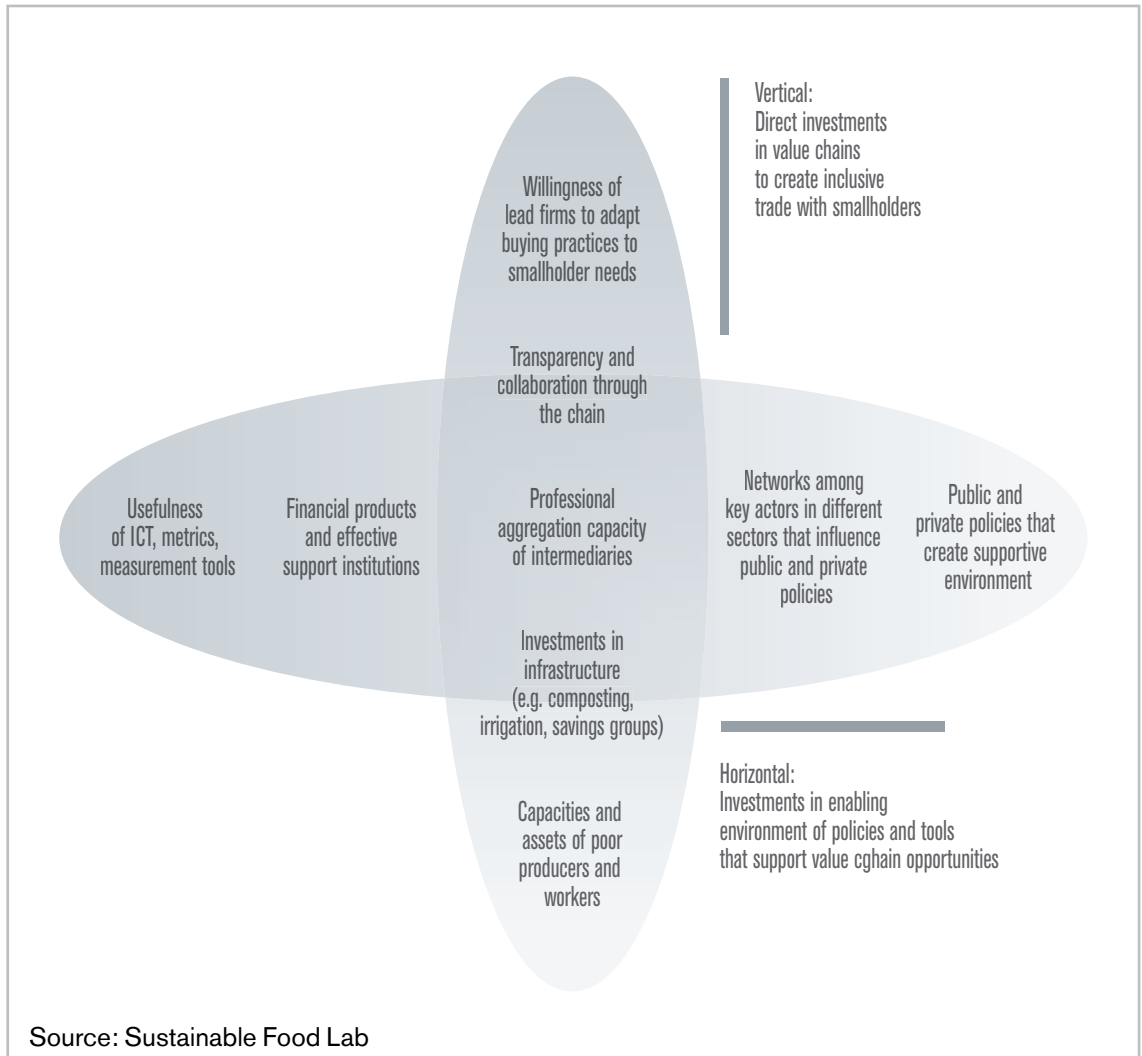
Many vertical interventions driven by lead firms are

unable to accommodate and benefit the many different dimensions of producer welfare and wellbeing (Humphrey and Navas-Aleman 2010) and can lack critical aspects of accountability (McDonald 2007, 808). Co-investment is most effective therefore when not only just investment in those variables directly related to trade within the value chain is considered, but also those more widely related to producer wellbeing.

Market diversification

Income flows throughout the year are better than once-a-year income; hence enterprise diversification is beneficial to livelihoods. Méndez *et al.* (2005) note in their study of coffee producers that while Fairtrade generated higher incomes, there was no correlation with improved food security except when used in combination with diversification. Market and crop

Figure 4. Vertical and horizontal investments



diversification can also help producers rotate crops and build soil fertility. Some Guatemalan vegetable growers in the highlands reported a 50 per cent drop in fertility from mono-cropping their only cash crop (Méndez *et al.* 2005). Developing local markets also has the potential to engage many more growers; sometimes the credibility and expertise gained from participation in a formal chain can attract more global, regional and local buyers. This helps reduce risk from any single market or crop.

General asset investments

Asset investments implemented for upgrading the anchor cash crop can be designed to benefit multiple crops and markets. Irrigation, value-added processing and composting facilities that increase the productivity and quality of the main crop can have spillover value for the rest of the farm enterprise (shown in Minten *et al.* 2005; Neven *et al.* 2009; Ruben *et al.* 2008).

Service input businesses

Service input businesses are an additional opportunity to create locally-owned, value-added enterprises supplying the main value chain. These might include a nursery business, a composting business or a value-added processing business. One key question is, 'How can strategic partnerships be shaped in such a way that critical information is shared and joint value propositions are developed that benefit upstream and downstream partners?' (Ruben 2010).

Women's economic leadership

Women's economic leadership opportunities can strengthen the development impact for two primary reasons. First, numerous studies show that female small-scale producers are engaged disproportionately in local markets and in domestic food production, compared with men (for example Deere 2005; Dolan and Sorby 2003; Garikipati 2006; Zhang *et al.* 2006). Second, more income held directly in the hands of women usually translates into improved

nutrition and educational outcomes, especially for girls (Hoddinott and Haddad 1995). Broader studies have concluded that equalizing women's status with that of men could cut rates of child malnutrition, benefiting millions of children under three years old (Guha-Khasnobis and Hazarika 2006; Quisumbing and Maluccio 2000; Smith *et al.* 2003). A survey of the literature on women in agriculture has shown that the main factors restricting women's productivity are decent work, access issues and power issues (Agri-ProFocus 2009; Apusigah 2009; FAO 2005; IEG World Bank 2010; OECD DAC 2010; World Bank/FAO/IFAD 2009). Opportunities to ensure that services reach women, as well as opportunities for women to participate in the main supply chain in leadership roles and in supporting service businesses, can increase the development returns of a project significantly.

A recent study by Ward *et al.* (2010) reviews the available evidence on how increased gender equality in the developing world can enhance economic growth. They find that gender discrimination can be a barrier to improving agricultural productivity because unequal distribution of resources (such as credit, extension services and inputs) creates inefficiencies, which lowers yields and reduces incomes.

Organizational models

Box 11 identifies different types of women's groups that exist in the agricultural sector to serve a multitude of purposes. The existence of these types of social infrastructure helps communities overcome high transaction costs. Further, they can be used by value chain actors to reduce the costs of project implementation and ensure a greater chance of success by linking more closely with community needs (Boodhna 2010).

Formal value chains offer an economic engine with potential to benefit the poor. But experience has shown that realizing the full potential of a

market opportunity requires a development project approach. This means well-designed, targeted upgrading of assets and complementary

development investments for leveraging impact on wider community wellbeing.

Box 11

Types of women's groups in agriculture

Producer associations and cooperatives: owned and managed by farmers to specialize in marketing, input supply or savings and credit.

Self-help groups (SHGs): 10 to 20 members, solving their common problems through mutual help.

Rotating savings and credit associations (ROSCAs): six to 12 individuals who make regular contributions to a common fund.

Women's groups in village development associations (VDs): renovation of school buildings and health centres, provision of irrigation and piped water etc.

Women's groups in management associations: produce public goods and externalities associated with non-excludability. They mobilize labor for community projects and manage common property resources, such as forest protection committees, seed distribution committees, and water and soil conservation projects.

Women's groups in agricultural extension field schools or farmer research groups: promote learning about women-relevant production technologies and/or contribute to the development of innovations.

World Bank/FAO 2009



Part IV

Getting started: Process lessons in 'linking worlds'⁵

Consider the following scenario (Vorley et al. 2009):

A major branded food manufacturer takes a high-level decision to make its business more inclusive and equitable for small-scale suppliers. Like many of its competitors, the firm is starting to see sustainable development as a core business principle. In a number of countries where it operates, the company commits to working with smallholder farmers. The company's commitment is based on both business and social reasons, primarily to improve the quality and security of its raw material supply, but also to contribute to the Millennium Development Goals (MDGs) and improve its reputation in the country and communities where it works. Involving smallholders as suppliers may also help the company get greater support from investors or customers who seek to support ethical trade.

In partnership with suppliers, the company identifies smallholders who can meet its stringent standards for quality and consistency. It develops a small fund to insure farmers against crop failure and invest in essential local service improvements. After a successful pilot, the program begins to run into problems. Product quality and quantity are variable and difficult to match with market requirements. Farmers complain that the company is failing to keep its commitments on orders and prices, and that pricing is not transparent.

Rising costs associated with collecting, grading and bulking product from dispersed suppliers, along with problems of farmers 'side selling' to

traders, make plans for scaling up the project less attractive. A newspaper article in Europe accuses the company of compromising food security in the communities where it is running its smallholder program. The management starts to lose heart, and to regret getting involved in the 'development' business.

What can we learn from this scenario? Could the company have done better? Are there principles that the company and its supply chain could have applied to improve the chances of success? Should the company have undertaken a more comprehensive review of its overall business model? Similarly, what was the responsibility of the farmers? What market considerations, skills and business linkages were needed to improve farmer engagement and performance?

Clearly linking the worlds of the small-scale producer and formal markets is not simple; achieving commercial success, meeting quality, consistency and cost requirements, and meeting development goals requires a focused strategy. This section briefly offers thoughts on how to increase the chance of creating sustained livelihood benefits within value chain projects, and how to look for opportunities to leverage the investment in formal market linkages to increase development impact.

As discussed in the previous section, there are four key strategies to increase development impact:

- Co-invest in knowledge, practices and infrastructure upgrading to meet quality,

consistency and standards required by the market.

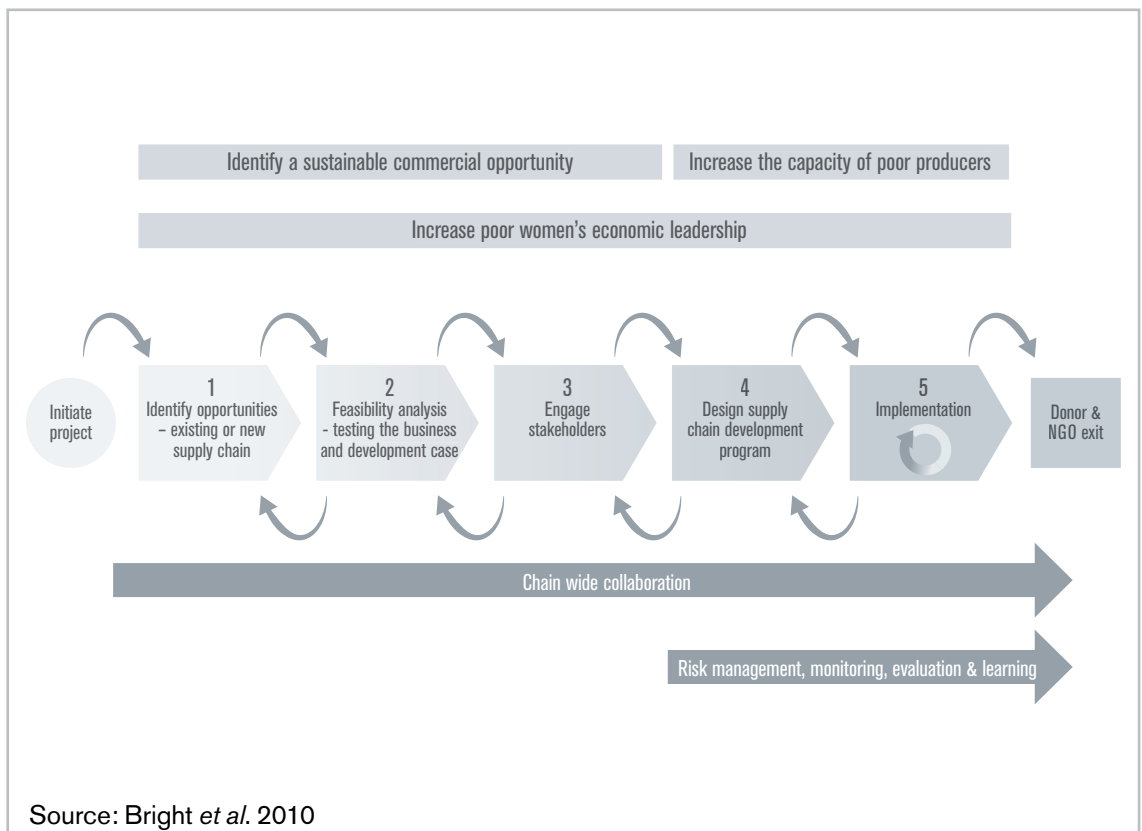
- Adapt trading relationships where appropriate to the needs of small-scale producers to ensure effective intermediaries, access to services, ongoing innovation, coordination, risk sharing, fair pricing structures, fair labor practices, etc.
- Adapt lead firm product proposition and buying practices to ensure consistency in buying practices and to embed the smallholder value into the product where possible to build long-term lead firm commitment and engage consumers.
- Co-invest in sustainable producer livelihoods to build product diversification complimentary to

the primary crop(s), women's economic leadership, and health and nutrition. The goal is more stable annual cash flow, food security, risk management and sustainable farm management.

The figure below outlines a process to develop a smallholder value chain project and Box 12 provides sub-steps for each phase of the process.

Once a market opportunity or supply chain has been identified, the New Business Model Principles from Vorley *et al.* (2009) offer guidelines for adapting the business model in the chain for small-scale producers. Below are examples of diagnostic questions that can be helpful in understanding needs and opportunities in a particular supply chain situation.

Figure 5. Smallholder value chain development



Box 12

Steps in developing a pro-poor smallholder value chain

<p>Identify the opportunity</p>	<ul style="list-style-type: none"> • <i>Improved ingredient quality and security.</i> • <i>Supply chain efficiencies.</i> • <i>Improved and expanded supply chains that incorporate small-scale producers.</i> • <i>New marketing/product opportunities.</i> • <i>An improved social ‘license to operate’.</i>
<p>Analyze the feasibility</p>	<ul style="list-style-type: none"> • <i>Is the offer attractive to male and female smallholders?</i> • <i>Can the crop be grown efficiently and cost-competitively?</i> • <i>What investment is needed to overcome structural barriers and performance issues at farm and processing levels to meet required volumes and standards?</i> • <i>How do costs compare with current suppliers?</i>
<p>Engage stakeholders and investors</p>	<ul style="list-style-type: none"> • <i>What benefits are available for smallholders and the wider stakeholders in the supply chain?</i> • <i>How are governments, NGOs, smallholder organizations, community groups and commercial organizations in the supply chain prepared to support you?</i>
<p>Design a supply chain development program</p>	<ul style="list-style-type: none"> • <i>Establish the value proposition and test it across marketing, operations and supply chain management teams.</i> • <i>Adapt practices for sourcing and purchasing to include smallholders against the New Business Model Principles.</i> • <i>Upgrade the enterprises along the chain, based on identified needs, to improve productivity and meet requirements for production and post-harvest handling.</i> • <i>Manage partnerships and attract co-investment to overcome structural barriers and performance issues, enabling smallholder’s interests to be represented and to improve the social/environmental performance of the chain.</i> • <i>Ensure the corporate culture supports partnership, with incentives for buyers that are aligned with creating long-term stability in supply chains.</i>
<p>Measure outcomes and manage risks</p>	<ul style="list-style-type: none"> • <i>Analyze risks to the company, smallholders and other affected parties, such as climate change, changing consumer preferences and currency movements.</i> • <i>Assess progress regularly by reporting back, having discussions across the supply chain, and taking a collaborative approach to identifying and solving problems.</i> • <i>Draw up an exit plan. Prepare to move out of the market without damaging smallholders if market forces change.</i>

Box 13

<i>Principle</i>	<i>Critical questions</i>
Supply chain coordination	<ul style="list-style-type: none"> • Have clear goals been discussed by different actors in the chain and consensus reached on targets? • Is there evidence of co-investment and shared decision-making in the chain or parts of it? If so, which actors participate and how does it work? • Is there evidence of shared problem solving among chain actors? If so, which actors participate and how does it work? • Are there any existing structures for collaboration, such as food safety committees, that could be expanded to encompass problem identification and resolution? • Are there one or more champions who will lead the process of co-innovation?
Effective market linkages	<ul style="list-style-type: none"> • How easy or difficult is it to buy (find product) and sell (find a buyer) products in this chain? • How are sellers currently linked to buyers? How do both buyers and sellers see this relationship? • Do buyers know where their product comes from? Do farmers know where their product is finally consumed? • Are business linkages along the chain stable or constantly changing? • Is there evidence of formal or informal linkage agents that provide both business and social development value? • Could the intermediary provide access to complementary markets? • Can the intermediary be a hub for accessing needed services?
Fair and transparent governance	<ul style="list-style-type: none"> • Are there clear and consistent grades and standards in the chain? How are they established and enforced? • Is there evidence of formal and informal contract adherence by members of the chain? If so, why? If not, under what conditions do the contracts break down? • How are different types of risk – production risk, commercial risk, financial risk – shared along the chain? Do these risks fall disproportionately on one actor or set of actors? • Are there mechanisms to ensure that there will not be sustained prices below cost of production for producers?
Sharing risks and costs	<ul style="list-style-type: none"> • What are the major risks in the supply chain? • Are there investments that could mitigate risk? • Are there financial mechanisms that could better share risks?
Equitable access to services	<ul style="list-style-type: none"> • Do all actors have timely access to market information? • Do all actors have access to information on quality standards? • Who has access to financial and non-financial support services in the chain? Is this access available for all participants? Why or why not? • Do all, some or no members of the chain perceive additional benefits when they improve their activities? Why or why not?

Part V

Conclusions

Analyses of projects connecting small-scale producers to formal markets show a wide diversity of experience and underline the importance of producer assets to both participation and benefits. Interestingly, formal chains tend to provide greater income security but not necessarily higher prices. When higher incomes do occur, it is often from higher yields, improved quality or value-added activities. Some formal chains can increase income (through better prices and better productivity) without improving food security, while some studies show that income diversification is crucial to improving food security.

While formal value chains can reach the poor, different products have different potential for the poor because of challenges specific to each supply chain or the agro-ecological conditions of producers. Evidence clearly shows that producers with higher levels of assets are more likely to participate and benefit from participation in formal markets. Assets include access to roads or motorized transport, education and/or size of landholding. Clearly some of the challenges of increasing the reach and benefits of formal chains requires learning how to reach the less organized farmers and investing with farmers so that those with fewer assets also benefit. In addition, the poorest producers with low levels of natural capital (i.e. land and livestock) in particular tend to participate in value chains as laborers (Maartens and Swinnen 2006; McCulloch and Ota 2002; Neven *et al.* 2009).

It is important to recognize that formal markets, particularly global formal markets, are ultimately modest in size relative to domestic and regional staple markets. Therefore, formal value chains are

not a silver bullet for pro-poor development. To have a significant and durable impact on poverty reduction, and to reach producers with fewer assets, value chain interventions must be integrated with upgrading and wider livelihood strategies.

Despite the modest size of formal market opportunities for the poor, and the challenges of linking the worlds of small-scale producers and formal markets, these markets can provide opportunities for addressing rural poverty. This is particularly true where conditions are favorable and a comprehensive suite of development interventions is possible. Along with the potential to benefit farmers through commercial relationships as suppliers and laborers in 'equitable trading models,' engaging with formal markets also offers the longer term potential for:

- preparing smallholders to engage with the growing domestic and regional formal markets and increasing large-scale staple production (although the growth rate of regional formal markets varies considerably)
- supporting business and farming professionalism among family farmers to help ensure their continued participation in the global food system
- developing partnerships with sophisticated private sector actors to build 'systems'
 - quality, grading, information services, etc.
 - that can upgrade local markets
- developing partnerships with the private sector to address policy issues that can bring more public investment and policy support for poorer producers.

Part VI

What questions remain?

The analysis of the literature and discussions with practitioners brings to light questions for further discussion, action-research in value chain projects, and shared learning in networks of chain actors and practitioners. The following are some of the most compelling issues and questions.

Increasing impact

How can we leverage the relationships and stability of trade in formal value chains to bring in investment, training, infrastructure and partnerships that will help farmers gain access to regional and local markets?

Can we accompany certification more effectively with targeted asset building to increase the percentage of households that are likely to realize the benefits of certification? For example, investments in community-level composting capacity might increase the number of producers who can take advantage of Fairtrade or organic certification.

How can we increase the scale of impact by working with businesses to expand commitments and learning from pilot projects to their buying practices in all their supply chains? Many companies are motivated by the need for success stories. Pilots are vulnerable to marginalization in the business culture of a large corporation. One of the goals of the Sustainable Food Lab is to facilitate the incorporation of development objectives into the core missions of companies. Some progress is encouraging – with Costco, Green Mountain Coffee Roasters and Unilever for example – but these Sustainable Food Lab pilots

often faced resistance within companies. In particular, adoption of explicit development objectives was a concern to some because of issues with sourcing costs and future supply security. The cultivation of greater commitment by the private sector is still in its infancy.

Expanding participation and benefits to poorer households

Formal chains tend to reach and benefit organized (and often better off) farmers. Can we increase the reach of value chain projects to the less-organized farmers?

Given that many value chain projects focus on upgrading smallholder production, yet opportunities for the poorest are often more from on-farm and off-farm labor, how do we increase labor opportunities?

Increasing producer agency

Much of the agenda around small-scale producers treats them as passive recipients of interventions in support of 'inclusive' markets. A chain approach can unintentionally replicate traditional development interventions by failing to see the rural poor as agents in their own development. The importance of producer agency – the capacity to make good choices and to act on those choices (for example when approached by NGOs and businesses with new value chain projects) – has been under-emphasized. How can we increase producer agency in market participation? Will that increase benefits?

The impact of intermediaries

The instinct of many development organizations working to create inclusive trading models is to build many services and governance mechanisms into the intermediaries to ensure better returns to farmers. Further, the strategy often prioritizes shifting trade to flow through farmer cooperatives as the intermediary of choice. Yet long-term commercial success in value chains is generally increased by making as few changes to the existing functioning institutions as possible. What are the minimum changes that need to be made to the intermediary to get a better development impact while delivering high-quality product?

Complementary approaches to certification

Certification adds significant cost to value chains – eventually borne by suppliers – and feeds a huge service industry. For sensitive crops, especially fresh produce where food safety is paramount, certification and segregated supply chains will be necessary. On the other hand, for bulk commodities, alternative approaches represented by the Better Cotton Initiative and commodity roundtables are worthy of close attention.

Managing risk in formal markets

Formal markets can have higher risks along the entire chain. For example, higher standards of production often mean more waste and delivery problems. Poor producers often are vulnerable to weather that can disrupt production. Recent literature and discussions on poor producers' engagement in value chains has centered largely on issues of risk. Many feel that these issues have not been explored adequately in the literature and studies to date because of poor evaluation techniques or lack of attention. It is important to consider 'the extent to which value chain reorganization, integration or governance locks participants into reliance on a system that is disproportionately sensitive to shocks' (Bolwig *et al.* 2008, 24). Given the risks to producers of

upgrading to more defined (and sometimes thin) markets, and to buyers in engaging with the frequently less reliable production systems of marginalized farmers, how do we measure, communicate and share or reduce risk to both producers and buyers?

Assessing the importance of formal markets versus emerging markets in creating opportunities

Markets in the emerging economies and domestic markets are growing much faster than formal global value chains. The era of northern retailers and brands demanding high standards without a significant premium may be over if they are outbid in the emerging markets. Will smallholders and traders be able to benefit from global formal markets for products for emerging markets such as China and India?

Data for donors and development organizations to better understand impact

How do we collect better, more consistent data in a cost-effective manner? Detailed evidence and quantitative impact assessments on value chains are limited. Many studies fail to take adequate account of the range of unobserved or endogenous variables, such as whether non-participants are excluded from chains out of choice or because they are unable to participate. Because many studies fail to take adequate baseline surveys or do propensity scoring, it is not clear whether benefits arise through participation in the value chain itself. The benefits of value chain participation can thus be overestimated, and the work of Donovan (2010) at CATIE (Centro Agronómico Tropical de Investigación y Enseñanza) is important.

Social metrics for value chain actors

Seven companies involved in the Sustainable Food Lab have articulated the need for relatively simple social metrics that they can use in sourcing and investment decisions. All companies use Key Performance Indicators (KPIs) to track

commercial performance. When sourcing from small-scale farmers, additional indicators are needed to track social issues including numbers of farmers, incomes, assets and food security. These indicators can be combined with KPIs for ecological performance including soil, water, climate/energy, toxicity and biodiversity. If KPIs

are developed collaboratively, data will be comparable and processes more likely to be shared. The challenges of cooperation in a competitive environment are not to be underestimated, however, and require a high level of facilitation skill.

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Endnotes

- 1 The World Bank (2008, 3) reports 1.5 billion people in smallholder households; Hazell *et al.* (2006) report over 2 billion. These include half of the world's undernourished people, three-quarters of Africa's malnourished children, and the majority of people living in absolute poverty.
- 2 www.regoverningmarkets.org
- 3 More details about these and other New Business Model (NBM) projects can be found at the Sustainable Food Lab's website at <http://www.sustainablefoodlab.org/projects/ag-and-development>.
- 4 It is important to consider inclusion and exclusion within the chain as well as the terms of participation to ensure benefits to poor producers.
- 5 Adapted from Bright, D., D. Seville, and L. Borkenhagen. 2010. 'Think big. Go small: Adapting business models to incorporate smallholders into supply chains.' Briefings for Business series. Oxford, UK: Oxfam International.

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