



Under What Conditions Are Value Chains Effective Tools for Pro-Poor Development?

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1. 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.¹ Smallholder farmers represent about 85 percent of the world's farms and support a population of roughly 2.2 billion people (Singh 2008) and about three-quarters of the world's poor are rural (smallholders or wage laborers). 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.

The full paper can be found at <http://pubs.iied.org/16029IIED.html>

This is a very 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 and can't compete in world markets with large farms in terms of productivity, quality, and efficiency. Another narrative is that we are headed toward a perfect storm of frequent supply shortages and increasing commodity prices because of a growing population and middle class, climate change, diminishing water supplies, and other environmental limits; such crises will lead to more and more opportunities for small farmers. A third interwoven narrative suggests that small-scale farmers in either scenario are critical for local food security and are stewards of core environmental services that need to be supported. These narratives inform our choice of interventions to increase benefits for the poor.

Many NGOs and some companies are working to link small-scale producers to regional and global formal markets. Formal markets have requirements—including quality, consistency, traceability, food safety, third-party certified standards (e.g., Fair Trade, Rainforest Alliance)—that necessitate direct communication and coordination along the supply chain. While these requirements raise the barrier of entry for new producers and particularly for

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.*

producers with fewer assets, they also present potential opportunities for diversification, income generation, and professionalization. Poor households can benefit from participation in formal supply chains not just as producers, but also as wage laborers in production or processing, and as providers in the service markets that support value chains.

Motivations for companies to engage with small-scale producers can include securing supplies, enhancing corporate social responsibility (CSR) reputation, gaining legitimacy in local markets, and creating “ethical” products. But connecting small-scale producers to formal markets is not simple. While smallholder farmers can supply primary and processed produce into local and global supply chains, ensuring that value chains deliver both commercially viable products to the market and value to smallholder households presents several structural challenges. Decades of under-investment have led small-scale producers in developing countries to operate in areas frequently 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 ensuring 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.

Third-party voluntary certifications are one of the most highly visible efforts to link farmers to markets in ways that create incentives for environmental and social progress. Certification programs both simplify companies’ engagement in ethical procurement and provide a channel to communicate with customers that has third-party credibility. Impact assessment trails implementation, however. It is important for donors, NGOs, farmers’ groups, and companies to understand the *role of certification and the frequent necessity of complementary strategies that can increase benefits to the poor.*

Understanding the benefits, costs, and risks when connecting small scale producers to formal markets is critical to supporting informed decision making by companies, farmers, NGOs, and donors about investing in supply chain opportunities. Key questions include: Who are the rural poor? Under what conditions do they benefit? What are implications of these lessons for our strategies in setting up “pro-development” value chains? What do we most need to understand next?

This Executive Summary, and the longer paper it reflects, seek to inform these questions from not only a review of literature, but also from experience with a cluster of value chain projects by development organizations and businesses in Africa and Latin America.

2. Who are the rural poor?

Small-scale producers and poor farmers often are characterized by a large degree of marginalization—lacking access to natural resources (both land and inputs), technologies (including irrigation), and 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 of the rural poor in Africa highlights how important it is to understand that the situations facing rural households are very heterogeneous (World Bank 2010). Food insecurity persists for the poorest households, and household investment capacities are extremely limited. The study further finds that adaptation strategies need to include diversification of activities and incomes. Although the study identifies important roles for non-farm activities (such as wage labor and self-employment), on-farm activities continue to provide the main share of household incomes.

3. What conditions affect how producers interact with formal markets?

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 formal supply chain. The second is involuntary, when an existing market starts to modernize and restructure, with new conditions of market participation. Debate around the former centers on inclusion; on the latter, the debate is mainly about exclusion. Both mechanisms present producers with options, to “step up” (to formal markets), “hang in” (to informal markets), or “step out” (Dorward 2009).

In some formal markets, new buyer standards have resulted in the *exclusion* of small-scale producers if additional investments in capacity are not made. After the introduction of compulsory GlobalGAP certification in Kenya in 2005, a survey of ten exporters by Graffham et al. (2009) found that these exporters controlled over 50 percent of the Kenyan export horticulture market. The survey found a 60 percent drop in formal participation of small-scale growers in these companies’ supplier networks. The authors suggest that the primary reason for this decline was financial. GlobalGAP certification is likely to require far more capital than many small-scale farmers can afford on their own (Graffham et al. 2009).

Cost sharing can make a big difference. In the Kenya example, the most successful exporters (measured in terms of numbers of small-scale grower suppliers) provided a significant share of the costs of GlobalGAP compliance. Although costs are associated with standards, it is striking that the meaningful inclusion of small-scale farmers is still a possibility. Sharing the costs and benefits of standards and certification between producers and exporters can be elements of a sustainable trading relationship (Blackmore and MacGregor, 2010).

In some cases, companies reach out to *include* small-scale producers. Walmart

and Unilever recently have made public commitments to include significant numbers of small-scale producers in their supply chains. A review of some recent household analysis in formal value chain projects shows the range of producers that can be engaged in these markets include those with low absolute income and food security challenges. A 2007 study by Green Mountain Roasters looking at coffee producers in Central America—cutting across all certifications—showed that at least 50 percent of the producers struggle with three or more months of hunger each year. An ongoing New Business Model project in Ethiopia linking over 10,000 producers of navy beans for export showed producers living in a declared food-insecure zone, with annual incomes ranging from \$300 to \$900 per year (Sustainable Food Lab 2009). A recent baseline study looking at Rainforest Alliance certification (reaching 37,000 producers) in Côte d'Ivoire using the COSA framework showed producers with incomes around \$360 to \$376 per year, with 40 percent of the certified and 55 percent 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.

Assets are key to participation

Both the literature and project experience tell us that the assets of 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 gaps between available assets and those necessary to benefit successfully in a particular market is critical to designing the upgrading strategy to expand participation to those with fewer initial assets.

It is possible to draw a number of conclusions from the literature about the profile of producers most likely to benefit from formalized market participation. *Beneficial value chain participation tends to be linked to strong levels of natural capital.* Measures of natural capital include size of landholding, access to water, type of crop, and level of productivity. Barham and Chitemi's (2009) study of smallholder farmer groups in Tanzania found that access to a reliable water source was correlated strongly with market improvements for 84 percent of groups. The evidence clearly showed that groups relying solely on rain-fed agriculture have a more limited range of opportunities to exploit market potentials and improve their situation. If producers have access to credit and income from value chain participation, they have more opportunities to increase access to natural capital (such as arable land and water).

Another critical finding is that *high levels of social capital can support links to formalized markets through aggregation opportunities.* 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). However, contract farming systems can work with unorganized farmers in ways that effectively substitute for intermediary organizations.

High levels of geographic marginalization inhibit value chain participation. Strong transport links or *proximity* to market hubs are important in a number of cases. *Financial capital* is important when standards, certifications, or other product requirements are necessary to gain entry to the market. *Human capital*, in the form of skills and education, is a key characteristic arising in comparative studies on participants versus nonparticipants in formalized value chains.

Pre-existing assets have a strong influence on the likelihood that smallholders will benefit from

certification programs. Fair Trade certification relies on existing market access and functioning cooperatives. Benefiting from organic markets relies on the natural and knowledge capital to increase productivity through composting and other techniques.

Market linkage projects often seek to build assets where they do not exist or to strengthen weak assets. It is important, however, to recognize the substitutability of assets as well as the ability to design interventions to compensate for weak or nonexistent capitals. Unorganized farmers lacking the social capital of a marketing organization can benefit significantly from contract farming schemes (Gibbon et al. 2009; Minten et al. 2005), and value chain interventions often offer a range of ancillary benefits and services that build human and natural capital. It is also important to consider the impacts on smallholders as laborers and not only as producers (Hendriks and Msaki 2009; Maartens and Swinnen 2006; McCullough and Ota 2002; Neven et al. 2009).

4. In what ways can poor producers benefit from participation in formal value chains?

Many value chain studies don't include baseline data, and it is therefore not possible to draw definitive conclusions and identify trends based on solid quantitative evidence. Humphrey and Navas-Aleman's (2010) study of the pro-poor impacts of donor interventions in value chains highlighted the limited number of quantitative studies demonstrating the effects of these interventions on the poor. Nevertheless, a review of literature and interviews with leading practitioners reveal common patterns of benefits, described below.

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 (e.g., Minten et al. 2005; Neven et al. 2009; Singh 2008). Stability seems to be a stronger motivator than price. Minten et

al. (2005) found that although 61 percent of farmers believed that the contract price was on average lower than on the local market (although 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. Similarly, Michelson et al. (2010) showed that farmers in Nicaragua experience significantly less price volatility in supplying to Walmart, although they are paid lower prices on average.

Formalized market suppliers tend to have *greater certainty on when the sale will take place and at what price* and thus provide increased income security through contractually defined payments or guaranteed income (Neven et al. 2009). Another case pointed to *seasonality smoothing* as key benefit to 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 percent of farmers said that access to a source of income during the lean period was a major reason for signing the contract.

As would be expected, Fair Trade certification results in greater stability through its guaranteed minimum price and longer-term trading relationships. This was reported in 27 of a reviewed 33 cases on the impact of fair trade (Nelson and Pound 2009). Another study looking across impact assessments of fair trade cases also concluded that in all seven case studies that they examined, fair trade had improved the wellbeing of farmers and individuals in situations where highly volatile price fluctuations have ruined the livelihoods of many farmers who have not had the benefit of the fair trade guaranteed price (Murray et al. 2003).

Higher returns

Higher returns for farmers can result from increased prices for cash crops, higher productivity, or both. In some cases (although not the general rule), poor producers are offered *premium prices* for their products in formalized markets (Gibbon et al. 2009). The projects in the SFL “new business models for sustainable trading relationships”

program all show higher incomes from access to higher value markets and/or increased productivity. 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*.

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

Improved productivity

Participation in formal value chains with standards or certification can lead to improved productivity, although organic certification can be an exception, at least during the first few years.

Minten et al. (2005) showed that participation in contract farming with standards led to increased on-farm monitoring and improvement in the use of compost and fertilizers. Neven et al. (2009) showed that farmers supplying Kenyan supermarkets use on average twice the amount of inputs (fertilizer, manure, chemicals) per hectare compared to traditional-channel farmers. Yields per hectare and per worker are therefore higher in the supermarket channel. A comparative study of the impact of Fair Trade certification on coffee and banana producers in Peru, Costa Rica, and Ghana by Ruben et al. (2008) showed that, in most cases, involvement in fair trade increased output and/or yield of their key crops. They also found that positive average net household income effects were registered for most fair trade situations.

On the other hand, Donovan’s (2010) study of Nicaraguan coffee growers demonstrated reductions in productivity for organic producers where fertilizer was not used. In this study, producers transitioning to organic suffered from serious reductions in productivity and asset de-accumulation. While productive improvements often are associated with participation in formal chains, they cannot be assumed, especially in the transition to organic.

Reduction in vulnerability and risk

Development practitioners often assume a direct link between increased income and reduced risk for households. However, more recently published studies highlight the importance of pricing structures that specifically reduce and share risk (e.g., Michelson et al. 2010).

Studies of the impact of fair trade supply chains on reducing vulnerability show varying results. Some studies have shown that more stable trade and access to credit has led to increased investment in land and other stable assets. Case studies report that the increased incomes have led to investments in diversified economic or home gardening activities. Other studies have shown that increased income from a fair trade crop has led to increased investment in that activity, with consequent increased dependency on the success of that market (Nelson 2009).

Food security

Producers supplying high-value export markets can suffer food insecurity, but positive synergies also may exist (Fujisaka et al. 2006). Positive spillover effects on food security crops were demonstrated in Madagascan contract farming for French beans to export markets (Minten et al. 2005). Rice productivity was shown to be 64 percent higher on plots with a contract compared to those without, which may be linked to improved agricultural practices. Hendriks and Msaki’s (2009) study of the impact of smallholder commercialization of organic crops showed significant improvements in food diversity and adequacy for farmers participating in commercial, certified markets.

Méndez (2010) found that the results are complex for coffee producers in Central America. Higher crop incomes were clearly the dominant experience for the fair trade communities studied, yet no improvement in food security was found. Income diversification in conjunction with Fair Trade certification was shown to be important for reducing food insecurity.

The World Bank's 2008 World Development Report described the transition of agricultural economies worldwide from rural subsistence to market-oriented enterprise responding to demand from urban centers. Dar et al. (2010) of ICRISAT argued at a recent symposium in Ethiopia that this continuum of development enables "rural areas to use agriculture to capture a share of the growing wealth of cities." ICRISAT's analysis posits that "Where poverty is declining, it is largely due to improving connections to urban markets that purchased agricultural produce and offered additional employment opportunities" (Walker 2010).

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, including a shift from smallholder contract farming to large-scale integrated estate production. Households that were characterized by lower levels of livestock and non-land assets benefited from these labor opportunities (Maartens and Swinnen 2006). In McCulloch and Ota's (2002) study of export horticulture in Kenya, they 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, had income primarily from labor they provided 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

nonparticipating 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. However, the results from a much larger body of studies looking at the impact of fair trade plantations on improving livelihoods through labor improvements are considerably more mixed (Lyon and Moberg 2010).

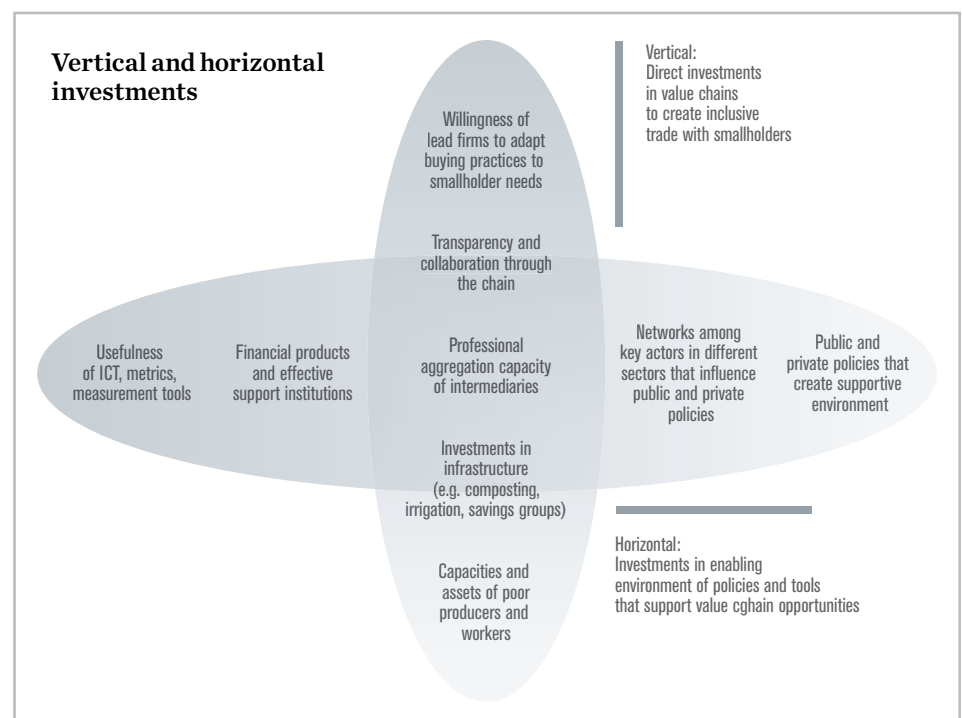
5. What are strategies for "leveraging" a market access opportunity to increase development impact?

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 not only "vertical" investments in the commercial chain but also "horizontal" investments in enabling conditions.

"Success" in pro-poor value chains is based on both commercial and

development success. Goods must be produced, processed, and transported to market at the quality and consistency required and at a cost that the product value proposition can bear. Development success requires returning benefits to producer communities that improve livelihoods. From the evidence and from practitioner experience, we see strategies for increasing benefits to the poor from: (1) investing in upgrading the value chain 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, and designing the product proposition and value chain upgrading strategy, must come from the stakeholders in a system and 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 and understand the costs, risks, benefits, and needed investments. The following is a framework intended to help facilitate thinking about inclusive supply chains and to identify the focus areas for improvement appropriate for a given context.



1. Co-investment in Upgrading

When seeking to engage poor producers in markets successfully, investments in upgrading are often critical. Small-scale producers, particularly marginalized poorer producers, and their intermediary business partners (such as farmers' associations or cooperatives), often need investment in production and processing capacity as well as business skills that will increase their chance of benefiting. These type of investments typically are needed to meet the requirements of the market (quality, consistency, production standards), or to enable the poor to reduce risks and enhance rewards (increasing productivity, sustainable farming skills, or business capacity).

Co-investment in the upgrading process is almost always required, because although firms are often willing to work with smallholder supply chains, they cannot justify the full cost of upgrading the least-advantaged producers to the market requirements when a significant practice and infrastructure gap exists. Buying companies may become primary investors in upgrading supply in the relatively rare situation of an absolute supply shortage that can be fulfilled only by smallholder producers, for example in cocoa production, but such circumstances are exceptions.

By “co-investment,” we generally mean both private and public sector investment that comes from outside the immediate cash flow of the supply chain, which is invested over a period of time to bring production and processing up to the needs of the market. 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.

2. Adapting Trading Relationships for Sustainable Smallholder Sourcing

A key to success in reaching and benefiting small-scale producers is ensuring that the business model of firms adapts to diverse smallholder needs (see, for example, Ponte 2007; Riisgaard 2008). Typical goals when adapting business structures in sustainable smallholder sourcing

projects include ensuring effective market linkage intermediaries, access to services, ongoing 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 producers to 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 fair trade 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 fair trade approach.

3. Adapting Brand Identity and Buying Practices

The brand identities and buying practices of lead firms have three key elements for increasing durability and benefits. First, market value to the lead firm and to consumers from the smallholder chain ultimately must be able to cover the operational costs of the supply chain. The ongoing added costs in the supply chain—such as services by the intermediary, risk-sharing mechanisms, and price premiums—all need to be covered by the chain.

Second, the buying practices of lead firms need to adapt to development objectives. Many farmers need long-term

technical assistance, and sourcing approaches like reverse auctions, driven only by cost, have the potential to undermine equitable trading functions.

Finally, embedding the “value” of smallholder sourcing or pro-development projects in the product proposition or reputation of the lead firm helps build the values of smallholder sourcing directly into relationship with consumers and therefore is more durable. Corporate commitments to certification (e.g., Mars to 100 percent certified cocoa, Cadbury's to fair trade for their Dairy Milk bar) are examples of this embedding of development outcomes in the brand identity for consumers.

4. Co-investment in livelihoods (beyond the value chain)

Beyond upgrading, trading relationships, and buying practices, evidence from many of the impact studies points to the need for additional investments in livelihoods and food security. These horizontal investments can leverage the relationships and opportunities created by formal value chain market access and increase access to donors and development organizations.

General asset investments targeted to 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 consistency 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).

Market diversification. Income flows through the year are better than once-a-year income, and hence enterprise diversification is beneficial to livelihoods. Méndez et al. (2010) note in their study of coffee producers in Central America that while fair trade generated increased incomes, improved food security did not occur except when fair trade was used in combination with diversification. Market and crop diversification can help enable a crop rotation that builds soil fertility. Developing local markets also has the potential to engage many more growers, and 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.

Service input businesses are an additional opportunity to create more 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 opportunities are crucial to positive development impacts. 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 and opportunities for women to participate in the main chain in leadership roles and in supporting service businesses can increase the development returns of a project.

6. What conclusions can we draw?

Analyses of projects connecting small-scale producers to formal markets underline the importance of producer assets to both participation and benefits. 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

As the Nelson 2009 study looking at ten years of impact studies in fair trade 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 coordination with other development actors, funds and initiatives to raise rural livelihoods to a more sustainable level.”

activities. Some formal chains can increase income (through better prices and better productivity) but 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 the challenges of each particular supply chain or because of the agro-ecological conditions of producers. Very poor producers (those living on \$1 to 2 dollars a day), such as those in the CRS/SFL dried white pea beans project in Ethiopia, can be reached through agronomic interventions to improve productivity or to achieve certification (as shown in a Rainforest Alliance cocoa project). Producers with higher levels of assets are able to participate in markets with higher demands on product characteristics, quality, and volumes, as shown on the smallholder cut-flowers from Kenya project.² The poorest producers with low levels of natural capital (i.e., land and livestock) 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, ultimately are modest in size relative to domestic and regional staple markets. Therefore, entry to formal value chains is not a silver bullet for pro-poor development. To have a significant and durable impact on poverty 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 where conditions are favorable and a comprehensive suite of development interventions are 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 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; and
- developing partnerships with the private sector to address policy issues that can bring more public investment and policy support for poorer producers.

A number of underlying principles can be identified that seem to increase the chance of successful smallholder participation in formal markets (Bright et al. 2010).

Supply chain coordination to ensure

² 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>.

collaboration and transparency across the supply chain. This enables identification and resolution of problems in both commercial and social performance. Close collaboration is particularly vital when perishable commodities are involved, which require traceability and management of food-safety risks. Collaboration also can stimulate innovation among actors in the chain as they grow to understand their interdependencies and adapt to changing markets.

Effective market linkages to connect the world of the disparate and heterogeneous small-scale producers with the needs of the modern markets for consistent, reliable supplies. No firms in formal markets can afford to source directly from thousands of small-scale producers; they require intermediaries. These market linkage intermediaries serve not only to aggregate and process the production to meet the needs of the buyer, they are also frequently essential hubs for services, inputs, or quality assurance, and in the best cases help farmers meet their diversity of marketing needs. The role of the intermediary is nested in context, depending on what other services and extension are available for a given crop in a given geographic area.

The choice of intermediary structure is important. Multiple failures have occurred when trying to create market linkages only through farmer cooperatives, while the reputation for rent-seeking among opportunistic intermediaries is well-known. In cases where social capital is low and producer organizations do not already exist, much evidence points to the success of contract farming in working with smallholders and poor producers (Ruben 2010).

Fair and transparent governance of the supply chain is important in ensuring better quality and consistency of production, and more stable benefits for producers. The agreed terms of trade, quality standards, and pricing structure (such as premiums for high quality and penalties for poor quality) must be clear throughout the chain from the outset. Dispute-resolution mechanisms—either formal or informal—are hallmarks of well-functioning governance structures. As understanding and knowledge

improves, supply chains tend to work better.

Strategies for **sharing of costs and risks** (such as bad weather, transport losses, and last-minute changes in customer demand) more equitably throughout the chain can mitigate the increased risks to producers of specialized production for formal markets and the tendency of the market to push costs and risk to the farmers. These can include better communication about supply and demand, financial risk-management schemes, micro-insurance schemes against bad weather, supply chain risk-management funds, and shared investments to improve the functioning of the chain.

Equitable access to services is an essential component of a successful trading relationship between food and drink 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.

7. What outstanding questions remain?

Analysis of the literature and discussions with practitioners brought to light questions for further discussion, action-research in value chain projects, and shared learning in networks of producers, buyers and practitioners. Below are some of the issues and questions we find most compelling.

Increasing impact

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

Can we more effectively accompany certification 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 organic certification.

How can we increase the scale of impact by working with businesses to apply learning from pilot projects to their buying practices across their whole supply chain? Many companies are motivated by the need for success stories. Pilots are vulnerable to marginalization in the business culture of a large corporation. Some progress is encouraging—with Costco, Green Mountain Coffee Roasters, and Unilever, for example—but these experiences often involve resistance within companies to adopting explicit development objectives because of concern over sourcing costs and future supply security. The cultivation of greater commitment by the private sector is at its beginnings.

Expanding participation and benefits to poorer households

Formal chains tend to reach and benefit *organized* (and therefore usually better-off) farmers. Can we increase the reach of value chain projects, particularly those in higher value markets, to the less-organized farmers? One approach to expanding the reach of higher-value certified markets is the “step” approach where producers are slowly integrated into increasingly more rigorous standards systems through baseline programs like the 4C code of the coffee community. Can the step approach be effective at reaching 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 that offer fair remuneration, good working conditions, and wider community development outcomes?

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, paternalistic interventions by the development community 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 underemphasized. How can we increase producer agency in market participation? Will that increase benefits for the producers and allow for improved capacity to adapt to future market and environmental conditions?

Intermediaries

The instinct of many development organizations working to create inclusive trading models is to build services and governance mechanisms into the intermediary role to ensure better returns to farmers, and often prioritize 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 institutions as possible. What are the minimum changes that need to be made to the average trader/broker/middleman role in a chain to get a better development outcome and deliver high-quality product?

Complementary approaches to certification

A range of valid approaches to poverty alleviation through value chain participation are available. Third-party certification is one leading approach, but may not be appropriate in all cases. For sensitive crops, especially fresh produce where food safety is paramount, certification and segregated supply chains will be necessary. For bulk commodities, alternative approaches represented by the Better Cotton Initiative and commodity roundtables are worthy of close attention. How might

these be leveraged for development impact?

Managing risk in formal markets

Formal markets can have higher risks for producers and buyers. 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 is centered largely on issues of risk. Many feel that these issues have not been explored adequately in 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 more unreliable production systems of marginalized farmers, how do we measure, communicate, and share or reduce risk to producers and buyers?

Better data so that donors and development organizations can 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 nonparticipants 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 thus can be overestimated (hence the significance of the work at CATIE of Donovan et al. 2010).

Social metrics for value chain actors

How can companies understand and measure social impact and improve their decision making around contributing to social goals through their sourcing choices? Several 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 these companies already use Key Performance Indicators (KPIs) to track commercial performance. When sourcing from small farmers, additional indicators are needed to be able to track social issues, including numbers of farmers, incomes, assets, and food security. These indicators can be combined with KPIs to rate ecological performance factors, 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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