

COPLA

**Trading Up: How a Value Chain
Approach Can Benefit the Rural Poor**

Jonathan Mitchell, Jodie Keane and Christopher Coles

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* Disclaimer: The views presented in this paper are those of the authors and do not necessarily represent the views of the COPLA programme, its partner organisations, including the ODI, or its funders.

COPLA Global: Overseas Development Institute
111 Westminster Bridge Road
London SE1 7JD
UK

Tel: +44 (0)20 7922 0300 Fax: +44 (0)20 7922 0399
www.odi.org.uk

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Executive summary

In recent years, Latin America has moved rapidly towards liberalising trade, both in the region and internationally. This has stimulated active debate on the merits of a more open trading regime. Getting lost in this polarised debate is an understanding of the impact of changes in the trade regime on marginalised groups, particularly the rural poor. This report examines how value chain analysis can, in a practical way, help the rural poor participate gainfully in local, regional and global trade, by:

- Identifying what orthodox trade theory tells us about the link between trade and poverty and explaining how and why value chains have emerged as a helpful entry point for discussions on rural poverty;
- Summarising what we know about the constraints faced by low-income participants in agriculture in Latin America;
- Developing a framework which outlines how the rural poor can upgrade their position within viable value chains; and
- Pulling together the theoretical perspectives, practitioner studies and the upgrading framework to learn lessons about how to use value chain analysis and development effectively as a tool to augment the incomes of poor people in rural areas sustainably.

Conceptual approach

Value chain analysis is more helpful than orthodox theory in explaining *why* the poor may face barriers to trade and *how* to overcome these. This is because orthodox trade theory uses a series of empirically questionable assumptions to provide an overarching answer to the wrong question: the link between trade and economic growth, on the one hand, and poverty reduction, on the other, has never been a central focus of trade theory. It also fails to deliver plausible interventions for policymakers and for practitioners who have more modest goals: how to support an identified target group to access (or to access on better terms) specific viable value chains. Recognising these weaknesses, trade theory is itself being reformulated and, in several important respects, is converging with value chain analysis.

A 'value chain' describes the full range of activities required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers and final disposal after use (Kaplinsky and Morris 2001). They do not exist in the sense of their having a tangible reality: they are simply a framework for trying to understand how the world works.

The approach is rooted in the real world of production and exchange. It focuses much less on overarching theory and unrealistic assumptions and more on a practical approach towards supporting specific target groups to access particular value chains. The methodology and framework are used by researchers, businesspeople and donors, with quite different goals: from increasing commercial profits to improving the competitiveness

of localities to reducing poverty. They are used for the simple reason that they help focus attention on the right questions and provide practical answers to them. VCA normally shows the build-up of costs along a specific commodity chain. This can be complemented with an identification of the business service providers and what are considered to be the main determining factors in the external policy environment.

Value chain analysis is well suited to understanding how poor people in rural areas of developing countries can engage, or improve their terms of engagement with, domestic, regional or international trade. The benefits of the value chain analysis methodology include:

- It recognises the lack of economic power of target beneficiaries compared with more powerful firms setting the 'rules of the game' in the value chain, and how this constrains their choices;
- Has economic viability and commercial sustainability at its core because of its market focus;
- Is a powerful diagnostic tool that can identify critical issues and blockages for specific target groups – and provides a framework for interventions to change the circumstances of the resource poor;
- Identifies the core rents and barriers to entry that determine who in the value chain benefits from production for diverse final markets;
- Is inherently scalable: even if the initial focus of a value chain development exercise is a single producer group or firm, the same logic can be applied to a cluster of firms, a region or a whole country;
- Can provide a policy and restructuring tool to counter both market and state failures.

It is for these reasons that value chain analysis has had a profound impact on development studies in recent years.

What we know: Themes emerging from the COPLA studies

Five studies, commissioned by COPLA in Latin America under the theme Trade and Poverty, examined a range of 'traditional' and more 'non-traditional' agricultural commodities: Brazil nuts in Bolivia, bananas in Peru, trout in Peru, wood furniture in Nicaragua and Honduras and rural community-based tourism in Guatemala and Nicaragua. The studies all adopted elements of a value chain analysis. They confirm much of what we know already about how the poor engage with trade, and how efforts to link poor producers with international markets through larger producer/exporters may succeed or fail.

Five important themes emerged from the COPLA studies:

1. That poor people in rural areas almost always forge links with lead firms in order to be able to access international markets;
2. The difficulties of sustaining vertical linkages;

3. Unsustainable interventions (often the initiatives of external actors), which are insufficiently linked to markets;
4. The importance of the business and enabling environment in which value chains operate in determining their sustainability and distributional impacts; and
5. That poor people engage with value chains at a number of different nodes of the chain, as workers and consumers as well as producers.

How the rural poor can upgrade in value chains: The IDRC framework

Upgrading means acquiring the technological, institutional and market capabilities that allow our target group (resource-poor rural communities) to improve their competitiveness and move into higher-value activities. In short, upgrading is the process of trading up, which allows poor people to access viable value chains or improve their position in existing value chains.

Over the past few years, development studies have been developing a language, approach and experience to support poor people in rural areas to upgrade their position in viable value chains. This has necessitated an adaptation of the 'traditional' upgrading sequence:¹ that of process upgrading before moving into product upgrading and on into functional and inter-chain upgrading. This categorisation, based on the historical experience of the newly industrialised countries of East Asia, may still be relevant for manufacturing firms seeking global markets, but it needs adjustment if it is to be relevant to the pressing task of upgrading some of the poorest and most disadvantaged, including agricultural producers and exporters, into viable value chains.

The Overseas Development Institute (ODI) has been working with the International Development Research Centre (IDRC), the Danish Institute of International Studies (DIIS) and with action research teams across Africa and Asia for the past three years to explore different ways that the rural poor can engage successfully in viable value chains. On the basis of this practical experience, we propose a menu of seven different types of strategy to upgrade the position of the rural poor in value chains.

Horizontal coordination

This is the process of greater intra-nodal organisation, often in the production and processing nodes, in some form of collective structure (typically a producer group). This form of upgrading is very important for poor people in rural areas because coordination with others allows producers to achieve economies of scale in supplies and to reduce transaction costs. Often, horizontal coordination is the first step in a sequence of interventions that ultimately result in access to the market, and is a prerequisite for other forms of upgrading. Critical to the success of horizontal coordination strategies are the entry rules to join the group and the quality of management of the group structure.

¹ Derived from the historical experience of the newly industrialised countries of East Asia, where firms made the transition from OEA production (original equipment assembling, that is, thin value added under contract to a global buyer) to OEM (original equipment manufacturing, that is manufacturing a product which will bear the buyer's badge), to ODM (own design manufacturing) to OBM (own brand manufacturing), see Kaplinsky and Morris (2001).

Vertical coordination

This is the move away from one-off spot transactions and towards longer-term inter-nodal relations, for instance contract farming, whereby a processor or exporter will contract horticultural out-grower farmers. This form of upgrading is important because it can result in greater certainty about future revenue flows for poor participants. In practice, vertical coordination is often a slow and difficult process, because it involves the building of trust relations between the buyer and the seller (to avoid the common scenario whereby producers break their contractual commitments and sell their produce on the spot market when prices are higher than specified in the contract).

Functional upgrading

This refers to changing the mix of functions performed by actors in the value chain – increasing (upgrading) or reducing (downgrading) the number of activities performed by individuals and firms. For instance, an agricultural producer starting to process some of their output to add value to it represents functional upgrading. Often, horizontally coordinated institutions are best able to provide these value-adding activities (such as grading and packaging of produce). The shortening of the value chain can be achieved by means of the exclusion of intermediaries and the redistribution of their functions among the partners of a newly formed vertical relationship. It is very rare for poor people to functionally upgrade themselves without carrying out other upgrading strategies.

Process upgrading

Process upgrading involves improving value chain efficiency by increasing output volumes or reducing costs for a unit of output. Examples of this include improving agronomy to enhance yields that result in higher sales or own consumption, or both. This may be the result of improved planting techniques, planting materials or investments, such as irrigation infrastructure.

Product upgrading

Improving the quality of the product of the value chain has become increasingly important as the richer Northern economies have become more quality conscious and as standards have risen. Some standards are driven by lead buyers (i.e. supermarkets requiring traceability of food products), others by statutory hygiene standards in importing countries and others, increasingly, in response to fair trade and organic demands by final consumers. The challenge of standards lies in achieving them (to allow market access) without excluding the poor from the value chain. Process and product upgrading are closely related because improving product quality often involves improvements to the production process.

Inter-chain upgrading

This is the use of skills and experience developed in one value chain to productively engage with another – usually more profitable – value chain. Examples of this include the

shift from growing traditional commodities to high-quality export horticulture. Inter-chain upgrading often has significant barriers to entry for the poor and vulnerable to access the more lucrative value chain.

'Upgrading' of the enabling environment

Although not an upgrading strategy in a strict sense, the competitiveness of the enabling environment for value chains is a major contributing factor in the success of the operations of a value chain. Improvements to the support, services, institutional, legal and policy frameworks in which value chains operate are often a productive area in which development agencies can intervene to improve the functioning of a chain.

Reflections on the use of value chain analysis

Below, we highlight some of the key findings of this experience for policymakers and practitioners seeking to assist the entry, participation and upgrading of the rural poor in value chains. Beyond taking a broader view of upgrading strategies, we underline the importance of:

1. **Clarity on the rationale for the (possible) intervention:** In particular, it is important to distinguish whether the primary aim of an intervention is to reduce poverty or to stimulate growth in the local economy. Whatever choices are made regarding the aim of the intervention, it should be accepted that, as with any sustainable private sector development project, the non-poor will necessarily gain from the intervention as well as the resource poor.
2. **Selecting an appropriate value chain to develop, with suitable demand requirements:** The choice of value chain to develop has important implications for the barriers to entry for the poor and for the sustainability of the initiative.
3. **Rigour in applying research methods:** Value chain analysis and development requires robust evidence-based research of the current market system and a clear appreciation of which blockages to poor people can be overcome and how. Poor-quality research can result in project failure, with disastrous consequences for target beneficiaries.
4. **Defining appropriate interventions:** It is important that the interventions proposed for value chain development spring from, and are constrained within, the logic of the value chain analysis and the market development approach.
5. **Identifying the key rents that allow poor producers to participate gainfully and sustainably:** Participation in markets does not, in itself, provide for sustainable income growth. The key goal is to locate rents in the chain that can be captured by poor people and that are unlikely to be eroded through time as a result of competition.
6. **Understanding about barriers to entry:** The trade-off in developing barriers to entry which are not so high that all the poor are excluded, but which are sufficiently high to allow participants to gain rent, lies at the heart of pro-poor value chain development.
7. **Avoiding obsessing about the production node in agricultural value chains:** Poor people engage with value chains at all nodes as producers,

intermediaries, workers and consumers. It is not necessarily the case that the largest pro-poor impact should centre on the production node.

8. **Analysing the enabling environment carefully:** A careful analysis of the operation of value chains will often identify state failures as well as market failures. It is not unusual for the main impediment to poor people engaging with value chains to be the state which purports to represent them.
9. **Taking action:** Upgrading the position of poor people in value chains on a sustainable basis is not easy. It requires the cooperation of many stakeholders in the chain, an inclusive policy process, which must include the lead firms, and a pragmatic and non-ideological approach towards value chain restructuring.

1. Introduction

1.1 Why look at trade and poverty?

In recent years, Latin America has moved rapidly towards liberalising trade, both in the region and internationally. There has been a surge in the number of regional trade agreements notified to the WTO since the 1990s, this includes in the Latin American region. Except Cuba, all Latin American countries are now part of some regional block, ranging from bilateral and pluri-lateral free trade areas to customs unions with pretensions of becoming a common market (Ruiz-Dana et al. 2007). However, the restructuring of existing agreements in the region, since the 1990s, and the signing of new ones has been argued to be further complicating trade within the region, by producing an overlap of the rules regulating trade, with varying depth, scope and limitations (Cornejo and Harris 2007). There is active debate in Latin America about the merits of a more open trade regime. But getting lost in this polarised debate is an understanding of the impact of changes in the trade regime on marginalised groups, including the rural poor.

Comercio y Pobreza en Latinoamérica (COPLA, or Trade and Poverty in Latin America)² exists to engage critically with these debates and to promote creative thinking on how poor people can harness the new market opportunities for pro-poor growth. This debate is of immediate relevance to the 57 million Latin Americans who continue to suffer extreme poverty, and to the 130 million, or one-quarter of the total population, who live on less than \$2 per day.

This report targets people who wield practical influence for progressive change in developing countries. In this category we include practitioners, non-governmental organisations (NGOs), businesspeople, donors and public policymakers whose decisions affect the lives of many resource-poor communities.

1.2 Aims and structure

The aim of this paper is to understand whether value chain analysis can assist in a practical way the efforts of those seeking to augment the incomes of the rural poor by helping them to participate gainfully in global trade. We have approached this question from several different directions.

Section 2 focuses on theory. First, we summarise what orthodox trade theory tells us about the link between trade and poverty. Second, we outline more recent developments in trade theory, which are grounded in empirical reality and which emphasise the industrial organisation of trade: this is the conceptual context from which value chains have emerged. We explain what value chains are, why they are used and why they may be able to help address our question.

² This research has been funded under the COPLA project. It is a two-year project funded by the UK Department for International Development (DFID), exploring linkages between trade, poverty and social exclusion.

Section 3 is rooted in a practitioner perspective in Latin America. COPLA commissioned five papers applying elements of a value chain perspective to achieve an understanding of the constraints faced by the poor participating in agriculture (bananas in Peru and Brazil nuts in Bolivia); fisheries (trout in Peru); the furniture industry (in Central America); and the services sector (rural community-based tourism in Nicaragua and Guatemala). This section highlights what these studies tell us about how poor people engage with trade in the Latin American context.

In Section 4, we present a framework for understanding how poor people in rural areas can upgrade their position within a range of local, regional and global value chains. This framework was developed at the Overseas Development Institute (ODI) (a London-based development policy think-tank and member of the COPLA network) and is based on experience of action research in Africa and Asia and an extensive review of the academic and grey value chain literature. It outlines the different upgrading strategies that have enabled the rural poor to benefit from trade, and explores what has worked, why and in what context.

Section 5 pulls together the theory underpinning value chains, the practitioner studies and the upgrading framework to reflect on what this tells us about using value chain analysis as a tool to support poor people to access viable value chains in a way that augments their incomes sustainably. Our aim is to distil findings which can be generalised beyond the case study and which can provide practical support to attempts to enhance the incomes of the rural poor.

2. Brief overview of the trade and poverty debate

2.1 An introduction to the debate

The winds of real change are blowing across the trade and poverty debate. We need to understand this change in order to be able to develop an approach that responds to contemporary needs.

First, the debate is changing because the nature of trade has changed. The ways in which new entrants and producers engage with trade have altered as a result of the increased integration of economies into the global trading system - and the fragmentation of stages of production across countries.

Second, since most developing countries have reformed their trade policies to become more liberal, the trade and poverty debate is characterised less by the battle of ideologies between liberalisers and non-liberalisers and more by the urgent need to find development solutions that work in practice. In Latin America, trade liberalisation has resulted in increased trade flows, but this has yet to contribute to significantly faster growth and poverty reduction (COPLA website 2009). The Latin American experience is not an anomaly. In other developing regions and countries too, trade policy reforms have frequently not delivered the growth and poverty reduction benefits anticipated.³

As a result, the key policy challenge lies no longer in whether to participate in global trade, but in how to do so in a manner that augments the productive capabilities and incomes of producers in general, and the poor in particular. This section discusses traditional and more recent theoretical developments in trade theory and methodology. The following section proceeds to discuss the contribution of global value chain analysis to the trade, growth and poverty reduction debate.

2.2 Orthodox theory, new trade theory and the evidence

Standard neoclassical trade theory asserts that the removal of impediments to trade, based on specialisation and comparative advantage, results in the largest increase in welfare for all (because of improved resource reallocation, given countries' different cost and quality of land, labour, capital and technology).⁴ In other words, if every country produces and exports the commodities, goods and services that it is best at producing, everyone will benefit. However, the theory has important weaknesses that limit its use for understanding how the rural poor can integrate with trade.

The first weakness is that several of the key assumptions are unrealistic. Markets do not always function optimally, and market failures inhibit countries from achieving their optimum mix of commodities based on the technology and factors of production available (their production possibility frontier).⁵ In the real world, productive employment

³ The focus of this discussion is on exports and the gains accruing to producers rather than on imports and the gains accruing to consumers.

⁴ Such as the Heckscher-Ohlin model.

⁵ Since models assume perfect competition, that markets clear, that technology is free flowing.

opportunities are not open to all as is commonly assumed; there often is a 'reserve army of labour', which may be both unemployed as well as underemployed.

Second, if trade were undertaken between two perfectly competitive markets then, according to orthodox economic theory, all trade transactions would occur at 'arms length', with prices and output determined by the intersection of demand and supply (owing to perfect competition). But we know that this is not the case: many prices in global trade are negotiated specifically between known parties, who balance short-term advantage with long-term objectives, and do so in the context of high-trust relations (which may include intra-firm trade).

Third, it is by no means evident that countries specialise in the production of goods (or services) which reflect comparative advantage at a given point in time. Many countries and producers seek dynamic comparative advantage; this may mean defying their static comparative advantage in order to move into increasing returns industries (Lin and Chang 2009).

New trade theory addresses many of these weaknesses. Developed on the basis of empirical realities,⁶ the presence of scale economies at the firm or industry level invalidates the assumption of perfect competition. This recognises that there are a variety of increasing returns to scale, including not only production costs but also the cumulative effects of knowledge and learning. Another departure from traditional trade theory is the recognition of externalities and spillover effects between producers operating in the same locale, who benefit from the proximity – and agglomeration – of other producers, buyers and suppliers.

As a consequence of the growth of outsourcing (as firms concentrate on their core competences), there has been an increasing tendency for production to become fragmented. Firms and countries no longer trade solely in final products, but also in intermediate goods and processes, which may or may not be reflective of their relative factor endowments. In fact, today most developed countries trade most with countries with similar factor endowments to their own – so most exports from European Union (EU) countries are destined for EU markets (the opposite outcome to what orthodox trade theory predicts). New trade theory can account for increased trade between countries in the same industry because of the increasing returns that may result from intra-industry trade. One of the central results of new trade theory is that two types of trade coexist, with net or inter-industry trade driven by differences between countries in comparative advantage, and intra-industry trade encouraged by similarities between countries (Neary 2009).

An important strand in new trade theory is that participating in external markets is a spur to productivity growth and learning. This is believed to be the case for a number of reasons. Some increases in productivity come as a simple consequence of producing at higher scale, for global markets. But learning is also believed to be enhanced by

⁶ Including the Leontief paradox, which found that a country with the highest capital per worker had a lower capital:labour ratio in exports than in imports. This empirical reality undermined the validity of neoclassical Heckscher-Ohlin theory, which predicted that countries would trade based on comparative advantage in factor endowments.

participating in more demanding global markets and by engaging with lead firms, and therefore benefiting from resultant technology transfer.

The second weakness of orthodox trade theory is that its empirical foundations are not entirely secure. Empirical evidence of differential economic growth performances related to trade openness typically involves cross-country regressions on trade and growth indicators, or on trade openness indices and growth (see Box 1). Using a similar methodology, the subsequent links between growth in trade,⁷ its impact on growth (gross domestic product (GDP)) and therefore poverty reduction have been estimated by Dollar and Kraay (2000; 2002).

Box 1: The empirical foundations of orthodox trade theory

Trade and growth regressions: Trade and growth regressions typically specify the growth of trade (export volume) within a linear economic model. Typically, growth (GDP) is a function of the growth rates of real GDP, capital stock and the labour force and other variables thought to explain economic growth. Such models are derived directly from the neoclassical production function. Criticisms have been made regarding measurement errors, omitted variable bias and the simultaneity problem (whereby variables included are affected by other variables in the model).

Trade openness indices and growth regressions: Further to the classification of countries by their trade policies and orientation ('outward' or 'inward') by the World Bank (1987), using a broader timeframe and sample and regressing a trade openness index with growth across countries, countries can be classified as 'closed' based on the following criteria: average tariff rates; coverage ratio of non-tariff barriers; if the country has a socialist economic system; if it has a state monopoly on exports; and if the black market premium exceeded 20% during the 1970s or 1980s. Criticisms of the methodology include those levied at more simple trade and growth regressions as well as those highlighted by Rodríguez and Rodrik (2001): simple measures of trade barriers (such as trade openness indices) tend not to enter significantly in well-specified growth regressions, regardless of time periods, sub-samples or conditioning variables employed.

The overriding criticism of both approaches is that neither explores *how* trade liberalisation affects economic growth and, as a result, poverty. Such detail can be found only in detailed country- or sector-specific studies as opposed to cross-country regressions.

There are considerable methodological concerns in relation to some of the aforementioned studies.⁸ Growth and trade may exhibit a two-way causality; that is, growth itself may lead to more trade, as well as vice versa (Rodríguez and Rodrik 2001). It has been suggested that influential studies detailing the benefits of trade liberalisation on poverty (such as the Dollar and Kraay study of 2000) were based more on faith than on evidence (Rodrik 2000).

Given the failure of liberalisation in some countries and regions to produce the anticipated growth and poverty effects, there have been subsequent theoretical as well as methodological developments. More recent findings suggest that the most productive

⁷ Export volumes, or exports plus imports as a share of GDP.

⁸ See Bhagwati (1996), who notes that 'while running such regressions can be suggestive of hypotheses one has not thought of ... their ability to persuade is crippled by the twin facts that the cross-country data are generally commensurable and comparable whereas the context within which these data must be understood and assessed is vastly different across countries'.

firms within an industry export, and these are likely to have been the most productive firm within an industry before exporting, i.e. exporters self-select into markets.⁹ The trade–growth nexus is becoming increasingly discussed as a growth–trade nexus.

The third key weakness of orthodox trade theory with regard to our investigation is that the link between trade and poverty has always been, at best, indirect. The central concern of orthodox trade theory is the effect of trade liberalisation on economic growth; the poverty impacts of this have never been a central preoccupation. Orthodox trade theory is therefore a blunt instrument for the purposes of this study. It has little to contribute to discussions of trade and poverty links; it seeks to justify a theoretical abstraction based on questionable assumptions, and is simply unable to explain today’s actual trade flows or the socioeconomic consequences of them. What practical lessons can be learned if the trade and specialisation agenda is addressed from the bottom up, by beginning with the observed reality of trade specialisation? It is here that we can observe the contributions made by adopting a value chains approach.

2.3 Value chains: What are they, why use them, how can they help?

What are value chains?

Value chains do not exist in the sense of their having a tangible reality: they are simply a framework for trying to understand how the world works. The *value chain* describes the full range of activities required to bring a product or service from conception, through the different phases of production (involving a combination of physical transformation and the input of various producer services), delivery to final consumers and final disposal after use (Kaplinsky and Morris 2001).

Value chains are frequently confused with other concepts, such as sub-sectors and clusters. The agriculture sector is divided into sub-sectors – like tea – which are defined in terms of the end product produced. Sub-sectors cover all the distribution channels for this end product, and tend to be looked at within national borders. Sub-sector analysis is very similar to value chain analysis, except that value chain analysis forces a focus on the various tiers of suppliers (all the way back to seed researchers) and buyers (including the role played by retailers and brands). It also tends to be more global in focus than sub-sector analysis. Value chain analysis generally restricts itself to a single marketing channel and follows the chain to the point of final consumption, whether this is in the country of origin for the product or not.

Clusters analysis also shares many similarities with value chain analysis. A cluster is a sectoral and geographical concentration of enterprise within a region or even one specific urban area (Bollywood films in Mumbai and tourism in Sharm-El-Sheik, for example). The rationale for focusing on clusters is that cooperation between firms in a cluster can

⁹ Bernard and Jensen (1995; 1999; 2004) have found from a number of firm-level studies that exporters are more productive than non-exporters. This result supports the hypothesis that firms that engage in trade benefit from ‘learning by doing.’ However, at the same time, as we have seen, firm-level studies suggest that productivity typically increases to a greater extent before firms export, as opposed to after firms enter export markets (Bernard and Jensen 1999; Clerides et al. 1998; Greenaway and Kneller 2007).

improve the efficiency of participating enterprises above the level that would be possible without cooperation (through improved access to inputs, cost sharing for research and development (R&D), improved marketing and advocacy, development of economies of scale and scope, etc). It is especially helpful in explaining the observed reality of clusters in many developing economies, and in understanding why many of these clusters include small firms (Schmitz and Nadvi 2000).

Value chains, then, are a way of understanding the interaction of people and firms with markets – whether domestic or global. In value chains, primary actors perform a selection of (primary) functions. These typically include input supply, production, processing, storage, wholesale (including export), retail and consumption. Actors who perform similar functions are regarded as occupying the same functional 'node', for example the input supply node, production node, retail node and so on. Secondary actors, or ancillary workers, perform (secondary) service roles that support primary functions, such as transportation, brokerage and service processing. As goods in value chains are exchanged and transformed, they 'flow downstream', in a series of transactions that add value and costs.

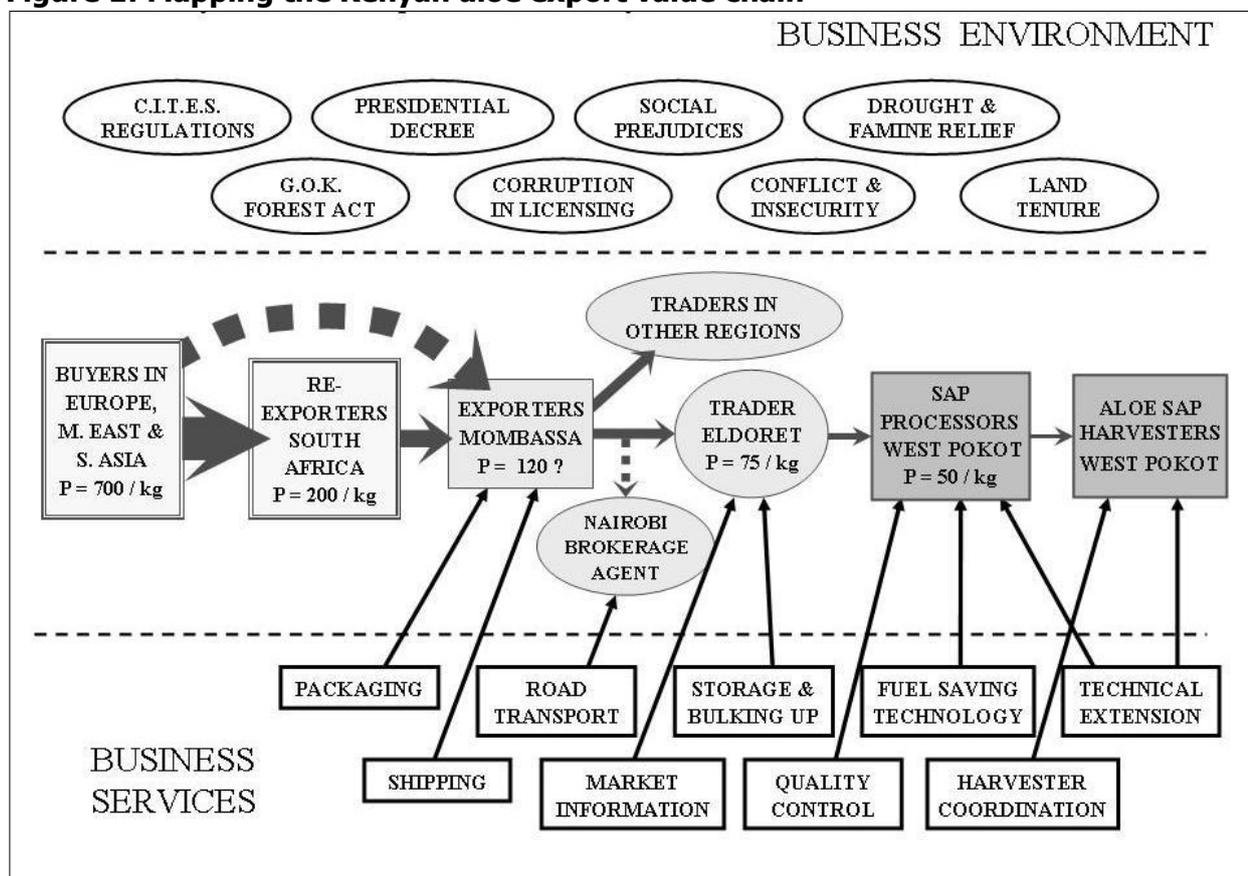
The point about value chains is that they recognise, as with the most recent variants of trade theory, that the firms linking suppliers to producers to processors and intermediaries to the customer at the end of the chain are the critical determinants of trade, whether these are domestic, regional or global. In addition, trade takes place in a more coordinated way than standard trade theory would suggest, often involving close coordination between parties in the chain which have no equity links with each other. All stakeholders along a specific value chain need to cooperate and to coordinate their activities to keep the end customer happy. Chain coordination allows 'driving' agents to institute measures which reduce costs and risks while increasing the speed and reliability of supply, or which increase sales (Gibbon 2001).

The concept of the value chain has risen to the fore in recent years to reflect major changes in market conditions (Kaplinsky and Morris 2001). From the demand side, global markets have become increasingly demanding of variety and quality, and the resulting chains of production have become increasingly suffused with standards. Many of these standards require linked processes throughout the chain. For example, in Forest Stewardship Council (FSC) accreditation, which covers sustainable timber production, a 'chain of custody', involving environmental and social standards, has to be passed with the timber along the chain, all the way from forestry practices to sawmills and to furniture production.

From the supply side, firms have increasingly concentrated on their core competences and, although they have been reluctant to own their suppliers and customers, they have needed to ensure that these conform to chain standards in order that they can achieve systemic efficiency in global markets. These two factors have meant that chain coordination – referred to as 'chain governance' (Gereffi et al. 2005) – is a necessary component of value chain competitiveness. Here, Gereffi has made the widely cited distinction between chain governance executed by key buyers ('buyer-led chains') and that in which the governance role is played by a holder of core technology ('producer-driven chains') (Gereffi 1994).

These differences are represented in Figure 1, which illustrates an export-focused agricultural value chain in Africa (aloe exports from Kenya) complementing the value chain map with an identification of the business service providers and what are considered to be the main determining factors in the external policy environment. It also shows the build-up of costs along the chain.

Figure 1: Mapping the Kenyan aloe export value chain



Source: Albu and Griffiths (2006).

The value chain diagram above illustrates a number of points that are important in value chain analysis. First, value chains are a market-oriented approach, in the sense that all activities in the chain are directed towards the market (no market = no value chain). Second, all stakeholders along a particular value chain have to cooperate to achieve systematic competitiveness – even if the chain involves large numbers of firms located across several continents, supplying different inputs into the final product. Third, the starting point for any value chain analysis is the internal working of firms (e.g. labour costs, productivity, quality control). However, the competitiveness of value chain nodes, within individual or several countries, is also profoundly affected by the general business environment (e.g. customs clearance for imports and exports), in addition to external trade governance (e.g. tariff levels, trade preferences, quality specifications, rules of origin requirements). It is often a combination of these factors that either makes or breaks nascent value chain nodes and participants.

Where do value chains come from?

Value chains are *relatively* value free as a framework and therefore have been applied in some very different contexts (see the excellent discussion in Altenburg 2007):

- The francophone *filière* approach of the 1960s, which was used to delineate the scope of analysis for agricultural commodity exports (cotton, rubber, cocoa and coffee), principally from France's former colonies. This was essentially a technocratic exercise undertaken by agricultural scientists motivated by a desire to improve the efficiency of the value chains.
- The management science approach to supply chain management and outsourcing, to explore 'make or buy' decisions based on the distinction between core and non-core competencies of corporations. Offshoring gathered momentum in the clothing industry in the 1970s as Northern companies moved their production functions to developing countries, which offered lower labour costs. Now, the great majority of consumer electronics, footwear, toys, bicycles, computers and clothes is produced outside Organisation for Economic Co-operation and Development (OECD) and middle-income countries. Increasingly, higher-value functions (such as call centres, R&D, etc) are being outsourced to developing countries.
- Porter's value chain concept, which is based on the observation that location-specific conditions (rather than the factor cost differentials of neoclassical theory) determine the competitive advantage of locations. Porter's analysis emphasises the importance of local rivalry and specific demand conditions. This approach has had a large influence on local economic development and cluster thinking.
- Gereffi and several others coined the global value chain concept (although the term 'global commodity chains' was used in earlier studies) following empirical studies of globalised production across several industrial sectors.¹⁰ This approach differed from the earlier *filière* school because governance of value chains was identified as a central theme – based on sociological notions of economic power allowing lead firms to impose the parameters of contracts and subcontracts in their supply chain and collect above average profits (or rents) as a consequence.

The evolution of global value chains, and increased competition among firms at different stages of the value chain, has resulted in new opportunities and challenges for new entrants.¹¹ On the one hand, the global fragmentation of production in theory means that many low income countries can plug into global value chains and therefore benefit from 'catch-up' growth (through resultant technology transfer, learning by doing, etc). On the other hand, some of the routes used in the past to achieve industrial development may not be as viable. Global value chain analysis focuses on the dynamics of inter-firm linkages within this system, and the way in which firms and countries are integrated globally. But it also goes beyond firm-specific linkages to reveal the dynamic flow of economic, organisational and coercive activities between producers within different sectors on a global scale (Kaplinsky and Morris 2001).

¹⁰ The value chains school chose to use value rather than commodity chains because commodities describe products that are undifferentiated and easily substitutable. Yet, the increasingly global chains were focused primarily on developing the capability to differentiate final products, to 'de-commodify' them.

¹¹ Firms risk being marginalised from GVCs unless they are able to produce according to specification.

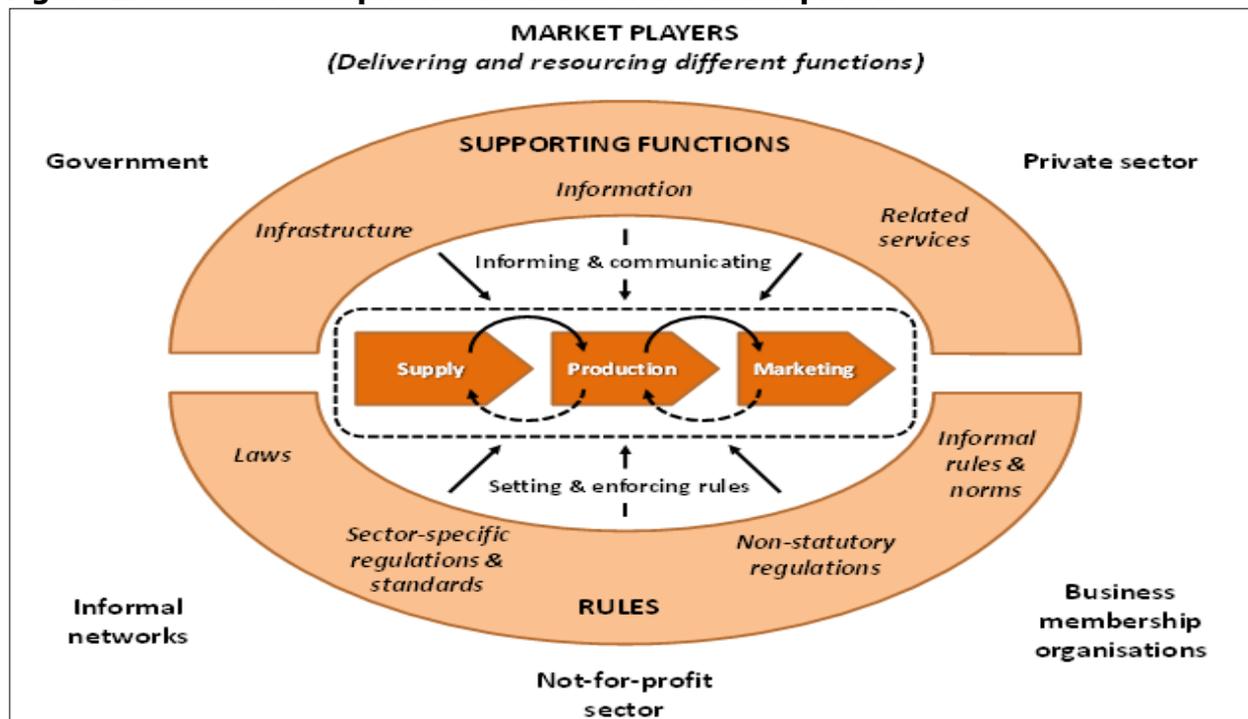
This raises the question of *how* producers (firms, regions or countries) participate in the global economy, rather than whether or not they should do so. Its approach is therefore analogous to the new trade theory literature in that the results are ambiguous: trade openness is not always beneficial to an economy; if it is managed in the wrong way, trade may have long-term detrimental effects. As Kaplinsky and Morris (2001) put it, 'if they [producers] get it wrong, they are likely to enter a "race to the bottom", that is a path of immiserating growth in which they are locked into ever-greater competition and reducing incomes'.

How can value chains help?

Value chain analysis can make an important contribution to pro-poor economic development for seven key reasons.

First, value chains are particularly well suited to understanding **how poor people can engage**, or engage more beneficially, with domestic, regional or international trade. The contribution of the global value chain thinkers was a recognition of something very important to the resource poor in rural areas – their lack of power compared with the lead firms setting the 'rules of the game' in the value chain. Trade is about productivity and factor costs, but also about the use of brute economic power to extract value from the chain.

Second, value chain analysis has **economic viability and sustainability** at its core because of its focus on markets and commercial viability (as well as development concerns). This is an important advance on more 'traditional' enterprise development projects, which have often focused almost exclusively on producers (or the supply side), to the neglect of sources of demand. Ironically, 'traditional' approaches to enterprise development (by both external donors and the state) have often paid insufficient attention to the existing market systems in which their interventions took place. Value chain analysis is therefore compatible with market development approaches to development.

Figure 2: Market development and value chain development

Source: Adapted from www.springfieldcentre.com.

Value chain analysis provides a framework for engagement with both business and beneficiary groups. Successful value chain development projects, therefore, aim for win-win outcomes for all participants. This implies that there is nothing 'anti-development' about generating incentives for the already rich to get richer, providing it is done in a way that includes, and benefits, groups of poor people.

Third, value chains are a strong qualitative **diagnostic tool**, capable, if employed with skill, of identifying critical issues and blockages for specific target groups and then generating robust and effective policies and development strategies. The key point being that a sound value chain analysis does not simply provide a robust explanation for why the resource poor are poor. It also provides a logical framework to formulate concrete intervention strategies to change the circumstances of the poor. In this sense, value chains are a normative, as well as a diagnostic, tool to understand what reality currently is – and how it can be changed for the better.

Fourth, and related, value chain analysis identifies the **core rents and barriers to entry** that determine who in the chain benefits from production for diverse final markets. This helps to focus minds on how best to facilitate the participation of the poor in these chains. There may be little point in assisting producers to enter chain links characterised by excessive competition (i.e. where there are no barriers to entry). On the other hand, poor producers can also be assisted in creating their own barriers to entry through upgrading strategies, for example brands of estate coffee produced and sold into global markets by Central American coffee farmers. Figure 2 outlines five of the key triggers for value chain upgrading: the need to improve system efficiency; product quality; product differentiation; social and environmental standards; and the business environment.

Fifth, value chain analysis is **inherently scalable**. This is important because, following the logic of the Millennium Development Goals (and particularly MGD1), external donors are increasingly concerned with reducing poverty at scale. Developing value chains which, if successful, benefit only a few tens of beneficiaries is – quite rightly – becoming difficult to justify. Even if the initial focus of a value chain development exercise is on a single producer group or firm, there is no reason why the same logic cannot be applied to a cluster of firms or a region or country.

Sixth, value chain analysis is **relatively evidence based and action oriented**. This contrasts sharply with the academic theories on orthodox trade and development, which often require acceptance of a range of fairly improbable neoclassical assumptions about how economic actors work and commitment to the theory when the empirical evidence fails to support these assumptions. However, value chains are not *entirely* 'value free': they are based on notions of power as well as competitiveness and value addition. But adopting a value chain approach does not predetermine the outcome of the analysis, so value chains are a framework for collecting data *and* understanding reality, rather than constructing an elaborate theoretical neoclassical edifice, one which may bear little relationship to reality.

More important than this, though, a critical problem with the more encompassing macroeconomic orthodox theories on trade and development is that they emphasis macro-structural factors (i.e. competitive advantage based on factor costs) that provide few clues for what specific firms in a specific value chain – and their governments – can do to increase their competitiveness and development impact.

Finally, value chains provide a clear way forward as a **policy and restructuring tool**. International evidence shows that achieving systemic competitiveness requires cooperation along the chain, as well as within links in the chain. After all, a chain is only as strong as its weakest link. So the establishment of a collation of interested parties involved in promoting participation by the poor, or the restructuring of value chains, is often a necessary process to ensure that appropriate global competitiveness is realised. Ideally, this includes both private sector parties concerned with endogenous rents and public sector participants concerned with exogenous rents for, as Rodrik (2004) indicates, there is evidence of both market failure and state failure. Realising global competitiveness involves a joint journey of discovery.

It is for these reasons that value chain analysis has had a profound impact on development studies in recent years. A number of development agencies and development practitioners have invested heavily in analysis using the framework. It is to this body of knowledge we now turn.

3. What we know about how the poor engage with trade: Themes from the COPLA studies

Five studies were commissioned by COPLA in Latin America under the theme Trade and Poverty. These examined a range of 'traditional' and more 'non-traditional' agricultural commodities: Brazil nuts in Bolivia, bananas in Peru, trout in Peru and wood furniture in Nicaragua and Honduras. In addition, they looked at the provision of tourism services and efforts to integrate community-based tourism into the mainstream tourism value chain in Guatemala and Nicaragua. The studies all adopted elements of a value chain approach, although more by default than by design.

Table 1: An overview of the COPLA studies

Title of paper	Description
Associations of small producers and exporters of organic bananas in the Chira Valley, Peru Alan Fairlie Reinoso, CIES	An analysis of the impact of organic and fair trade certification for bananas in this relatively disadvantaged area of Peru. The study outlines how relatively small-scale farmers – organised into associations – can benefit from these niche markets. Higher input costs are more than offset by significantly higher prices for accessing high-value export markets. The role of associations in supporting individual farmers is highlighted. Agricultural labour conditions on banana farms are not explored in this analysis.
The dynamics of the Brazil nut sector and its impacts on the labour market and poverty in the Northern Amazon region of Bolivia Osvaldo Nina et al.	This is an assessment of the impact of Brazil nut cultivation on the labour market and poverty in a region with few other economic alternatives. The study focuses on the terms and conditions for jobs created for collectors and processors during the short harvesting season. The impact of Brazil nut cultivation on the rest of the regional economy is highlighted, as well as the dis-enabling environment created by government, with poor economic services (particularly electricity), low education standards, a vague institutional framework around land ownership and a failure to form alliances with the private sector.
Integration of small trout producers in Peru with foreign markets: A distant goal? Juana Kuramoto, GRADE	This study evaluates the varying degrees of success with which small-scale producers, as a result of various donor projects, have been able to supply urban and international markets in Peru. The study highlights the barriers faced by small local producers to access to export markets. It questions whether sophisticated markets can be used to reduce poverty and highlights the important role of local government in promoting private sector investment.
The wood furniture sector in Central America: An opportunity yet to be seized Welbin Romero Jiron	This analysis highlights the failure of two Central American countries with very different enabling environments (Honduras and Nicaragua) to develop their infant wooden furniture industries (or, in fact, any significant value addition to lumber), despite abundant natural resources and significant liberalisation of trade since the early 1990s. The link between trade liberalisation and trade growth is questioned, as are state-led approaches to natural resource management of forestry reserves.
Rural community-based tourism in Central America Francisco Perez, Oscar Barrera and Ana Victoria Pelaez Ponce	This case study evaluates the outcomes of rural community-based tourism in Nicaragua (five communities) and Guatemala (four communities), as an alternative to more mainstream tourist development. Despite strong community organisations (cooperatives) and some tourist natural assets (caves and culture) – and, in the case of Nicaragua, reasonable infrastructure and access to markets – the financial sustainability of initiatives has been badly affected by an inability to link with the main distribution channels (tour operators and hoteliers). The initial investment costs are high and barriers to entry are significant. Notwithstanding poor tourist flows, these initiatives have brought some economic and other benefits to the destination areas.

Source: See summaries in Annex and full versions (in Spanish) on the COPLA website.

Many of the same themes highlighted in the value chain literature, as well as other empirical results of firm-level studies on trade to date, are clearly visible in the results of these studies (which apply as much to trade in goods as services, such as tourism). The studies therefore confirm much of what we know already about how the poor engage with trade, and how efforts to link poor producers with international markets through larger producer/exporters may succeed or fail. These aspects are highlighted in Table 2 and are emphasised in the summaries of these studies in the Annex.

Value chain analysis can perform three distinct functions, as:

- An heuristic tool (plotting the nature and extent of activities along the chain); and/or
- A framework for analysing the power relations that determine access, exclusion, division of labour and incomes; and/or
- A policy tool facilitating a diverse range of stakeholders to achieve systemic efficiency.

The COPLA studies focus largely on the first two functions. That is, they describe how trade takes place, the actors and the relationships between value chain nodes, and then locate poor producers within the value chain (and, in one case, poor labourers). Two out of the five case studies extend value chains from being analytical to being a policy tool, describing specific interventions designed to increase the participation of poor producers in trade.

The following sub-sections discuss some of the key themes arising in the COPLA studies, and how these reaffirm what is already known. Section 4 then attempts to move from a largely descriptive exercise of locating poor producers and labourers within value chains, to exploring what can be done about improving their relative position.

3.1 The need to forge links with lead firms in order to access international markets

As we have seen, the empirical reality is that firms that already export are often the most productive firms within an industry, and are likely to have been the most productive firm within an industry before they started exporting. This implies that exporters self-select into markets. This is reflected in the COPLA country case studies for trout and banana production in Peru: relatively poor producers are participating in export trade by linking in with larger, more established and more productive producer/exporters, so-called 'lead firms'.

In Peru, one company accounted for 90% of national trout exports in 2006. There was a clear business case for the inclusion of a greater number of trout producers: in order to remain competitive in export markets, an increased supply of trout was needed, beyond that which existing producers at that time were able to provide. Thus, following donor initiatives and forms of public-private partnership, contractual arrangements between large trout exporters and poor producers were drawn up. These provided technical assistance, inputs to production and finance.

Around 80% of Fair Trade (FT) and organic banana production in Peru is concentrated in the Piura region, among established certified producer/exporters. Research results suggest that farmers with better export opportunities belong to the oldest and most developed associations, with access to organic and FT certification. In order to export certified organic and FT bananas, new entrants need to form alliances with more established producer exporters and the intermediaries that now undertake certification. Although state networks initially supported farm conversion, there are difficulties for new entrants into the organic and FT banana market, relating to the costs and complications in conversion and certification: new entrants need to cover these costs themselves.¹² This is an excellent example of barriers to entry allowing existing producers to benefit from export trade but effectively restricting access to less established farmers.

3.2 The difficulties of sustaining vertical coordination

In the case of Peruvian trout, not all contractual arrangements forged between poor producers and larger producer exporters have proved durable. There are examples of small producer organisations walking away from long-term supply contracts with established large processors in an attempt to bypass intermediaries so as to capture more of the value in the chain. These attempts at functional upgrading have often been unsustainable, because producers have been exposed to the removal of support of the lead firm for vital services, such as production finance, technical support and transportation. The authors of this study therefore question the effectiveness of linking poor producers with large exporters in order to reduce poverty, given the upfront investments required to do so (provided by donors) and the risks of failure.¹³ They note that poor producers are generally risk averse and manage a range of resources and activities in order to support themselves. This means that, for them, focusing exclusively on a single economic activity represents a high risk. They recommend that, in parallel with the promotion of value chains linked to international markets, regional and domestic markets should be targeted as more realistic alternatives for poor producers.

The authors of the case study on certified banana exports in the Piura region of Peru highlight the importance of producer organisations (a form of horizontal cooperation) in supporting poor producers to access export markets. They highlight the competition that exists between producer associations and producer exporters for high-value banana export markets, but also the risks of exclusion to these markets for new entrants.

¹² Organic and FT certification achieves multiple objectives: fixed prices for guano fertiliser have been affected by exchange rate developments, which means that organic alternatives are becoming economically viable and additional fair trade price premiums are helping to offset additional costs.

¹³ Although their general conclusions refer to specific instances of efforts to coordinate poor small-scale producer with larger exporters failing, there have also been some success stories, within which the enabling municipal environment has played a key role (see Annex).

Table 2: COPLA markets and upgrading typologies and barriers identified

Commodity	Market	Upgrading typologies	Barriers identified	Beneficiaries
Organic/FT bananas	Niche export (mainly EU), some local sales of rejects	Strong horizontal upgrading (farmer associations) and vertical upgrading (long-term relationship with buyers) support process and product upgrading (organic and fair trade certification).	Investment cost for conversion is high, as are ongoing costs of organic supplies. Need a strong and established association.	Gender issues. Male banana farmers are in more established associations.
Brazil nuts	Global chain feeding into undifferentiated markets	No evidence of any upgrading among primary (collectors) or secondary (processors) actors in the value chain. But this is becoming an issue since improving traceability of nuts and raising phytosanitary standards will soon require stronger coordination between value chain nodes.	Poor enabling environment (vague land ownership, poor education); weak trust, coordination and contractualisation between producers, processors and sellers; more stringent phytosanitary standards a potential barrier to exports.	Low-income collectors and shellers working in processing factories.
Trout meat	Niche export, some local supermarkets	Horizontal (producer group membership); vertical (long-term relationships with buyers); improved process and product (use of balanced feed).	Technical and financial support (upfront and working capital requirements) required for producer groups; difficulty of sustaining long-term relationships with buyers and maintaining standards of output required for export markets – national and regional markets therefore more viable for low-income producers.	With significant support, small numbers of low-income producers have remained in viable value chains.
Wood furniture	Not clear, very limited exports	No evidence of any upgrading initiatives with producer groups so, despite trade liberalisation, no increase in trade from small and medium-sized enterprise (SMSE) sector.	Fragmented, disorganised and uncompetitive (compared with mass-produced furniture industry) infant furniture industry. Unsustainable cultivation of forestry resources, particularly in Nicaragua.	Not mentioned, other than intermediaries for 'black market' lumber.
Community-based tourism	International and domestic niche rural tourism market	Horizontal coordination (cooperatives), process upgrading with human resource development. Early moves to link tourist destination with main tourist distribution channels (tour operators and hoteliers).	Lack of tourists because of failure to link tourist destinations with main distribution channels. This has resulted in financial dependency on external financial assistance. High initial investment and barriers to entry, particularly for indigenous people.	Some financial and less tangible benefits to participating households, communities and the environment.

3.3 Unsustainable interventions without links to markets

The other extreme highlighted in the COPLA studies is a tendency to focus on supply to the neglect of the market, its demands and the role and functions of actors along the value chain. The rural community-based tourism study in Central America evaluated interventions designed to increase participation of the poor (primarily as labourers but also as entrepreneurs). It reflects poignantly on the challenges of organising nodes of supply,

but also highlights the tendency of many development interventions to focus more on increasing the supply of services than on targeting and tapping into demand.

The authors note that leadership at the community level, clear rules and transparent collective decision making are fundamental elements for success, and that they are present in the project area. However, another critical element of a value chain initiative is to link to the market because, without access to tourist flows, projects which depend on tourist spending either fail or remain perpetually dependent on grant finance from donor organisations. This is a graphic illustration of the importance of understanding the market and not allowing a preoccupation with the production node to eclipse the need to link community-based tourism initiatives with mainstream suppliers.

3.4 Importance of the business and enabling environment

The authors of the wood product and furniture production study in Honduras and Nicaragua show that, in each country, small producers do not directly export their output. In the Nicaraguan case, a small group of large enterprises is dedicated to the extraction and export of wood and wood products, including furniture; in the case of the furniture industry, only four of the largest enterprises export intermittently. In Honduras, the majority of exports originate in businesses grouped in two organisations: the National Association of Timber Companies (ANETRAMA) and the Honduran Timber Association (AMADHO). The authors note that opportunities created by trade liberalisation to date have been seized by those agents with access to the most related knowledge and resources.¹⁴ This is not an unexpected result.

However, there are clear differences in the export performance of wood and furniture products from Honduras and Nicaragua. The case study authors explore the different roles played by the organisation of producers and business associations, as well as forestry management practices and the institutional environment within each country. The most conservative estimates place deforestation in Honduras and Nicaragua at between 70,000 and 100,000 hectares annually. In both cases, the legal and regulatory framework for the forest has been oriented towards impeding the authorisation of exploitation permits. But there are clear differences in the performance of each country to date, relating to a state-led regulatory framework in Nicaragua (which has not been successful) and a forest community-based initiative in Honduras (which is more effective). The authors conclude that relationships between export markets, their demands and resultant impacts on the organisation of production, including forestry management, have an important effect on the viability of the value chains in these two countries.

The state gives very limited support to the Brazil nut value chain in Bolivia, which is surprising given the economic significance of the sector. There is a lack of investment in post-harvest facilities owing to insecure land tenure. An erratic electricity supply limits processing activities. These enabling environment factors reduce returns to labour at both the processing and the collecting nodes of the Bolivian value chain. If alternative, higher-value markets, such as the EU, are sought, which demand higher standards, there may be

¹⁴ Targeted export markets for wood products and furniture products are not detailed further.

additional stimuli for improving internal and external organisation and coordination between nodes in the chain.

3.5 Who are the poor?

Although all of the COPLA case studies involve projects that create jobs, the only study that specifically investigates how labourers engage with trade in a value chain context is that on the dynamics of the Bolivian Brazil nut industry. This study explores the different roles of men, women and indigenous people across value chain nodes, but not specific interventions to improve wage incomes for poor labourers.

Bolivia is a major exporter of Brazil nuts to world markets, with a large market share. For example, according to FAOSTAT data for 2007, 35% of world exports of Brazil nuts come from Bolivia. Over 99% of Bolivian exports are in the form of shelled Brazil nuts. The processing of Brazil nuts within Bolivia is a key value addition activity. In terms of value addition within country, shelling (processing) is the most lucrative node and also the most labour intensive. Shellers are predominantly women, who comprise approximately 90% of a processing company's employees. By contrast, Brazil nut collectors are more likely to be indigenous and male; their wages depend on both the quantity and the quality of the nuts they gather.

In this example, restricting the analysis to the production node would have covered only the non-poor plantation owners and the male nut collectors. Such a focus would have missed the much more significant poverty-reducing impact of the value chain, which lies in the very large numbers of women working in processing factories. This offers a warning: we should be wary about assuming that the pro-poor impact (or potential) of a value chain is greater the further upstream in the chain one looks.

3.6 In summary

These five COPLA studies are a useful way to 'ground truth' our thinking about poor people and trade in the contemporary reality of Latin America. The studies echo a number of the issues raised in the conceptual discussion in Section 2, which will resonate throughout the later parts of this report. The studies are a helpful framework for analysing the nature of activities along the various chains, and raise many important issues around the power relations that determine who the winners are and who the losers are from domestic, regional and global trade. In the next section, we make the transition from using value chain analysis as a descriptive tool to using it to help us understand how to move forward and improve the position of poor people participating in, or wanting to participate in, value chains.

4. What to do about it? How can poor people upgrade their position in value chains? An emerging framework

4.1 Introduction

Section 3 summarised themes outlining what we know about the difficulties poor people face in accessing commodity, product and service value chains in Latin America. This section provides a framework that aims to present the reader with the tools to move from description and analysis of the problems to developing an intervention to address them. The central organising theme here is that of upgrading strategies and, specifically, how poor people in rural areas can upgrade their position in viable value chains.

This framework was developed as part of a research programme with the International Development Research Centre (IDRC) and includes evidence from academic and practitioner literature (Bolwig et al. 2010) and also our own experiences managing an action research process in Africa and Asia over the past three years. This programme has involved supporting poor people in rural areas to access viable value chains, including target groups producing for the domestic market (cassava in Tanzania, fonio, a staple crop, in Mali, incense sticks in India, lemons in Kalamansi); regional markets (bay leaf in Nepal/India); and global value chains (pangasius catfish in Vietnam, octopus in Senegal).

Our aim in highlighting this international experience is to share some relevant thinking on upgrading strategies. This will also help us understand what trends identified in the COPLA studies can be used for generalisation, beyond the narrow range of commodities/services that constitute the case studies and to different geographic contexts.

4.2 What is an upgrading strategy?

A key contribution of value chain analysis to an understanding of how the incomes of the rural poor can be augmented lies in the notion of upgrading. Upgrading is acquiring technological, institutional and market capabilities that allow firms (or communities) to improve their competitiveness and move into higher-value activities (de Ruijter de Wildt et al. 2006). As such, value chain analysis has given development economics a tool to understand why the weak, poor and disorganised are unlikely to benefit from trade (that is, owing to their failure to appropriate rents) and also a series of practical strategies to empower poor people to change the terms of their engagement in global trade by overcoming barriers to entry or creating barriers to entry of their own. It is the capacity to upgrade into rent-rich activities that underpins sustainable income growth (Kaplinsky 2000).

'Traditional' value chain development envisages an upgrading trajectory, which begins with process upgrading, moves on to product upgrading and then on to functional and inter-sectoral upgrading (Gereffi 1999; Kaplinsky and Morris 2001). These upgrading categories are based on the experience of technological upgrading by the East Asian newly industrialised countries. They are typically used as historical reference points to be applied in sector studies across the manufacturing sector.

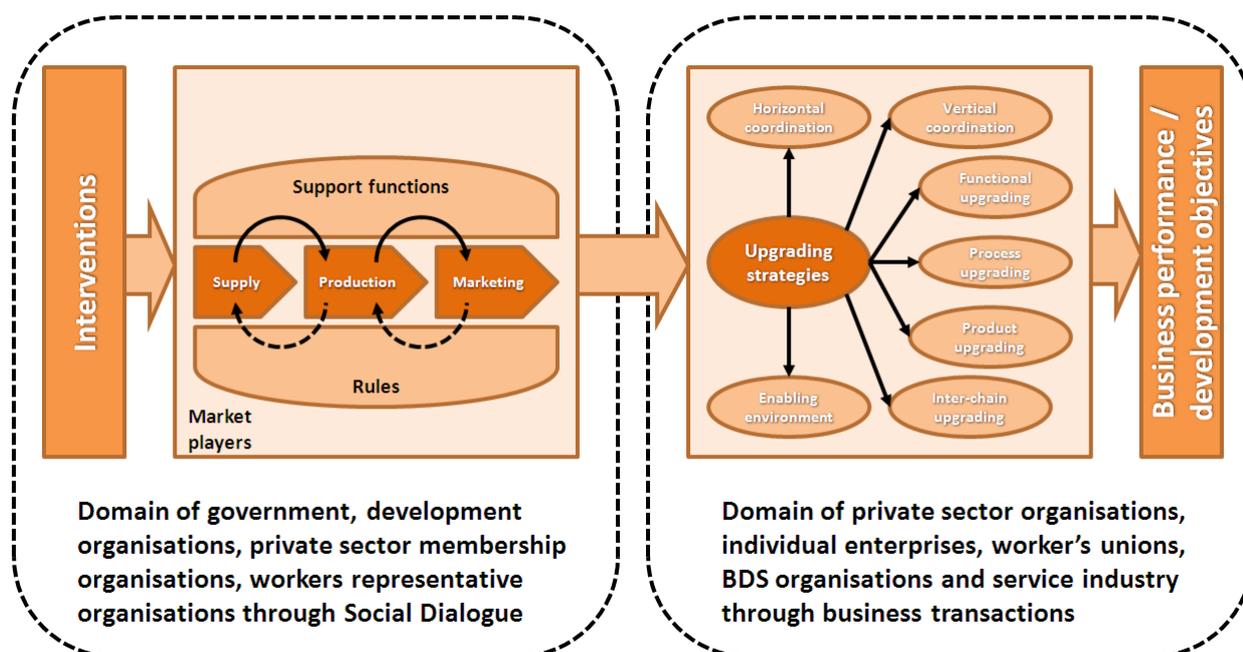
In our work, we have found that the problems faced by those working in agricultural activities in some of the poorest parts of the developing world often are, unsurprisingly, not the same as those faced by industrial entrepreneurs in Singapore. For instance, people in poor, rural areas often have very few financial or other resources to access viable value chains. As such, very often, horizontal coordination (organising yourself with a number of others to allow for the bulking-up of produce or inputs or access to technical support) is an important precursor to more conventional forms of upgrading.

A more nuanced category of upgrading strategy has been developed, one which is more sensitive to the choices available to the rural residents of developing countries – and which extends the relevance of upgrading strategies to agricultural and basic craft goods. These categories of upgrading have been identified during practical work on value chain development, with Northern and Southern research partners.

Table 3: Typology of upgrading strategies

Type of upgrading strategy	What it means	Examples
Process upgrading	Improving chain efficiency	Introduction of irrigation to rice paddies (process upgrading, von Braun and Webb 1989)
Product upgrading	Improving product quality	Shift to organic cotton production (process and product upgrading, Eyhorn et al. 2005)
Functional upgrading	Changing the mix of functions performed	Coffee farmers adding value by processing their cherries (Bolwig et al. 2008) and shortening the chain by removing intermediaries (Singh 2008)
Horizontal coordination	Development of relationships among actors within functional 'nodes'	Formation of new fish traders' groups (Walker 2001) and strengthening of producers' groups (Naved 2000)
Vertical coordination	Developing relationships among actors between nodes	Horticultural production on a contract (Raynolds 2002) and the provision of extension services and credit in kind by a maize processing firm (Simmons et al. 2003)
Chain upgrading	Applying existing skills to a new chain	Farmers moving from mixed agriculture to fish farming (Naved 2000), or fishers shifting from targeting anchovies and tilapia for the local market to Nile perch for processing and export in Tanzania (Kadigi et al. 2007)
'Upgrading' of the enabling environment	Changes to the external governance of the value chain	Changes to policy, law, institutions, support organisations, for example, reduced local government sales taxes for beekeepers' products in an Indian state and the revision of matrilineal inheritance legislation in Ghana (Walker 2001)

These upgrading strategies are critical to the discussion on how to improve the position of poor people in value chains because they demarcate the range of strategies that can be adopted by the development practitioner working with the target community.

Figure 3: A new typology of upgrading strategies

Source: Adapted from Herr (2007).

Before outlining the international experience on implementing upgrading strategies, we need to understand two key conceptual issues: rents and barriers to entry.

4.3 Rents and barriers to entry

Value chain analysis provides a focus for the discussion of rents and barriers to entry, both of which are critical in understanding who benefits from involvement in global value chains.¹⁵ Rents arise from the control of scarce valuable resources and require protection from competition. This is realised by taking advantage of, or creating, barriers to entry. The ability to generate and appropriate rents is central to chain rents distribution, at one point in time and over time. There are four main families of rent (Kaplinsky 2005).

A first important category of rent is the ability to shape market relations, by building monopoly power and using anticompetitive practices, such as predatory pricing or cartels, to exclude competitors. An example is the power exercised by agricultural lobbies in high-income countries to promote tariffs that discriminate unfairly against food imports; another example is the existence of cartel buying power in agricultural commodity markets.

A second category of rent is resource rent, for example high-yielding agricultural land. The third and fourth categories of rent show the power of human agency to cut costs and improve products by augmenting production processes, organisational systems and product and service design and delivery. Here, we can distinguish between endogenous rents and exogenous rents. Endogenous rents are generated largely by firms and in interactions between firms and local research and technology organisations. Exogenous

¹⁵ This discussion on rents is drawn largely from Kaplinsky and Morris (2008).

rents are created largely by actors who are not directly productive participants in the value chain, and often result from activities initiated by, or under the control of, governments. For example, efficient financial intermediation, transport and telecommunications infrastructures, and responsive design and delivery of specific policies to help production, are all factors that contribute to the ability of chain participants to appropriate rents for themselves and for stakeholders resident in a particular location.

Box 2: The timber and furniture value chain to illustrate diverse rents

Rents include monopoly rents (cartelised buying), resource rents (some parts of the developing world are ideally suited to hardwood timber), endogenous rents (reflecting the efficiency of seed development, cultivating, harvesting, processing and delivery to final markets) and rents determined exogenously to the timber and furniture value chain (for example, infrastructure and financial intermediation). Brazilian producers of saligna-eucalyptus, for example, show a capacity to reap rents not only in furniture production but also in the relational links between the timber and the furniture sector.

The diversity of rents in the timber and furniture value chain

Chain links	Monopoly rent	Resource rent	Endogenous rent	Exogenous rent
Seed development			R&D	Research and technology organisations (RTOs);
Timber harvesting machinery				
Planting			Timber producers	
Fertilisers and pesticides				Physical infrastructure,
Growing		Sun, water, soil		
Harvesting			Timber producers	Financial intermediation
Timber buying	Cartelised buyers		Local and foreign buyers	
Sawing			Sawmilling firms	Logistics,
Chips			Chip firms	
Veneer			Veneer firms	Policy incentives;
Furniture design			Furniture firms	
Furniture production			Furniture firms	Export marketing
Non wood components			Supplier firms	
Domestic logistics			Logistics firms	
International logistics			Logistics firms	

Source: Kaplinsky and Morris (2008).

4.4 Literature review

To gather information on the experiences of researchers, practitioners, businesspeople and policymakers working with poor people in rural areas to upgrade their position in value chains in order to reduce poverty, we conducted a systematic review of the available published and grey literature. This literature review has been peer reviewed by a number of top researchers in the field, so we have confidence that it has good coverage of the relevant material.

Quality of evidence in the literature

The literature reveals that the quality of evidence on the impacts of upgrading strategies on the poor is mixed. A small minority of the work reviewed is of the highest methodological rigour, using, for instance, randomised paired before and after comparisons with controls or randomised group comparisons controlling for endogeneity.

The following articles present exemplary methodological models: Ashraf et al. (2008), Bechetti and Costantino (2006), Bolwig et al. (2008), Hughell and Butterfield (2008), Kleinwechter and Grethe (2006), Maertens and Swinnen (2009), McCulloch and Ota (2002), Roy and Thorat (2008) and Ruben et al. (2008a; 2008b). Ashraf et al. (2008) present a particularly strong study because they investigate impacts and causality at each stage of the entire agronomic process, and then retrospectively analyse the real issues that the project was set up to address.

However, most of the literature on upgrading presents evidence that is purely anecdotal or that is seriously methodologically flawed. Often, the relationship between project interventions and impacts (attribution) is not demonstrated clearly. One evaluation claims broad and significant project impacts despite presenting data that describe similar, and sometimes better, outcomes for control group members in comparison with targeted beneficiaries (USAID 2008) – so the empirical data contradict the findings presented in the text. Our conclusion is that much of the impact evaluation being performed in value chain development is poor, resulting in erroneous conclusions and inadequate project design and policymaking.

Measuring impacts

In a development sector context that demands fast impacts ('low hanging fruit' and 'quick wins') and direct attribution of outcomes to project inputs (upgrading strategies in this case), the focus tends to be on chain-level (proximate) impacts such as changes in yields, prices, sales volumes and product quality.

This review highlights the danger of viewing the impacts of upgrading on the target value chain in isolation. For example, changes to household income from sources of livelihood beyond the value chain of interest often demonstrate negative effects (so gains made from the value chain are often offset, at least somewhat, by losses in other sources of livelihood). In some cases, the decline in non-value chain livelihoods is so dramatic that it results in a decline in overall household income. These complementary factors reinforce the observation in value chain analysis that participating in global markets does not, in itself, guarantee augmented incomes. It depends on how poor producers are incorporated in these chains, and necessarily has a time dimension too.

Most of the impacts reported in the literature are poverty related, but only the better studies reflect the multidimensional nature of poverty. These surveys consider household- and community-level impacts at ultimate levels, examining changes in social, human, natural and physical capital in addition to financial impacts. Several studies report that, while marketable surpluses or household expenditures may not necessarily rise, and may even fall, as a result of increases in gross household revenue, there are positive impacts in

other aspects of poverty – additional profits lead to more resources directed towards child education, better health, increased household food security and increased investment in housing and household durables.

The best studies also examine in detail the implications of resource reallocation within households – in other words, the net impact of diverting time, money and assets from one livelihood or enterprise to another. In so doing, they also provide insights into the gender and age distribution of the benefits arising from participating in global value chains.

The literature delivers a salutary warning regarding the sustainability of impacts (and, therefore, the potential for long-term poverty reduction). It is one thing to persuade poor actors to participate in global chains. But competitiveness is a moving frontier, so the capacity to upgrade is important. But will the associated risks and costs repay their investment in upgrading? Examples here include badly designed and poorly resourced programmes in exotic cash crop export, where buyers may default because they find more profitable supply sources (see Warning and Key 2002 for the cited example) or (smaller) producers fail to comply with exacting standards through lack of human and financial capital (Ashraf et al. 2008).

Of the three main categories (income poverty, environment and gender), environmental impacts receive the least attention in the literature. Hughell and Butterfield (2008) measured a reduced rate of environmental damage as a result of improved forest concession management through FSC certification. Kaaria et al. (2008) investigated whether additional income from upgraded livestock and agricultural activities would be reinvested in natural resource management, finding that resources were instead devoted into expenditure on assets and basic needs. There are reports of reduced pollution from pesticides alongside production increases as a result of an Indian horticultural development project. Finally, Walker (2001) describes how injudicious interventions in horizontal institutions and the legislative framework in Ghana's Cape Coast artisanal fishery led to harmful conflict and competition, with negative consequences for resource management.

The wider literature on gender and markets (summarised by USAID 2005; 2006) describes how factors such as access to assets, gendered education differentials and the nature and value of economic activities affect the way in which men and women participate and gain.

The best analyses of gender issues in value chains distinguish among household, institutional and chain levels of analysis and highlight the importance of addressing underlying issues in gender-based interventions. However, most authors and practitioners have a weak understanding of gender issues in value chains, and do not pursue impacts beyond the most immediate outcomes. This means that interventions to upgrade the position of women can be ineffective and sometimes damaging, as with the example of Ghana's female-run fishery (Walker 2001).

In the context of multiple-scale impacts, women's economic empowerment (the ability to make strategic life choices) is properly viewed as the process by which proximate impacts at chain level, such as greater female participation and increased income, are translated

into poverty impacts in the context of women as members of households and wider society.

For example, if women's incomes increase as a result of upgrading, how is this then translated into 'ultimate' factors, such as community poverty rates, mortality rates and household food security? This depends on a complex set of interactions mediated by socio-cultural norms, intra-household dynamics and the political economy. Several studies show how, for example, although women may often be seen to lose out to male appropriation of income as their economic activities become more lucrative, changes in the aggregate household economy result in better food security and nutrition for all members. In other words, we view empowerment as an intermediate impact rather than as an end in itself.

One of the key points emerging from this analysis is that establishing who participates and gains in value chains on an individual basis is insufficient to achieve an understanding of the manner in which gender dynamics shape the benefits received by men and women. 'The household', 'men' and 'women' need to be unpacked and understood in each individual context. Even where women may not directly control assets and income, they and their households can benefit from their engagement in value chains, for example through better nutritional outcomes and increased food security resulting from increased aggregate household production and income.

Robust empirical analyses of root causes and underlying issues for gender inequities give rise to appropriate interventions. Importantly, these interventions do not necessarily have to be exogenous to the value chain; indeed, the best example of an iterative learning, monitoring and revision process came from a private sector actor (Hyman 1993). Generic value chain-level interventions targeting nodes in which women participate are of limited effectiveness if issues at the institutional and household levels are not also addressed.

We are still developing our understanding of how to intervene to improve gender equity in outcomes from engaging in value chains. However, we know enough to be able to support practitioners in identifying root issues to avoid ineffective and damaging interventions and policymakers in maximising the impact of the value chain approach in improving gender equity outcomes.

Evidence on upgrading strategies

Bearing in mind that incomes reflect the capacity to appropriate rents – that is, to escape the pressures of extreme competition – we can focus on the various categories of upgrading identified in Table 3 above.

Just as the value chain methodology is an intangible conceptual approach towards the analysis of firm-level competition and efficiency in value and rent capture, 'upgrading strategies' are useful theoretical constructs on which to frame one's understanding of complex empirical realities. However, in practice the typology that we use to frame theoretical questions surrounding the process of pro-poor value chain development is far more blurred.

Upgrading strategies are not, and cannot be, implemented in isolation and follow a sequential path, which we have referred to as an upgrading trajectory. Therefore, it is very difficult and somewhat unproductive to seek to attribute the ultimate outcomes that are our primary concern (poverty reduction, greater gender equity and improved environmental outcomes) to individual upgrading strategies.

Understanding the effects of upgrading strategies has to be generated in the context of each instance, evaluating the impacts over time of the particular interventions chosen and how they interact. A narrative account or 'story' is invaluable in making sense of a complex process that is part science and, necessarily, because trust relationships between people are at its core, part art. However, at the proximate chain level, we can evaluate the impacts of individual or grouped actions.

Horizontal coordination

- Horizontal coordination is the process of greater intra-nodal organisation, often in the production and processing node.
- The purpose of all horizontal institutions is to develop economies of scale, increasing functional efficiency and reducing transaction costs.
- It is often the first step in a sequence of interventions that ultimately facilitate market access, often as a prerequisite for other forms of upgrading, particularly vertical coordination and functional upgrading.

Examples of horizontal coordination:

- Pools resources and shares costs. This is a common feature of organic and FT-certified markets, where certification and inspection costs are prohibitively expensive for individuals and fees are shared among cooperative members (Aranda and Morales 2002; Bacon 2005; Garza and Trejo 2002; Lyon 2002; Méndez 2002; Ruben et al. 2008a; 2008b).
- Generates a cluster that attracts both suppliers and customers, as in Brazil's Sinos footwear cluster which, at its peak, accounted for 12% of global trade in leather footwear.
- Bulks outputs to economically feasible volumes that attract buyers and open up new market opportunities (Roy and Thorat 2008).
- Enables access to services and activities such as credit on favourable terms, information, training and technical services, bulk input purchase and donor and government support at lower transaction costs than for individuals. For example, in Indian export horticulture, market information is obtained at high fixed costs (attendance at trade events and meeting buyers) on behalf of smallholder farmers by a cooperative union and disseminated to them effectively at low marginal cost (Roy and Thorat 2008).
- Enables the resulting groups to act as governance bodies, for example in the design and implementation of codes of conduct (Bah and Goodwin 2003), monitoring performance in group contracting (Simmons et al. 2003). Codes of conduct can give a shared sense of responsibility and cohesion, promoting effective self regulation, improving vertical relationships and increasing income (Bah and Goodwin 2003). In outgrowing schemes where contracting is on a group basis, group members

themselves monitor compliance and are incentivised to expel contractually errant farmers through fear of loss of the collective contract (Singh 2008; Warning and Key 2002).

- Provides support for other activities outside the value chain (Méndez 2002).

A spectrum of increasingly formalised types of organisation is represented in the literature, from officially registered producers' groups (e.g. CRS/SASIA 2008), to smallholders' marketing organisations (e.g. ACDI/VOCA 2007) and full share companies (e.g. Bechetti and Costantino 2006).

Collectivism increases bargaining power resulting in better negotiation outcomes, such as higher prices or more favourable terms of business. Collective action also enables the small producer to participate effectively in global markets by addressing the issue of their isolation.

Sequencing of upgrading is a strong theme in the literature: typically, horizontal coordination makes individuals more creditworthy, which enhances financial stability, in turn enabling investment and smoothing cash flow. These chain-level outcomes translate through increases in individual incomes into household-level outcomes, such as greater assets and improved food security through greater food spending. Where functional, process, product and chain upgrading requires large resource investments; horizontal coordination brings together individual assets.

Group membership is often a precondition for participation in vertically coordinated outgrowing and contracting schemes (Ashraf et al. 2008; Simmons et al. 2003; Warning and Key 2002). Thus, horizontal coordination can be exclusive as well as beneficial – group membership is often self-selecting and, where institutional membership represents a barrier to entry, the poorest are usually among those excluded (Ashraf et al. 2008; Eyhorn et al. 2005; Simmons et al. 2003).

Some studies purport to be measuring the outcomes of an upgrading intervention but are in fact simply observing the pre-existing differences between study groups, because they fail to examine the covariance and endogeneity in group entry patterns (Eyhorn et al. 2005; Kadigi et al. 2007). Smallholder farmers in an established and well-organised producer organisation may well always have been more affluent than farmers who are less organised.

The use of groups in value chain upgrading interventions is more effective when functional groups with effective leadership exist, and traditional group structures are employed rather than those imposed by development agents (Schmitz and Nadvi 2000; Simmons et al. 2003). Indeed, imposed structures can be not only ineffective but also highly damaging. For example, Ghanaian women fish traders on the Cape Coast used to work in networks of matrilineal 'companies'. A Women in Development initiative required reorganisation of these traditional institutions in order to meet donor criteria for a microcredit scheme (Walker 2001). The imposition of these artificial groups caused the breakdown of social cohesion and longstanding networks. Because it is the women who control fishing activities, new pressures of conflict and competition among the traders resulted in reversion to unsustainable fishing practices and accelerated stock failure.

In contrast, a hybrid seed corn processing company in Senegal worked with traditional smallholder clusters headed by powerful leaders, who were able to influence individuals' commercial decision making to prevent maladaptation (Simmons et al. 2003).

Evidence from coffee, banana and honey sub-sectors shows that the existence of collective marketing structures (commonly cooperatives) with sufficient market power creates buying competition in local markets, forcing up prices for both members and non-members of these institutions (e.g. Coles and Amsalu forthcoming; Ruben et al. 2008). In price-taking environments such as these, private buyers must make their offer at least as attractive as that of the cooperative in order to compete to purchase farmers' production.

Membership of trades unions can improve employment conditions for secondary chain actors. However, case studies of horticultural labourers in East and Southern Africa suggest that women are still underrepresented in these bodies, a situation that perpetuates gender inequities in the labour market (Smith et al. 2004).

Horizontal coordination can elevate gender negotiations to a higher level than the household; when backed by the strength of an organisation, women may be more successful in winning control over economic activities (Naved 2000). Crucially, the most successful participants in terms of retaining control of their income and its disposal were fish farmers who, with the support of the institution, managed to resist ceding the title deeds of their ponds to their husbands. In contrast, women who used male-owned land for vegetable production or lost ownership of their ponds gained relatively little.

Box 3: Horizontal institutions for women in India's incense stick sector

The Indian incense stick (*agarbatti*) sector is a predominantly cottage-based industry, employing mainly women. In Tripura state, an estimated 15,000-20,000 women produce raw bamboo sticks for the industry. Value addition for this primary processing stage is very low and, prior to the project, the vast majority of women producers in the value chain earned incomes below half a dollar per day, because they were unable to: 1) efficiently produce their products in high volume; 2) upgrade their role in the value chain; 3) access raw materials owing to environmental policy constraints; and 4) make products of industry standard and quality.

Through institution building, women were empowered and their livelihood outcomes improved (in terms of physical, natural, financial, human and social capital). The project was centred on building women's groups into a rural marketing network, including innovative marketing structures based on clusters of smallholder groups and Joint Forest Management Committees.

These institutions enabled women to participate in ways that were not previously open to them as individuals, increasing their bargaining power in vertical relationships and facilitating dissemination of technical and market knowledge. They also enabled the women's voice to be heard within government institutions and were successful in lobbying for changes in the policies that constrained their input supply.

Vertical coordination

- Vertical coordination is the move away from one-off spot transactions toward longer-term inter-nodal relationships, often between producers and processors or processors and exporters.
- It involves what the value chain literature refers to as 'governance'.
- It acknowledges that there is value in longer-term associations above price taking.
- It can be a slow and difficult process, because it requires the building of trust among all participants and clear demonstration of 'win-win' benefits to all parties (e.g. Ashraf et al. 2008).
- It generally involves a lead party – perhaps a key buyer, or a large local firm – to coordinate actions along the chain.

Not all vertical relationships are governed by formal contracts, and so we use the terms 'contractor' and 'contracting firm' loosely. For example, one Indian fruit and vegetable retailer distinguishes its 'contract growing' scheme from 'contract farming' or 'outgrowing' (Singh 2008). The supermarket chain issues information on its specific requirements to growers without a formal agreement. If it cannot buy produce at a certain time it introduces its suppliers to alternative buyers, stating that its aim is to remain the first choice buyer for all the smallholders it deals with.

Vertical coordination can present the contractor with a stable, assured market, with guaranteed prices that usually at least match the market going rate and, as an incentive for longer-term commitment, often exceed it. Vertical relationships often include embedded services such as discounted bulk input supply (reducing the risk of high-cost inputs), access to credit (cash or in kind), technical support and supply of capital equipment. Longer-term relationships create incentives to invest in process, product and functional upgrading by providing the stability of assured income. They reduce risk and vulnerability by insulating contractors from price volatility (Aranda and Morales 2002).

The benefits for contracting firms are assurance of quality and supply, reputational and marketing gains (ACDI/VOCA 2007; Singh 2008), risk transfer and capacity gains for diversified production without major investment in additional landholdings.

Financial returns from contracted high-value production are highly dependent on quality – premium buyers will accept only the very highest quality products. The benefits of such relationships are often constrained by the relatively small proportions of total production that are sold to these markets. However, selling to additional channels diversifies income and reduces vulnerability (Aranda and Morales 2002; Ruben et al. 2008).

A feature of contracting in smallholder agriculture is that contract winners are often better off to start with (Maertens and Swinnen 2009). Therefore, the better studies of the impact of contracting on smallholders' livelihoods control for the endogenous characteristics of each group (Bechetti and Costantino 2006; Bolwig et al. 2008; Hughell and Butterfield 2008; Kleinwechter and Grethe 2006; McCulloch and Ota 2002; Roy and Thorat 2008; Ruben et al. 2008a; 2008b) and, ideally, use randomised group assignment (Ashraf et al. 2008).

An effective means of linking producers' primary institutions with markets is via professional marketing intermediaries. A federation of beekeepers in South India invited local entrepreneurs to meet with them and discuss the possibility of their entry into the honey market. Of the 25 potential traders who attended the series of meetings, six became Professional Marketing Agents (PMAs), eventually supplying large buyers across India. In comparison with existing private traders buying from individual farmers, the PMAs have lower procurement costs because they can access bulk quantities of honey in one place and have better purchasing and sales networks. These advantages are passed on to the producers in a price premium.

The literature gives some pointers on why some contracting schemes are more successful than others.

Box 4: How to improve the chances of success and maximise positive impacts of contract farming

One of the main causes of contract scheme failure is high costs: setup and running costs, enforcement costs and maladaptation costs (of growers failing to comply with requirements). The best contracting schemes minimise costs by keeping interface time with individual growers as short as possible. Mechanisms for achieving this and maximising benefits to both parties are:

- Design contracts with marketing and price premium guarantees to incentivise investment in high quality (Bolwig et al. 2008).
- Deal with traditional grower groups that are well established, functional and well led (Simmons et al. 2003). Dealing with individual farmers increases the costs of drafting, negotiating and enforcing contracts and requires more face-to-face contact time. Incentivise internal handling of grievances and maladaptation through group contracting.
- Use social rather than physical collateral to maximise participation of the poorest. In contrast with most other contracting examples, where group participants are selected based on their physical collateral, a maize-processing company in Senegal used local information on social collateral (honesty and trustworthiness) provided by its community agents. Each cluster functioned like a small firm with a powerful chief executive officer. Notably, under this system the members and non-members of the scheme could not be distinguished statistically using wealth indicators such as landholding size and livestock assets; in other words, even the poorest farmers were able to participate (Simmons et al. 2003).
- Crops that are the most likely to be grown successfully and beneficially under contract have the following characteristics (Warning and Key 2002):
 - Familiar crops that do not require training in new practices. This also minimises training and capital costs to the contracting firm.
 - Low asset specificity so that farmers are able to redirect resources if they find contract terms unsatisfactory.
 - Crops with a ready alternative market of comparable value to minimise the risk of monopsony and exploitation.
 - Crops with multiple seed sources to further constrain buyer power.

Functional upgrading

- Functional upgrading refers to changing the mix of functions performed by actors in the value chain, in other words increasing (upgrading) or reducing (downgrading) the number of activities performed by individuals and firms.
- This form of upgrading is relatively rare in the literature; existing cases describe three forms of functional changes.

Increasing value added by processing previously unaltered materials into new products, for example:

- Smallholder farmers in Egypt producing dairy products when previously they sold only milk, empowering women with new skills and increasing incomes (ACDI/VOCA 2007);
- Increased likelihood of Ugandan coffee producers investing in processing and receiving premium prices as the result of the assurance of being linked to a stable, reliable market (Bolwig et al. 2008);
- Increased processing of oil seeds by Tanzanian producers, either through ownership of improved ram presses or through access to service processing, resulting in stimulation of local oil and seed markets and increased incomes for farmers and processors (Hyman 1993);
- Introduction of processing technologies to coconut farmers, resulting in increased and diversified incomes;
- Own-brand organics chocolate, such as that emanating from Ghana under the Divine brand.

Adding new functions to horizontally coordinated institutions, for example:

- Newly formed producers' groups in Kenya performing grading and packaging of fruits and vegetables at dedicated centres to meet buyer requirements (Ashraf et al. 2008);
- Advertising prices to tourists by juice pressers in The Gambia, helping to improve vertical relationships with customers, contributing to increased sales and income (Bah and Goodwin 2003).

Shortening chains by exclusion of intermediaries and redistribution of their functions among the partners of a newly formed vertical relationship, for example:

- Direct sales to major retailers by fruit and vegetable producers in India, with the supermarkets taking on the transport function and producers bulking and grading at dedicated collection and distribution centres coordinated by farmers' groups (Singh 2008; USAID 2008). Farmers gained assured markets with increased, stable prices and favourable payment terms; the supermarkets reduced their costs through elimination of intermediaries' fees and gained the reputation of selling high-quality, fresh produce. These are examples of 'buy higher, pay lower', whereby the seller receives a price above the going farm-gate rate and the buyer saves considerably on prevailing wholesale rates. 'Middlemen' did not lose out

significantly because high proportions of retail requirements were still sourced through conventional channels.

Millard (2004) provides an account of the evolution of horizontal and vertical coordination and functional upgrading in the case of Starbucks Ltd buying coffee from Mexico. Initially, cooperatives exported directly, facilitated by the American NGO Conservation international (CI). However, cooperatives were not competitive at providing their members with services (negotiating with processors, buying coffee) and CI took to negotiating on their behalf. CI and Starbucks then arranged with a third party to provide export services to the cooperatives until, ultimately, Starbucks asked the third party to buy from the coops and sell to them, reducing the company's transaction costs and enabling direct communication with the supplier. The contract stated the buying price for both Starbucks and the third party. Farmers earned more as a result, despite constant Starbucks prices, as the result of chain efficiency. Cash flow also improved because the third party paid on receipt and undertook quality control to Starbucks' standards, reducing the risk of returned shipments. This is now standard practice for this multinational company, now the world's largest buyer of FT coffee, and serves to offload risk for both itself and the producer to the intermediary.

We found no examples of functional upgrading carried out in isolation from other upgrading strategies. Therefore, it is not possible to attribute observed outcomes directly to functional changes only. However, increased value added and more direct linkages with buyers – resulting from packages of strategies that enable functional upgrading – have clearly been demonstrated to improve incomes from the target value chain.

ACDI/VOCA (2007) describe how transfer of skills in dairy processing to Egyptian women led to female empowerment and consider how household resources were reallocated as a result of increased incomes. No other studies describing functional upgrading events have considered spin-off effects, externalities or implications beyond economic impacts at the individual or firm (value chain) levels.

Box 5: Functional upgrading and downgrading in the Mekong catfish and interdependence with other strategies

In southwest Vietnam, Mekong catfish are produced in ponds by farmers who sell fish of a weight of around 2kg to the local market and to processors to export. Farmers arrange themselves into three functional guilds: nursery farmers who produce fry, fingerling farmers and grow-out farmers.

A full pond of *Pangasius* catfish is a considerable capital investment: feed costs are high and margins are low. Small producers are locked into a boom and bust cycle. A glut of fish forces prices down and production becomes uneconomical. Grow-out farmers respond by leaving the sector to take up fingerling farming (downgrading), which is never as profitable as grow-out farming in a good season. Production drops and prices rise, causing a rush of farmers back into grow-out activities, and so on.

If prices were stable, even small margins would deliver favourable returns to grow-out farmers. Grow-out farming is regarded as being more skilled than fingerling farming, and farmers functionally upgrade to the former after gaining experience in the latter. Seed (fry) production is the most skilled of all activities, and only the most successful producers attempt it.

While undoubtedly interesting, this account of functional upgrading and downgrading in isolation is relatively uninformative. This again illustrates the interdependent nature of what we refer to as upgrading strategies. The boom and bust cycle is being addressed through vertical coordination with processors, who also lose out from periodic shortages of fish: in 2008 one of the major local buyers sourced 20% of its requirements from smaller producers, representing 4,800MT or around \$4.5 million. Therefore, declines in availability and price hikes pose serious economic problems for firms.

The capacity to develop vertical relationships with processors was achieved partly through horizontal coordination; that is, creating 'medium-scale processor equivalents' by grouping smaller grow-out farmers and coordinating their cropping cycles. In addition, an intensive programme of process and product upgrading at each of the three production stages was required in order to meet environmental and food quality standards, a prerequisite for supplying the processors' end markets.

Finally, for those micro-producers who were too scattered to be clustered and who were unable to afford the capital costs of certification, a programme of (inter-)chain upgrading was implemented, in which farmers were supported to begin the profitable supply of frogs to local and regional markets.

Process and product upgrading

- Among the most common pro-poor interventions in value chains are improvement of processes within or between nodes and the associated upgrading of product quality.
- These two upgrading strategies are closely linked: each instance of product upgrading in the literature is linked to improved processes.
- One of the major broader forms of process upgrading described in the literature is the shift to organic production.
- One of the most common specific kinds of process upgrading in value chains is improvements to agronomy resulting in higher yields, higher production and increased sales or increased own consumption, or both. This may involve the use of improved planting techniques, planting materials or supply of inputs, for example upgraded irrigation infrastructure

As markets in the richer Northern economies have become more discriminating, so standards have evolved. Some of these standards are driven by the process requirements of lead buyers (for example, supermarkets require traceability in food products), others by legal phytosanitary requirements in importing economies and others as a response to FT and organic demands by final consumers. In each case, the upgrading of a product has associated requirements for the upgrading of process.

The International Fund for Agricultural Development (2003) synthesised six case studies of organic adoption in Latin America and the Caribbean. Although the cases differed in the way that production costs, yields and prices evolved, organic producers obtained higher net revenues in all cases.

Farmers who employed production processes closer to those of organic systems experienced cost increases through improved production technologies, most of which were labour intensive, and certification. Farmers who used to apply chemical inputs experienced a decrease in production costs, even though labour and overhead costs increased.

Similarly, those with practices most resembling the organic system experienced rapid yield increases with the new techniques, but farmers using chemical inputs experienced declines during the first years.

All farmers obtained higher prices than did producers selling similar conventional products nearby, partly because of the nature of the organic product itself, but longer-term relationships with buyers also played a key role in determining better price margins. The organic process lends itself to small farmers, who are often accustomed to producing without chemical inputs. Qualitative data suggest that there may have been health benefits from organic production. Finally, it was observed that success in organic production is very difficult for farmers using chemical inputs, with little access to family labour (often women) and uncertain or no land tenure.

Similar leaps in process and quality improvement are required to access markets with food safety and quality standards, such as the Euro-Retailer Produce Working Group for Good Agricultural practices (EUREPGAP) and Hazard Analysis and Critical Control Points (HACCP) (e.g. Ashraf et al. 2008; Maertens and Swinnen 2009).

These requirements represent barriers to entry that individual smallholders struggle to overcome; even institutions formed to share the costs of compliance are not open to all – for example, membership of producers' group may be contingent on the possession of irrigation facilities. The principle behind the investment in process and quality upgrading paying off is that better products fetch better prices. Where this quality–price linkage fails, investment ceases (e.g. Coles and Amsalu forthcoming).

As part of the shift towards stricter, higher standards and process requirements in end markets, African horticulture is becoming larger in scale and more integrated. This can be exclusive in the sense of the barriers described above, but Maertens and Swinnen (2009) present data suggesting that the poor can benefit through labour rather than product markets as processes are upgraded: labourers associated with high-value export farming enjoy higher returns than those in conventional farming and agro-industry.

Koczerberski (2007) describes the way in which a company in Papua New Guinea, in partnership with support organisations, introduced a new payment process for women palm fruit labourers. Initial technological approaches to address poor participation in harvesting loose fruit had very limited success because they failed to address the underlying issue caused by male–female power dynamics. Direct payments to women via their 'mama card' incentivised female labour by giving the women control over income and allowing men to pay them housekeeping money in kind by giving them fruit to be registered on the cards. This reduced intra-household conflict and resulted in better nutritional outcomes for household members, because money controlled by women was spent almost entirely on family needs.

The introduction of simple water pump technology to rice paddies in The Gambia greatly increased yields within household compounds (von Braun and Webb 1989). The resulting reallocation of resources led to reduced marketable surpluses and women losing control over rice production and income because the crop was shifted to male-controlled communal fields used for consumption. However, the families gained in food security

terms. This example illustrates the way a fairly simple upgrading intervention with the immediate impact of increasing yield can lead to somewhat complex outcomes when mediated through intra-household dynamics.

Box 6: Process and product upgrading in the cassava value chain, Tanzania

A number of projects across rural Tanzania are attempting to reduce smallholder poverty through the commercialisation of cassava, a staple food crop. Markets for cassava include wet unprocessed tubers for home consumption and dried grated 'chips' for further processing into animal feeds and high quality flour (HQCF) for use in commercial and domestic foods. Following the example of some other African countries, for example Sierra Leone and Nigeria, the Tanzanian government is beginning to promote HQCF in the partial substitution of wheat flour, introducing the potential for enormous market growth.

As the staple crop is important for household food security, only the marketable surplus is sold. The study groups' members estimated that they achieved yields of only around 3.8-5.9MT/ha. However, under favourable growing conditions, improved (disease-resistant) African varieties can potentially yield 20-25MT/ha. The low and unreliable supply of raw materials in Tanzania means that animal feed processors, who require very large volumes, continue to produce maize-based mixes, and that commercial millers struggle to source the quantities they require to meet even the currently modest demand for HQCF.

Artisanal processing of cassava into chips is often undertaken in unhygienic and damp conditions that allow moulds to develop and spoil the product. When milled, these discoloured chips produce greyish flour that is highly unattractive to consumers. The animal feed market accepts lower quality chips but offers lower prices. Therefore, the best incomes are made from high-quality chips with low moisture content that produce a white flour, as detailed in the Tanzania Bureau of Standards HQCF standard.

The Sokoine University of Agriculture in Morogoro implemented a three-year action research programme of upgrading smallholders to participate in the domestic cassava market. In order to address the undersupply issue, farmers were given a 'starter pack' containing improved planting materials and modern hand hoes, along with agronomic support.

In horizontally coordinated groups, they were also supplied with grating machines (functional upgrading) and technical assistance with best drying practices for the production of high-quality chips for supply to the food industry. This has enabled them to enter into new relationships with buyers (vertical coordination). In addition, the greater yields offer better food security and marketing options, with any surplus not supplied to millers available for sale unprocessed to local markets.

The cost to the farmers of upgrading their agronomic practices in terms of both time and money has been negligible and their income stream has been diversified, making them less vulnerable. The challenge now is to maintain smooth and constant supply to buyers, particularly given the current erratic rainfall patterns and consequent failure of other household crops.

Packages of upgrading strategies: Accessing speciality FT and organic export markets

- Complex certification schemes require a package of support – a mix of sequenced upgrading strategies.
- In the South American context, FT and organic upgrading have resulted in increased human capacity and significant poverty reduction impacts.
- Price premiums can lead producers to become specialised on higher-value speciality markets, increasing their vulnerability.
- Group membership is a prerequisite for inclusion and offers access to other services. The collective experience of the certification process can impart skills, knowledge and experience that improve groups' ability to stand alone, for example a move from microcredit to commercial financing through enhances creditworthiness.
- South American experiences are generally more positive than those of Africa, where the FT movement is still in its infancy.
- Environmental benefits of organic production may be traded off against higher labour costs and lower yields.

Cases of value chains in premium organic, FT and other speciality markets dominate the upgrading impact literature. Commonalities among these studies justify separate treatment. The FT coffee literature alone is considerable and growing. In order to coordinate vertically with speciality markets, which are exacting in their standards and requirements, a package of upgrading strategies is required. Most commonly, this comprises horizontal coordination and product and process upgrading, sometimes with functional upgrading, for example semi-processing by producer groups and improvements to the enabling environment in the form of pro-worker changes to labour standards and the provision of business development services (BDS). In some of the more advanced cases, functional upgrading also involves the development of own-brands.

The process is sequential: improvements to the production process to increase productivity and/or horizontal coordination for bulking create sufficient supply volumes for economically feasible export. Product and process upgrading, often involving certification to social, environmental and food safety standards, allow access to an increasing number of markets that apply these benchmarks and minimise the proportion of rejected consignments.

Few, if any, smallholder farmers can individually afford the costs of certification to FT and organic standards. Reducing barriers to entry for individuals through horizontal coordination (producing cost-sharing and efficiency gains) is often the only way to link the poor to these types of markets. However, in cases where even producers in groups struggle to achieve FT standards, double certification can diversify marketing options. For example, Méndez (2002) describes how organic certification may permit quality downgrading (that is, a focus on maximising yield over quality for less quality-sensitive organic markets) for those unable to achieve FT standards. Ruben et al. (2008a; 2008b) describe how the gains made by single certification FT producers are relatively small in comparison with those who also hold organic certification.

At the proximate (chain) level, long-term relationships with speciality buyers insulate farmers against the price volatility of open commodity markets and offer premium prices

for the highest-quality products. This quality–price linkage can create an incentive to invest in further quality improvements (Aranda and Morales 2002; Boersma 2002; Bolwig et al. 2008; Singh, 2008) and value addition (Bolwig et al. 2008; Ruben et al. 2008a; 2008b).

IFAD (2003) suggest that it is longer-term producer–buyer relationships, rather than FT linkage *per se*, that are responsible for more favourable price offers. Aranda and Morales (2002) argue that degree of producer organisation is a more important factor in determining the benefits of participation than linkage to FT markets in particular.

The predictability of prices and markets serves to reduce vulnerability. Increased income reliability can lead to two divergent outcomes – either investment in livelihood diversification, for example through diversified cropping and capitalisation of micro-enterprises (Bechetti and Costantino 2006; Ruben et al. 2008a; 2008b) or dependency and specialisation through a ‘sense of security’ and loss of the rhythm of quality maintenance (Lyon 2002).

Other features common to most, if not all, linkages to speciality export markets are improved access to, and reduced cost of, credit through group microfinance and non-financial benefits of association such as technical and organisational training and human capacity development (Garza and Trejo 2002). The Fairtrade Licensing Organisation (FLO) provides access to market information and international producer networking (Aranda and Morales 2002).

Several authors report positive externalities for non-participating producers, including local price increases and technology transfer. At the farm level, learning from FT-oriented process upgrading can be applied to conventional crops, improving quality and yield (Lyon 2002). Coles and Amsalu (forthcoming) describe in detail how the mere presence of a functional cooperative puts upward pressure on prices locally by forcing private traders to offer competitive prices in local markets. However, where products have an alternative domestic market, price rises may have negative food security implications.

FT market power can also apply to labour markets. For example, in a Ghanaian banana case study the local labour union incorporated standards into all plantations one year after FT-registered plantations began implementation of working directives.

Producer income varies according to the relative proportions of production flow along premium and conventional price channels (e.g. Aranda and Morales 2002). Coles and Amsalu (forthcoming) emphasise the importance of the strength and functionality of horizontal institutions in determining the extent to which their members benefit from participation in speciality markets. Owing to variable product quality or low institutional capacity (to raise capital and manage the business), relatively small proportions of total production are commonly sold to and accepted by the FT channel.

In addition, supply is constrained by relatively limited demand from speciality niche markets. However, Aranda and Morales (2002) conclude that one of the main benefits of FT linkage is in incentivising production at a time when others are exiting the sector and even migrating away from marginal rural areas.

A special kind of externality associated with FT marketing is the separate premium over and above the minimum buying price paid to producers for use on democratically chosen community-level projects. Most FT farmers would prefer to use the payments to enhance individual welfare, but intermediate solutions include allocating the money to microcredit, school fees, health insurance, input provision and technical assistance (mostly limited to FT farmers). In practice, the 'isolated' management of these fees without effective interface with other providers (community-based organisations (CBOs), government and civil society organisations (CSOs), for example) limits the multiplier effect (Ruben et al. 2008a; 2008b).

In terms of how chain- and livelihood-level benefits translate into household- and community-level outcomes, Ruben et al. (2008a; 2008b) report on four robust case studies of FT-marketed products in Ghana, Peru and Costa Rica, concluding that, in almost every case, producers' income from and participation in other activities reduced after they began to supply FT markets. For example, a case study of coffee growers in Peru observed that productivity declined as more time was devoted to leisure, with price increases being 'consumed'. Another risk of specialisation is a shift toward monopsonistic marketing, whereby many producers sell to a single market channel.

Although specialisation in higher-value niche market products may lead to reduced investment in other livelihood strategies, and even significant negative impacts on household expenditure in the short term, FT households showed consistently higher shares of income devoted to long-term investments in household durables, house improvements and education. In other words, FT households in the cases reviewed did not necessarily appear wealthier but tended to allocate expenditure to areas likely to improve their welfare and assets in the medium and long term.

Most FT-linked farmers were found to be significantly less risk averse, with additional income from FT sales representing a financial platform on which new micro-enterprises are initiated. Similarly, labourers can use the relatively small but stable income from FT work to insure other riskier activities. Workers reported enhanced feelings of job security, corporate identification and sense of co-ownership.

Bechetti and Costantino (2006) report that FT producers have superior capabilities and social and economic wellbeing compared with their conventional counterparts. Garza and Trejo (2002) highlight the increased capacity for community development conferred by FT attachment and note significant household income increases with increased investment in the value chain itself (coffee production), as well as additional landholdings and child education. Méndez (2002) lists increased household income, improved community infrastructure and greater support for non-coffee activities as the ultimate benefits of FT linkages.

The author suggests that the dynamics within households engaged in FT value chains are more male dominated than those within non-FT households, owing to reinforcement of the role of the male household head in key decision domains. They point out that gender dynamics are not considered in the FT certification process.

In terms of the environmental impacts of organic and FT production, there are reports of reduced use of and reliance on chemical inputs (e.g. Eyhorn et al. 2005), improved pest control (Aranda and Morales 2002) and increased soil fertility and water quality (MacDonald 2004). In the cases reviewed by Ruben et al. (2008a; 2008b) less progress was made with investment in land-attached improvements (such as soil conservation structures, terraces, contour rows, drainage), which have high lump sum requirements for which the FT premium is hardly available. Investments and improvements are also inhibited by insecure land rights.

Inter-chain upgrading

- Inter-chain upgrading (sometime called chain upgrading) is the process of using skills gained in one value chain to participate in another.
- It is exclusive because it involves overcoming particularly significant inter-chain barriers to entry.
- As with the appropriation of more profitable activities within chains, income increases derived from access to more lucrative chains can bring about changes in intra-household dynamics.

An example of (inter-)chain upgrading is the shift from general (local variety) horticulture, such as local endemic tomato varieties or okra, to high-quality export (exotic variety) horticulture, such as green beans. These are entirely different value chains with hugely distinct markets, channels, standards and dynamics.

As with contracting and certification processes, Ashraf et al. (2008) illustrate that chain upgrading often excludes some of the less advantaged chain participants. In the former case, few wealthier farmers joined, because they had little need of additional support, and few poorer farmers participated, because they could not cover their share of certification costs. Only new entrants significantly increased their income, suggesting that projects would be most effective in targeting non-participants in preference to those already exporting successfully. In the latter case, the prerequisite of irrigated production excluded farmers from across the entire range of landholding areas.

However, McCulloch and Ota (2002) found that in their particular East African case there was no significant relationship between individuals' pre-existing wealth characteristics and their likelihood of participation. Dolan's (2001) focus was mainly on the implications of the higher-value nature of the new value chain in terms of intra-household gender dynamics (male appropriation of female labour and income).

Kadigi et al. (2007) claim to measure wealth differences between standard-compliant and non-standard-compliant fishers in Tanzania's Nile perch export fishery. However, they actually compare the incomes of inherently wealthier individuals, who have the assets to target higher-value Nile perch, with those with more modest equipment which allows them to target only tilapia and anchovies. This is another case that illustrates how entry barriers can lead to upgrading being an exclusive process (and how researchers need to be more rigorous in their analysis).

Kaaria et al. (2008) tell us little about the process and implications of chain upgrading, in this case the introduction of pig production to East and Southern Africa. Their

methodological approach (without controls or an analysis of group entry patterns) does not allow us to conclude to what extent the reported changes are attributable to their inventions or whether differences among participating groups existed beforehand.

As discussed above, Naved (2000) describes how the success of two projects introducing new economic activities to women in Bangladesh was contingent on the degree to which they controlled factors of production and, therefore, the resulting income.

East African horticulture was traditionally female dominated, with women selling produce on the local market and using the income for household needs such as food and education. However, higher incomes from higher-value export contracting have increased returns, leading men, who own the productive assets and control their outputs, to appropriate the income while women still provide the bulk of the labour (Dolan 2001).

The enabling environment

- The competitiveness of the enabling environment of value chains is also a major factor in their success.
- As with products, processes, functions and relationships within and between chain nodes, improvements to the support service, institutional, legal and policy frameworks in which value chains operate can be brought about by development agents.
- The literature examines examples of actions taken in the realms of standards, codes of conduct, policy and legislation and business development services.
- The bulk of the evidence in the literature tends towards the conclusion that the benefits of upgrading to meet certified standards outweigh the costs and inherent risks.
- Codes of conduct may not be effective in improving gender equity in value chains if underlying issues are not identified and addressed.
- Specific policy and legal changes may be highly effective in removing blockages to greater efficiency and competitiveness, but badly conceived interventions, for example Western-style laws 'cut and pasted to developing countries', risk being ineffective or damaging.

The policy, legal, institutional and governance environment in which value chains operate has significant effects on their functioning. Referring back to the theoretical discussion on rent earlier in this section, an effective enabling environment (that is, one that is more effective than those in competitive environments) provides a series of exogenous rents to bolster the endogenous firm-specific rents developed by individual producers or groups of producers in a chain. While not upgrading strategies in their own right, actions to enable actors to surmount barriers in the enabling environment (or to remove them altogether) can have dramatic positive impacts for the poor.

Coverage of such interventions in the reviewed literature falls into the following categories:

- Upgrading to meet trading standards with certification for compliance, such as food quality and safety standards (for example Hazard Analysis and Critical Control Point (HACCP) and EurepGAP; e.g. Kleinwechter and Grethe 2006), environmental, social and economic standards (for example, FSC, FT and organic certification; e.g. IFAD 2003; Ruben et al. 2008a; 2008b).

- Implementation of codes of conduct governing employment or operational standards at individual, firm or industry level (e.g. Bah and Goodwin 2003).
- Changes in policies and legislation, with or without lobbying (e.g. Walker 2001)
- Provision of business development, credit and support services (e.g. Ashraf et al. 2008; Sebstad and Snodgrass 2008).

Box 7: A framework for compliance with trade standards and application to the case of Peruvian mango farmers

Kleinwechter and Grethe (2006) studied the costs and benefits of compliance with EurepGAP standards for Peruvian mango farmers, potentially exporting via export firms who support the certification process, and set out a framework for compliance with international trade standards.

The first barrier to adoption is the 'information stage'. Those producers who considered that they had sufficient information to inform their decision-making process were statistically better networked (members of a producer organisation and already contract farming or exporting), were more 'cosmopolitan' (frequency of visiting a large town), had better media access (telephone and internet) and had larger landholdings (were better off). However, even the worst-off producers could surmount these barriers if they had a close relationship with exporters who provided them with information.

The second stage of compliance is decision making (on whether to implement). The authors state that farmers are not proactive in decision making. Although some producers decided against implementation because of a lack of financial resources, most of those who began the process were persuaded that it was necessary for the buyer or for international markets. As with the information stage, better-off and well-networked producers were more likely to choose to implement the standard.

At the final stage, implementation, costs of compliance ranged from \$10-580/ha/year (with a mean of \$145), representing 0.3-15.2% of the farm-gate price. The authors suggest that this large variance was explained by: 1) the starting point of the producers in terms of how closely their current practices were to those required; 2) their end target point (the level of compliance they wished to achieve); and 3) the degree of financial support received from the exporter.

Most producers reported net benefits of compliance, including increased productivity, better marketing conditions, elevated knowledge of labourers and managers, improved working conditions, higher product quality, better farm hygiene, improved relations with other producers and improved infrastructure.

The benefits of compliance are weighed against increased dependency on exporters (who are supporting the process), increased risk of monopsony and anti-competitive practices and a loss of independence through more intensive involvement of exporters in farm management.

The arguments in this article are somewhat tautological – for example, that those producers with better access to information should be better informed is perhaps not surprising. However, this case presents good-quality qualitative evidence of net benefits to producers of certification in this context.

All authors agree that the increased costs inherent in certification processes impose potential barriers to entry for the poorest actors, but also that the benefits of successful compliance and certification generally outweigh the costs.

Lobbying for specific changes in policies and legislation can be effective. Beekeepers' federations were successful in persuading an Indian state government to reduce sales taxes on honey from 12.5% to 4%, increasing producers' profits.

Ongoing liberalisation of the state-controlled *mandi* agricultural wholesale yard system in India, originally introduced with the aim of protecting producers from trading malpractices, has allowed for the formation of mutually beneficial longer-term vertical coordination among farmers, retailers and exporters (USAID 2008).

The impacts of environmental, social and trade standards, particularly with respect to speciality FT and organic supply chains, are reviewed above.

However, not all changes to legislative processes have the desired results. In The Gambia, women were given priority in the official land registration process in an attempt to maintain traditional land rights (von Braun and Webb 1989). This did not prevent women from losing control over the traditionally female rice crop as productivity increased significantly. Changes in traditional matrilineal inheritance law in Ghana to favour widows pitted daughters-in-law against mothers-in-law in the fisheries sector and saw the reorganisation of traditional 'firms' to exclude the former, creating mistrust, conflict and disharmony and negatively affecting informal natural resource management and marketing systems (Walker 2001).

The provision of microcredit and improved access to commercial credit on better terms has stimulated the creation of new enterprises, resulting in livelihood diversification and reduced vulnerability in many contexts where horizontal and vertical coordination have occurred (Ruben et al. 2008a; 2008b).

There is less evidence of the success of BDS development – the one evaluation of a dedicated BDS project accepted for review was of poor quality, with highly ambiguous results (Sebstad and Snodgrass 2008).

Codes of conduct can give a sense of collective responsibility and ownership, improving horizontal and vertical relationships and incentivising internal self-regulation (Bah and Goodwin 2003). However, their implementation can be patchy and positive outcomes tend to be the result of isolated, unilateral actions of individual firms.

Tallontire et al. (2005) conclude that social codes in African horticulture have not necessarily achieved better outcomes for women and informal workers because the economy itself is 'gendered', and that it is only by addressing this that the conditions of all workers, including women, are likely to improve. In other words, these interventions fail to address the underlying socio-cultural reasons for gender inequities.

4.5 In summary

This upgrading framework has sought to harness the most rigorous experiences from around the world to help us understand the practical issues involved in upgrading the position of poor people in rural areas into viable value chains, in order to reduce poverty.

In the next section, we will bring together the theoretical insights about trade and poverty, the evidence from the five COPLA case studies and the experiences of implementing upgrading strategies, to reflect on how poor people can be better supported to upgrade their position in value chains.

5. Reflections on the use of value chain analysis

If we pull together the threads of the foregoing analysis – the conceptual insights; the summary of the five COPLA case studies; and the framework on upgrading – several important messages emerge that could provide useful support to anyone wrestling to upgrade the position of poor people in a value chain. We believe that these messages have a relevance that stretches beyond the specific value chains investigated in the case studies, and also beyond their geographical boundaries.

Reflecting on the foregoing, we believe that nine key messages arise, the importance of:

1. Clarity on the rationale for (possible) intervention;
2. Rigorous research methods;
3. Selecting an appropriate value chain to develop with suitable demand requirements (i.e. avoid obsessing about global value chains);
4. Basing interventions on market failures;
5. Identifying the key rents that allow poor producers to participate gainfully and sustainably in global markets;
6. A clear understanding about barriers to entry in export markets;
7. Avoiding obsessing about the production node in agricultural value chains;
8. Careful analysis of the enabling environment; and
9. Construction of a restructuring coalition to facilitate the inclusion and upgrading of poor producers.

5.1 Clarity on the rationale for (possible) intervention

Value chain analysis and development is just a tool, one which can serve many different ends. As the overview of the analytical foundations from which value chains emerge demonstrates, the aims of value chain analysis can be diverse, including:

- Maximising profit for the lead firm (as in much of the management science and supply chain literature); or
- Increasing the efficiency of vertical integration in tropical agricultural chains (as in the French tradition of *filière*); or
- Increasing the competitiveness of a locality (as in Porter's value chain concept); or
- Enhancing the position of poor people in value chains (the preoccupation of many working in development studies) in order to achieve sustainable income

None of these rationales for value chain development is wrong, they are just different. It is important that anyone intervening in a value chain is very clear about the rationale for their intervention and, specifically, the identification of primary beneficiaries.

An important feature of value chain development exercises is that, even where the primary beneficiaries are poor people, it is inevitable – and in fact important – that the non-poor also benefit. If pro-poor benefits are offset by losses by the non-poor, there will

be no financial incentive for the key actors in the value chain to make its operations more inclusive. There are examples where the affluent have voluntarily transferred resources to the poor through the process of production and exchange, with no short-term gain for themselves. However, these are relatively unusual, and it is important to distinguish between incremental changes internal to the value chain that allow the resource poor to capture additional rent on a sustainable basis and the one-off charitable donations that characterise many corporate social responsibility projects. These are often limited both in scale and in duration and, therefore, in poverty-reducing impact.

The key challenge of sustainable pro-poor value chain analysis is to find changes to the value chain which will benefit both the rich and poor, perhaps preferably with disproportionate gains to the poor, so the non-poor will have a clear business case for making the changes required to increase the social inclusiveness of the chains operations on a long-term basis. Development practitioners therefore must be able to 'sell' their pro-poor value chain proposals to an audience which regards the initiative as a commercial supply chain exercise.

5.2 Selecting an appropriate value chain to develop with suitable demand requirements

Selecting an appropriate value chain to develop is a critical decision in the lifecycle of a project. The need for this is most obviously demonstrated where the COPLA studies have, after their analysis, questioned the value chain that has been selected. For instance, the work on the Peruvian trout chain for export led researchers to question whether attempting to integrate poor producers into such a sophisticated market with such high demands for technical expertise and capital was appropriate as a vehicle for a poverty reduction project.

A respectable viewpoint held by some in the commercial sector is that only two criteria matter in terms of selecting an appropriate value chain to develop: market attractiveness and the capacity of institutions working within the chain to make the necessary changes. Table 4 below outlines some of the selection criteria that would apply to most development projects. In addition to market and institutional criteria, it is important to understand the likely impact of a particular value chain on the target group.

In the value chain literature in development studies, there is a focus on the production node in agriculture and poor producers seeking to participate (or gain more for existing participation) from global value chains. This bias is also revealed in the COPLA studies, with tourism being the only study not on a product or a commodity market. Brazil nuts in Bolivia was the only study to look beyond the production mode of the value chain. However, several researchers questioned the usual preoccupation with targeting poor producers with the aim of increasing their access to global chains.

Table 4: Value chain selection criteria

Criteria	Meaning?
What are the size and relevance of the value chain to the target group?	How many of the target group are located in the sector and how do they participate? How relevant is the sector in providing jobs and incomes for the poor and for women?
What are the main areas of rent in the chain and what barriers to entry protect them?	Are there sustainable incomes to be earned in the chain that are within the grasp of poor producers?
What is the upgrading strategy challenge facing the sector?	<ul style="list-style-type: none"> • Stepping up: doing things better than they are at present (i.e. increasing productivity, quality, adding value at lower levels of the value chain); or • Stepping out: exploring completely new markets, new products, opportunities in related sectors; or • Hanging in: strategies aimed at survival for economic activities which come under heavy competitive pressure.
What is the feasibility of stimulating change?	What is the feasibility of your organisation, working with the target group, to actually stimulate and sustain change through the chosen intervention in the sector?

Source: Adapted from Herr and Muzira (2009).

There is a clear appreciation that accessing high-value export markets requires actors to meet strict standards, which generate strongly exclusionary pressures on poor producers.¹⁶ Even for classic commodity value chains, like Brazil nuts, concerns are raised about the likely future threat of stricter hygiene standards in the EU market – which producers in Bolivia will struggle to meet. The authors agree with the view expressed in several of the papers, that poor producers should consider linking first with less risky domestic and regional markets, before attempting to enter global value chains.

5.3 Rigorous research methods

The heart of any value chain development proposal is a thorough analysis of the current value chain and clarity about what the systemic problems in the chain are and what interventions in the chain are proposed to address these. The evidence from the literature review indicates that weak analysis is pervasive throughout this field of investigation.

This is important because, if evidence-based research is intended to inform and impact on policy (whether public or private), then researchers shoulder a heavy responsibility to ensure that the quality of policy research is fit for purpose. To illustrate this point, Table 5 outlines an assessment of the impact of FT and organic certification on banana production in the Chira Valley in Peru, undertaken by researchers at Group for the Analysis of Development in Peru (GRADE, which produced the trout case study), the International Centre for Political Economy and Sustainable Development (CINPE) in Costa Rica and the Centre for International Development Issues (CIDIN) at Radboud University in the Netherlands.

¹⁶ Some authors note that what may be developing globally is a trade system whereby volume and value are important product attributes in South–South trade and quality and uniqueness in North–South trade (Green, 2005).

Table 5: Importance of rigorous analysis

Measuring the impact of FT on development	Associations of small producers and exporters of organic bananas in the Chira Valley
Use of propensity score matching to ensure that households engaged with FT, organic and conventional farming are comparable in terms of their intrinsic differences (farm size, location, resource endowments) and 'difference in difference' approach ¹⁷ to attribute changes in welfare to the treatment and the comparison group.	The study does not distinguish between organic and FT farming methods, combining the two. The study does not compare organic, FT or conventional farming systematically with each other or with a comparison group. The study does not control for intrinsic differences between farmers engaged in different types of cultivation.
Interviews with 914 farmers households so that findings have statistical significance.	The study included 10 associations but no information is given on the number of farmers or the statistical significance of the findings.
Distinguish between different levels of impact: direct effects on household production, net income and expenditures; indirect effects on household wealth through improved credit access, capital stocks, investments and changing attitudes to risk; and institutional strength of farmers' organisations and externalities for non-FT farmers.	The only quantitative information provided is a net income per/ha figure, so it is not possible to calculate an income figure per farmer, let alone for different genders. No mention of indirect effects and qualitative assessment of institutional issues.
<p>Conclusions:</p> <p>Net household incomes of conventional, organic and FT banana producers are \$4,000 for conventional farmers and some 17% and 37% higher for organic and FT farmers respectively.</p> <p>Main gains of FT certification are indirect and institutional. Income effects are much less significant than impact on credit access and asset value.</p> <p>Role of women in decision making declines in FT-farming households. Environmental benefits owe mainly to organic, not FT, certification.</p> <p>Long-term delivery contracts and assurance of stable and large-scale marketing outlets are far more relevant for FT than the price advantage.</p>	<p>Conclusions:</p> <p>Annual net income of organic banana farmers is 50% greater than for producers of conventional farmers.</p> <p>Women and youth take a growing role in the organisation of the associations.</p>

Source: Ruben et al. (2009).

This illustrates the point that the conclusions emerging from any analysis are influenced strongly by the research methods adopted. In this example, we have similar researchers studying the same value chains in the same location and coming to very different

¹⁷ A statistical technique to deal with the problem of how much change in a project area to attribute to the project. This involves measuring change between the 'before' and 'after' project scenario in a control or comparison area as well as in the project area, and then taking general change, which is unrelated to the project, into account before attributing changes in the project area solely to the project.

conclusions about the impact of organic and FT certification. Both these studies are highly policy relevant, and policy decisions taken could impact on the livelihoods of large numbers of poor people – yet the message from researchers to policymakers is ambiguous.

5.4 Identifying chain rents

In Section 4 we observed that participating in global markets does not, in and of itself, provide for sustainable income growth. If market entry is in a chain, or a chain link in which competition is intense - than incomes may be low. If a chain or chain link is subject to increasing competition over time, then the incomes earned by participants in the chain may well not be sustainable. Thus, as we have observed, the issue is not so much *whether* to participate in global value chains but more *how* to do so gainfully.

A first critical step in an intervention designed to augment the incomes of the poor, therefore, is systematically to identify the key links in the chain, and then the extent to which they are subject to competition. In other words, are these links protected from competitors and, if so, with what impact on incomes? This competition may be very local, it may be within a region but within national boundaries, it may be within an economy or it may be in global markets.

Then, in a second step, it is necessary to try and understand how these rents are evolving over time, that is, whether they are likely to experience technical change and/or increasing competition. In the global economy, rents are inherently dynamic. Without this analysis, poor producers may be encouraged to enter sectors that provide incomes in the short term, but these incomes may not be sustainable. This will damage both the welfare of poor producers inserted in these changes and the credibility of attempts to assist poor producers to participate in other chains.

5.5 Designing appropriate interventions

In action-oriented value chain analysis, it is not sufficient to undertake a rigorous analysis. Our objective is not only to describe the world, but also to change it. Moving from analysis to intervention is not easy, but there are practical approaches to ensure that the interventions selected are pro-poor and feasible, and represent value for money.

We need to be cautious with regard to projects where there is disconnect between the analysis of the status quo and the intervention recommendations. Implicit to value chain analysis is the aim to harness the power of mainstream business to reduce poverty. The rationale of this belief is that this approach will have more significant and sustainable impacts on poverty reduction than will sporadic acts of charity in the form of corporate social responsibility from business or action by the state. This is why it is so important to understand how the business functions in the value chain and the barriers to entry for poor people, to establish a business case for changes to the chain which will reduce poverty.

The key changes for sustainable pro-poor growth are therefore internal to the value chain, involving upgrading of poor people within the chain rather than initiatives external to the core functioning of the value chain, like corporate social responsibility and stronger partnerships between value chain actors and those external to the chain (such as local and regional government).

Table 6 outlines an approach that clearly integrates the diagnosis part of a value chain exercise to the subsequent identification of intervention opportunities, so that future opportunities are rooted in the analysis. This approach also highlights the fact that there is no unique 'correct answer' on the development of a value chain. Different interventions each have a different profile of pro-poor impact, feasibility and value for money and the choices and trade-offs should be considered with project partners explicitly, rather than being buried under a pile of sophisticated analysis. The analysis of intervention options should be a technically rigorous exercise; the choice of which value chain development option to pursue should be a decision made by a much broader constituency.

Table 6: The what and why of pro poor value chain analysis and development

Phase	Step	What to do?	Why?
Phase 1: Diagnosis	Step 1	Preparation.	To define the intervention focus, target groups and project team.
	Step 2	Map the big picture: enterprises and other actors in the value chain, links between them, demand and supply data and the pertinent context.	To clarify the structure of what might seem a chaotic reality and understand the overall system.
	Step 3	Map where the poor do and do not participate to avoid erroneous assumptions about poor actors.	To take account of the less visible suppliers.
	Step 4	Conduct fieldwork interviews in each node of the chain, with buyers, producers and intermediaries and service providers, including current/potential poor participants.	To provide data and insights for Steps 5 to 8.
	Step 5	Track revenue flows and pro-poor income. Estimate how expenditure flows through the chain and how much accrues to the poor. Consider their returns and factors that enable or inhibit earnings.	To follow the dollar through the chain down to the poor and assess how returns can be increased.
	Step 6	Understand the main areas of potential income generation in the chain (that is, the nature and extent of rents).	To identify the primary potential sources of sustainable incomes.
Phase 2: Scope & prioritise opportunities	Step 7	Identify <i>where</i> in the value chain to seek change: which node or nodes?	To select areas ripe for change drawing on Steps 1 to 6. To ensure Steps 7 to 9 are focused on priority areas.
	Step 8	Analyse blockages, options and partners in the nodes selected and to generate a long list of possible interventions.	To think laterally and rationally in generating the range of possible projects.

	Step 9	Prioritise projects on the basis of their impact and feasibility.	To generate a project shortlist, comprising projects most likely to deliver impact.
Phase 3: Feasibility & planning	Step 10	Project feasibility and planning.	To package selected projects for funding and implementation.

Note: These steps are iterative and cannot be entirely sequential. For example, some initial thinking from Step 6 (where to focus) will help in focusing resources within Step 5; consideration of partners' activity will inform Step 6 but be more detailed in Step 7.

Source: Adapted from Mitchell and Ashley (2009).

It is striking that, while most of the COPLA papers discuss an impressive range of upgrading strategies pursued in respective sub-sectors in the past, future proposals contain many fewer upgrading strategies internal to the value chain (see Table 7). In fact, there is a very strong emphasis placed on the role of the public sector (at municipal, state and national level) to provide policy, infrastructure, market information, an improved investment climate, basic services, etc. Many of these recommendations for interventions external to the chain may be valid, but in many cases they could be complemented with changes internal to the value chain.

Similarly, where project beneficiaries need access to finance for initial capital costs or ongoing working capital requirements, it is more sustainable for practitioners to work with existing BDS providers to understand how these services can be extended to beneficiaries, rather than simply for donors to provide, on a grant basis, the financial and other services it is deemed that the target group requires. In addition to supporting the development of markets, this approach is less likely to result in the kind of 'white elephant' projects that litter the development landscape (for instance aid projects providing expensive ponds for intensive trout production, when the Peruvian target group prefers to raise fish on an extensive basis and so leave the ponds unutilised).

Table 7: Upgrading strategies in the COPLA papers

Study	Existing upgrading strategies mentioned in the reviews					Future proposals
	Process/ product upgrading	Functional upgrading	Vertical upgrading	Horizontal upgrading	Inter-chain upgrading	
Bananas in Peru	√ - organic/FT certification	X	√ - long-term relationship with certification bodies	√ - strong farmer associations	√ - organic to FT-certified product	Association should take on functions of intermediaries; public investment should provide basic services and infrastructure.
Brazil nuts in Bolivia	X	X	X	X	X	Corporate social responsibility, better support for industry from municipal and state government.
Trout in Peru	√ - improving standard for global market	√ - initiative to supply supermarkets directly	√ - long-term relationship with processing companies	√ - various models of producer associations	√ - initiatives moving from international to domestic supermarkets	Value chain development requires vast institutional support scheme; public sector should provide infrastructure and market information systems and work with private sector; poor should concentrate on simple goods for local markets.
Wooden furniture in Central America	X	X	X	X	X	State support required to slow rate of deforestation, provide infrastructure, investment and working capital to micro, small and medium-sized enterprises and promote value addition for exports and improve investment climate.
Rural community-based tourism	√ - improving tourist services at destination	X	√ - Nicaraguan attempts to link with hotels and tour operators	√ - used existing cooperative institutional models	X	Rural tourism initiatives should be better connected to the market (vertical upgrading). Increase policy support for rural tourism.

5.6 A clear understanding about barriers to entry

At the heart of pro-poor value chain development is a difficult trade-off. On the one hand, barriers to entry to participate and to gain from participation in value chains are a bad thing because they disproportionately exclude the poorer and more vulnerable members of society (who are the target groups for development projects). On the other hand, barriers to entry are critical because, without them, everyone and anyone can participate in a value chain and so there is no gain (or rent) to be extracted from this participation. The trick is to identify those barriers within the grasp of the poor to overcome and, where barriers are being created, to set the barriers to entry just high enough to allow participants to gain without setting them so high that only the non-poor can participate.

This is not a theoretical quandary: it is at the heart of sustainable income generation. The literature discussing the impact of certification clearly demonstrates that increasing standards in value chains raises the gain for actors remaining within the chain, but inevitably excludes the poor and others as the barriers to entry are raised (unless positive spillover effects may be harnessed and a race to the top incentivised). Two of the COPLA papers speak directly to this issue.

First, organic/FT banana producers in Peru have accessed a value chain which has seen their production volumes – and, particularly, farm-gate prices received – increase very quickly. However, the analysis suggests that banana producers who are benefiting from the certification process are more affluent, better educated and members of stronger associations than the average. Moreover, the analysis found that new entrants to the value chain are facing high barriers to entry in terms of the capital cost of conversion and high input costs. Given the wide range of support services offered by the farmer associations to their membership, support to upgrading the less established associations (horizontal coordination) would seem to be a worthwhile initiative.

Second, the trout producers in Peru face serious barriers to entry caused by the high working capital costs of balanced trout feed necessary to meet the standards required by the export market. An alternative approach to reduce these barriers may be to target national or regional market with less onerous standards which would be more accommodating of the type of feed that is more accessible to low-income trout producers (the paper cited examples of producers entering value chains to supply supermarkets in Lima). For commodities with high-cost inputs, it may well be more profitable (and certainly less risky) to supply lower-value markets at much reduced production cost than necessarily to seek the highest-value market. A process over time can be conceived whereby producers 'graduate' from domestic to regional and, finally, global markets as their capacity increases.

Since the debate on trade openness and growth of the late 1990s, and the failure of liberalisation in *some* countries and regions to produce expected growth and poverty effects, more recent debate posits that more productive firms export – as opposed to firms getting more productive by exporting. In fact, empirical evidence suggests that new entrants typically increase their productivity to a greater extent than before they access

world markets: competition in world markets is typically fierce and producers may gain more 'learning by doing' experience if they target national and regional markets first.

5.7 Avoid obsessing about the production node in agricultural value chains

We question the wisdom of pinning all our hopes for pro-poor growth in developing countries on the production node of agricultural value chains, as is the tendency of many in the development sector. In the literature review on value chain upgrading for the rural poor, the weight of work focusing on the agriculture sector completely dwarfs work on any other part of the economy. This assumption should be questioned from two different directions. First, why should agriculture have a monopoly on pro-poor growth in rural areas of developing countries? Second, within agricultural value chains, why the focus on the production node?

Agriculture is an important part of the solution for poverty reduction in rural areas in developing countries. However, it is not the only, or even necessarily the main, driver for progressive change. Moreover, by their nature, many agricultural products require processing, which is often undertaken close to the farm (for example where the crop degrades, as in the case of sugar and cassava), or where processing weight and volume losses are substantial (for example with cashew nuts). In many contexts, agricultural productivity growth is slow, rates of adoption of new technology are limited and non-farm rural income increasingly dominates the financial contribution from the agricultural sector. Given this, the tendency for development practitioners to load all their expectations for pro-poor growth in rural areas on agriculture appears to be high risk at best. This is exacerbated by the focus on supply-side rather than market-based approaches. The contribution of value chain analysis is that, with its focus on the market, barriers to entry for the poor and power relations between chain actors, the need to upgrade the position of the poor is informed by a clear understanding of how markets function. For example, it may be that the highest achievable rents are in marketing and branding (as in the case of Divine chocolate), rather than in enhancing agricultural productivity (in this case, of cocoa, where prospects for technical change are limited and barriers to entry are low).

The contribution of a paper on tourism from COPLA is a powerful statement that the non-agricultural sector has a role in pro-poor growth in rural areas. Fortunately, value chain analysis and development can be applied across the primary, secondary (industry) and tertiary (service) sectors of the economy, so many of the ideas developed in the agriculture sector can, with some adjustments, be applied in product and service sector value chains.

Even limiting ourselves to agriculture, there is a tendency for the development sector to focus on the production node rather than elsewhere in the value chain, and particularly on intermediaries. This is a restrictive approach which should be challenged – even in Africa, where many of the poor are self-employed farmers, as is the case in cocoa and chocolate. The COPLA paper on Brazil nuts is a timely reminder that the labour market across several nodes of the value chain (collecting nuts and shelling them in processing plants) can have a more significant poverty-reducing effect, without poor people needing to own production assets (Brazil nut plantations) themselves. Often, many more poor people engage in value

chains as intermediaries and workers than as producers. For instance, in many fishery chains, the ratio of fishers to intermediaries (porters, transporters, processors, etc) is 1:4, so many of the poor (and particularly female) chain actors are concentrated in the intermediary workforce. What this implies is that changes to the nodes of the value chain that are downstream from production may have a larger pro-poor impact than focusing exclusively on the production node.

There are economic activities that are inherently inaccessible to the poor (because of their upfront capital requirements, risk profile and human capacity requirements). As global value chains increasingly move away from the traditional model of spot transactions with no relationship between producers and buyers – to a model where the market demand for traceability and supply chain management requires long-term vertical relationships in the value chain – we can hypothesise that the production node in many value chains will inevitably tend to become more exclusive over time. Whether this exclusivity is caused by the vertical integration of value chains or simply the imposition of increasingly stringent, buyer-driven standards on upstream suppliers, the effect on poor producers will be the same. It therefore behoves practitioners to be more imaginative in the way they conceive that poor people can engage with value chains.

If, after careful analysis, it is concluded that trout farming (or organic/FT banana production in Peru) is unlikely to ever be accessible to a significant numbers of low-income households, investigating whether a labour market intervention would be more productive is certainly justified. A critical gap in the organic/FT banana analysis is whether a proportion of the gains to producers from certification has been passed onto farm labourers (and what proportion)? The Brazil nut study contains a very useful analysis suggesting that increases in the world price of nuts are reflected in the labour rates paid throughout the value chain.

5.8 Careful analysis of the enabling environment

The analysis of practitioner experiences with upgrading the position of poor people in value chains in Section 4 has a clear focus on factors internal to the value chain. Even with respect to governance issues, the emphasis is on the commercial governance of chains, rather than on external governance by public agencies. However, the role of government in encouraging (or discouraging) the target group from accessing value chains on beneficial terms is clear. The incomes of the poor are most likely to be enhanced when these external support resources (exogenous rents) are provided more effectively than in other producing environments. The support of COCOBOD in Ghana (the Ghana Cocoa Board) plays a crucial role in enabling poor Ghanaian cocoa farmers to achieve higher levels of quality and thus a price premium than their competitor farmers in neighbouring Côte d'Ivoire (Barrientos et al. 2007).

The constructive role played by government is apparent in the comparative analysis of wood product exports from Honduras and Nicaragua to date. Honduras is reducing the rate of deforestation while increasing wood product exports and implementing what may be considered relatively more 'business-friendly' regulations and forestry permit systems. This contrasts with Nicaragua, which has experienced a decline in wood product exports,

particularly since 2005. Further analysis and exploration of alternative markets for wood products, such as FSC-certified products, could have more clearly highlighted the linkages between trade, the behind-the-border regulatory environment and challenges and opportunities for community-based forestry management in Nicaragua. Similarly, lack of clear land ownership is limiting investments which would increase the efficiency (and pro-poor impacts) of the Brazil nut chain in Bolivia. This is a major constraint.

Figure 4 reinforces the point that all value chains operate within a context of rules and support functions which are external to the value chain. It is, therefore, entirely legitimate to intervene at this level to support value chain upgrading strategies. Caution should be exercised, however, in advocating either unfocused strategies for public agencies – such as government forming partnerships with commercial entities – or very specific interventions which undermine local markets – such as the state subsidising fertiliser inputs for organic banana production in Peru.

Value chain analysis is designed to identify the precise blockages between poor people and viable value chains, and interventions in the enabling environment should be targeted at these. This is likely to be more effective than broad strategies which will support the value chain but which are not essential for a specific target group to engage. Where a specific obstacle to upgrading has been identified, it should not be assumed that the state must intervene directly to overcome it. For instance, high organic fertiliser costs are clearly a burden for banana farmers seeking to convert to organic cultivation. However, conventional banana farmers have an average net income of \$4,000 a year, so state subsidies for fertiliser may well not be the most effective use of public funds. Rather effort should be focused on understanding why this comparatively affluent target group is unable to access the finance to make these purchases themselves.

5.9. Taking action: facilitating value chain upgrading

Three lessons can be learned from international experience in working with global value chains (Kaplinsky and Morris 2001; Rodrik 2004). The first is that a chain is only as strong as its weakest link. For example, setting in train a process for organic certification in bananas or FSC certification of furniture is pointless unless poor producers are able to achieve the necessary standards, if port authorities are able to handle the logistics expeditiously and if agricultural practices are to be improved systematically. Hence, it is necessary to address all of the chain challenges in a coordinated and strategic programme. The value chain approach identifies all of these key levers of chain competitiveness.

Second, the process of policy formulation will always be much more important than strategic visions produced by 'experts'. The developing world (indeed, also the high-income countries) is littered with very informed and clever strategic visions which sit on shelves, or which are 'implemented' with very limited efficacy. The clear lesson of history is that, unless the key stakeholders along the chain are included in the process of chain analysis and the determination of strategy, then they are unlikely to buy into the steps required to achieve meaningful results. Since many poor producers are often barely literate, this may require novel methods of ensuring their participation in this analytical

process, and here the participation literature is redolent with examples of innovative methods.

And third, the institution of an effective process of value chain restructuring cannot be turned into an ideological dispute about whether states or markets are the optimal path by means of which to enhance the participation of the poor in global value chains. As Rodrik points out, the policy process is simultaneously characterised by both state failure and market failure. It involves a voyage of learning, in which public and private actors, as well as actors from the 'third sector' (e.g. NGOs) and aid agencies embark on a task of mutual learning.

Thus, the primary key attribute of successful policy is not the 'strategic plan' but the 'strategic process', and that this strategic process must incorporate the major chain stakeholders in it if systemic efficiency and competitiveness are to be achieved.

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Annex: Summary of COPLA papers

1. Organic banana producers, Peru

This is an analysis of the impact of organic and fair trade certification on banana producers and organisations in a relatively disadvantaged area of Peru. The study explores how relatively small-scale farmers – organised into associations – can benefit from niche markets. Higher input costs are more than offset by significantly higher prices obtained by accessing high-value export markets. The role of associations in supporting individual farmers is highlighted. Agricultural labour conditions on banana plantations are not explored in this analysis.

The organic banana is distinct from conventional products and is directed at a specific market niche. Organic banana exports from Peru grew significantly between 2000 and 2007, in terms of both net value (from \$264,000 to \$31 million) and volume (from 856 tonnes to 64,586 tonnes). Given Peru's total export figures, this suggests that almost all bananas exported are organic. The main export destinations are the European Union (EU) (Holland, Belgium and Germany), the US and Japan.

Table 1.1: Banana exports from Peru, 2002-2008

Year	Trade value (\$'000)	Quantity (kg)
2002	6,182	19,079,140
2003	7,284	19,390,380
2004	10,598	27,307,282
2005	17,662	42,859,943
2006	27,047	57,149,864
2007	31,439	65,518,288
2008	45,738	78,179,805

Source: UN Comtrade (<http://comtrade.un.org/db/>).

In Peru, production and export of organic bananas is a recent activity. For more than 30 years, organic bananas have been produced in the Chira Valley, in the northern part of the country. In the Tumbes, Piura and Lambayeque regions, 3,414 hectares have been certified, 80% of which are concentrated in Piura.

The lands of Sullana province (in which Piura is a town) are well suited for banana production because of their humid and tropical climate. In addition, Black Sigatoka (a plague that affects this cultivation in other parts of the world) is absent, thus permitting production using organic techniques. Although bananas have been produced in this area for a long time, producers only began the conversion to cultivation of organic bananas at the end of the 1990s.

It is important to emphasise that the increase in exports of this product involves zones which are less developed relative to the rest of the province and which are increasingly participating in the Fair Trade (FT) system. With respect to its level of development, the province of Sullana is ranked 46th out of a total of 95 Peruvian provinces.

In the region are distinct organisations of small producers with on average fewer than 3 hectares of land, (indirectly) linked to export activity through the organic banana

production chain. Exportation, strictly speaking, is the responsibility of institutions related to foreign companies.

The goal of this study is to analyse, from a multidisciplinary perspective, the main factors explaining the success, as well as the problems, that organic banana producer associations have experienced in their development in the Chira Valley. To this end, the researchers visited these associations and undertook randomised surveys with producers and unstructured interviews with different agents. Although there is consensus regarding the goal of direct export, this research project seeks to demonstrate how some associations have achieved this goal and others have not, as well as the limitations that need to be overcome in order to be able to repeat this successful export experience elsewhere.

1.1 Conversion to organic bananas to access high-value markets

There is heterogeneity among associations with regard to the average number of hectares per farmer, possession of FT certification and the main offices of farmers' associations. Of the group of 10 associations selected, 6 are FT certified. In these, the rate of higher education is higher than the average (30%). Regarding access to basic services, those with FT have a higher level of access; for those who do not have FT, access is low. This could owe to the fact that, in the latter case, associations are located further from district capitals and the most important populated centres.

Regarding conversion to organic bananas, the majority of producers and their leaders underscore the importance of a state programme and export companies. State networks have facilitated access to inputs such as organic fertiliser through credit and training in its use for the first farmers who converted to organic production.

The main costs for banana producers relate to inputs and labour. The main inputs are manure and other permitted organic fertilisers (island guano, sulfomag and potassium sulfate). Therefore, the increased price of organic manure and fertiliser is the main concern of the producers surveyed: these inputs represent 43% of total costs for banana producers in a year. The associations are making the necessary effort to bring down the cost of fertiliser by making purchases in bulk. It is estimated that the total net income that an organic banana producer receives per hectare is S/.8,489 annually (around \$2,960), resulting in a monthly net income of S/.707.4 (\$237).¹⁸ The costs of production of organic bananas are much higher than those of conventional bananas, but these have been offset by the high prices paid by export markets.

1.2 Evolving producer–export relations

The focus of recently created associations is still on efforts to gain access to the FT premium and, therefore, to the necessary resources to respond to their producers' problems with productivity. To this end, farmers respond to rising costs of organic manure through specific company services. The majority of strategies are adopted by farmers individually or through a network mobilised between them and exporters (who also supply

¹⁸ Regarding this income, fruit that does not comply with export standards is sold on the local market for a lower price than obtained in export markets.

fertilisers). Therefore, there is great heterogeneity in the positions of farmers and their associations with regard to their own resources and negotiating capacity with exporters. This situation affects the subsequent phase of marketing, in which networks between farmers, their associations and companies define their insertion in the export chain.

There is a positive cost–income relationship for the organic banana producer who participates in FT, surpassing the revenue that conventional bananas yield. Individual producer efficiency is one factor in this relationship, but there are also exogenous factors, such as the price of guano, which is fixed by the state, the price of imported fertiliser, which increases costs, and the falling exchange rate, which reduces income. Entry into the FT regime constitutes an important advancement for producers, although a substantial percentage of potential profits is currently appropriated by intermediaries.

Chains of coordination vary according to the role of producer associations and their participation in networks. This diversity is manifested both in the management of purchases and administration of inputs and certification, as well as in the limits and alternatives proposed for marketing. Legal and institutional factors exist which, at times, appear to be restrictive. In this initial phase, for less developed associations, it is very difficult to gain access to both organic and FT certification. For the associations that are more advanced there is a problem with direct export, owing to the contracts that bind them to traders for a fixed period of time (renewed sometimes automatically).

Regarding intermediaries, things are more complex. The situation is different in different cases: when only the association has certification, and therefore negotiating power, or when associations have decentralised producers. Much depends on the level of development and advancement of producers in the value chain. The ideal would be that associations contribute so that, gradually, local producers under the control of producers and associations can provide goods and services currently provided by intermediaries. Only in this way will it be possible to negotiate with different intermediaries, in an attempt to maximise the premium from Fair Trade.

In sum, the research findings suggest that farmers with better export opportunities belong to the oldest and most developed associations with access to FT certification (Appbosa, Apoq, APROBOVCHIRA). Their conversion strategies have entailed mobilising support from the state; their response to rising costs now depends on the resources of the association. Farmers in younger associations (Uboic, Apbosa) can no longer rely on this support, for their conversion to either FT or organic production.

2. Brazil nuts, Bolivia

This is an assessment of the impact of Brazil nut cultivation on the labour market and poverty in a region with few other economic alternatives. The study focuses on the terms and conditions involved in jobs created for collectors and processors during the short harvesting season. The impact of Brazil nut cultivation on the rest of the regional economy is highlighted, as well as the dis-enabling environment created by government, with poor economic services (particularly electricity), low education standards, a vague institutional framework around land ownership and a failure to form alliances with the private sector.

The economic and social dynamics of the Northern Amazon in Bolivia originate mainly from the rubber boom period, nearly a century ago. Since the collapse of the rubber industry at the beginning of the 1990s, Brazil nuts have become the main source of job creation and economic activity in the region. Despite expansion of exports in recent years, there has been scant attention to the effects of this activity on the labour market and poverty reduction in the region. The objective of the research is therefore to investigate the impact of Brazil nut-exporting activities on job creation and poverty reduction in the Northern Amazon region.

The region includes a swathe of land of approximately 100,000 square kilometres, bordered by the department of Pando, Vaca Diez province of the department of Beni, and Iturralde province of the department of La Paz. The area is located in the north of Bolivia and the territory is covered primarily by tropical forest (94%), fallow lands (3%) and rangelands (3%). The economic traditions of the region have always been related to economic booms and the demand for forest products, which has arguably generated a series of perverse dynamics, such as low technological investment, including in human capabilities, and generally limited opportunities for new economic activities. Opportunities for diversification in the regional economy are further restricted by a combination of geographical limitations, and limited demand for additional services in the Brazil nut value chain. Natural obstacles such as geographical isolation result in high costs for basic services.

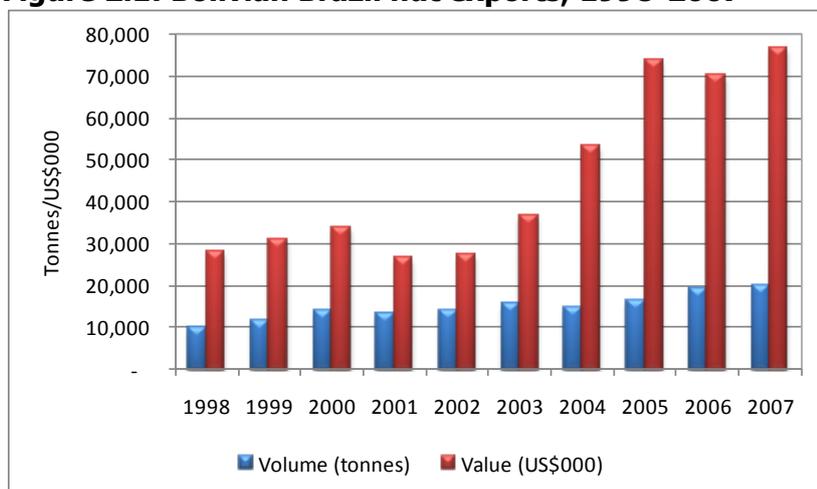
The regional economy revolves around extractive activities. Rural labour is concentrated in subsistence forestry, agriculture, hunting and fishing, as well as in other miscellaneous activities that make the most of non-timber forest products; in urban areas, a significant proportion of the population is, either totally or partially, employed in services and trade activities. The city of Riberalta is the economic capital and the Brazil nut industry is the economic motor of the Northern Amazon region.

2.1 The Bolivian Brazil nut value chain

Bolivia is a major exporter of Brazil nuts to world markets, with a large market share. For example, according to FAOSTAT data for 2007, 35% of world exports of Brazil nuts came from Bolivia, 29% from Brazil and 6% from Peru (and 15% from Indonesia). Nearly 100% of Bolivian exports are shelled Brazil nuts; only 0.8% of the Brazil nuts are exported with their shell. This suggests that the processing of Brazil nuts within Bolivia is a key value

addition activity.¹⁹ Brazil nuts accounted for a maximum of 2.9% of Bolivia's total export value in any of the years 1998-2007. Bolivia's top five export markets for Brazil nuts are the US (53%), South Africa (16.5%), New Zealand (7.4%), Spain (4.3%) and Canada (3.5%).²⁰

Figure 2.1: Bolivian Brazil nut exports, 1998-2007



Source: FAOSTAT (<http://faostat.fao.org/site/406/default.aspx>).

The research team undertook analysis to determine the proportion of value added accruing within country from the harvesting and processing of Brazil nuts prior to export. The distribution of value addition across value chain nodes is clear: approximately 52% of the value added generated in the Brazil nut chain is attributed to shelling companies, 20% to the landowners and 28% to the collectors and the workers of the processing company. Although an export price is given (fob), purchase and sale prices are not known; the margin of exporters compared with retailers is also unknown. However, in terms of value addition within the country, shelling (processing) is clearly the most lucrative node and also the most labour intensive.

Table 2.1: Value-added distribution, 2008

Processing entity	(B/kg)		Value added	Contribution
	Purchase price	Sale price		
Brazil nut collectors (<i>zafretero</i>)	0.00	2.60	2.60	13%
Landowner (<i>barracas</i>)	2.60	6.50	3.90	20%
Workers in the processing plant (shelling the nuts)	6.50	9.35	2.85	15%
Other processing in the plant (other industrial processes)	9.35	19.50	10.15	52%
FOB price of export	-	-	19.50	100%

Source: Compiled by the authors in their paper.

¹⁹ Bolivia is also the second-largest importer of Brazil nuts in shells, according to FAOSTAT data for 2007.

²⁰ Calculated based on mirror data on UN Comtrade reporters' average Brazil nut imports from Bolivia 2000-2008 (in value). (Mirror data were used as Bolivia's own data as reported to Comtrade seem somewhat anomalous.)

Brazil nut harvesting requires pristine forests. These resources are considered 'finite', given the long time required until trees are able to bear fruit.²¹ The legal and institutional framework regarding land ownership is currently weak; the current norm does not ensure that landowners exercise their rights and obligations. For example, many of the landholders do not have legal documentation that certifies ownership of their land. Moreover, the existence of growing demand for land redistribution among colonised groups and indigenous communities, coupled with the absence of a transparent, strategic and holistic policy regarding the holding of Amazon lands, has resulted in a tense and uncertain socio-political environment for investment. For example, landholders with processing companies are not motivated to invest in the improvement of storage facilities, trails and market entry. Meanwhile, indigenous communities cannot utilise their lands as collateral owing to a lack of documentation on their legal ownership of the land, therefore their opportunities to access financing are rather limited.

Brazil nut collectors' pay depends on both the quantity and the quality of nuts they gather; thus, post-harvest losses result in reduced income for collectors. There is a lack of investment in post-harvest facilities owing to insecure land tenure. Weak links between nodes of the value chain, from collection to processing and export, potentially create risks: there is a need for increased quality control and traceability of Brazil nuts exported to high-value markets such as the EU. However, recent data reported by Bolivia's import partners suggest that the US is a far larger market than the EU (or Spain, in particular).²²

2.2 Focus on poor labourers

Brazil nut collectors (*zafreiros*)²³ earn on average B2.6 per kg from the landowners (around \$0.38). Considering that a gatherer can collect approximately 70kg per day, in a harvest season of 90 days (between December and March), it is possible to earn a total income of B16,380 (\$2,340).²⁴ Landowners, estate owners (*barraqueros*) or rural communities earn on average B6.5 per kg from processing companies (\$0.94), resulting in a value added of B3.9 per kg (\$0.57). A landowner with an average holding of 50,000 hectares would earn Bs195,000 (\$27,850).

Some processing companies are also landowners. In other cases, collectors own their own land and then sell to processors or to bigger landowners. The nut shellers (*quebradoras*) in the processing companies earn B2.85 per kg of shelled Brazil nuts (\$0.41); on average, a sheller delivers 16kg of shelled Brazil nuts per day. Assuming 25 working days per month, a worker earns a monthly income of B1,140 (\$160). Approximately 90% of a processing company's employees are shellers, who are predominantly women. At the regional level, it is estimated that, throughout the entire production chain, Brazil nuts generate income for approximately 70% of rural homes and 30% of urban homes.

²¹ As the trees bear the most fruits after 100 years and can keep producing at maximum potential for a further 50 or more years.

²² As previously pointed out, the US accounted for 53% of Bolivia's Brazil nuts and Spain just 3.5% over the period 2000-2008.

²³ *Zafreiros* are generally immigrants from semi-urban areas in the region.

²⁴ A gatherer's income is variable and depends on individual effort, climate conditions and density of trees per hectare, as well as Brazil nut production per tree. There are harvesters who can earn B5,000 during the harvest (\$726), as well as those who earn more than B30,000 (\$4,357).

Wages

Analysis of household surveys suggests that labour income for most other industries except Brazil nuts increased between 2001 and 2007: the average monthly income increased from \$128 in 2001 to \$186 in 2007, an increase of almost 50%. This compares with just \$106 to \$108 for the Brazil nut industry. This could owe to the increased quantity of workers joining the sector because of favourable prices in the period from 2001-2007, resulting in a drop in labour income within the sector. Despite this limited growth, workers in the industry typically have higher income compared with those in the agricultural sector.

Table 2.2: Labour income by economic activity, 2001-2007
(\$, monthly)

Activity	2001-2002	2003-2004	2005-2007
Agriculture	79	83	111
Brazil nuts	106	164	108
Industry	121	124	156
Construction	137	135	244
Commerce	161	132	180
Services	204	223	263
Other	139	116	111
Total	128	142	186

Source: Household surveys in authors' paper.

2.3 Increasing the lot of poor labourers

The main implication here for public policy is the need to connect private entrepreneurial activity with public intervention. The areas in which an alliance between firms, the municipality and the community could favour the creation of a competitive social and economic environment include:

- Supporting the focus on corporate social responsibility;
- Dynamising productive municipal activities, oriented towards connections with Brazil nut activities (currently the ability of processors is limited owing to poor quality electricity and fuel);
- Diversifying export markets;
- Establishing the optimal size of lands for sustainable and profitable exploitation of the resources of the forest;
- Developing the capacity and practices of small producers.

3. The trout value chain in Peru

This study evaluates the varying degrees of success with which small-scale producers, as a result of various donor projects, have been able to supply urban and international markets in Peru. The study highlights the barriers faced by small local producers to access to export markets. It questions whether sophisticated markets can be used to reduce poverty and highlights the important role of local government in promoting private sector investment.

The tastes and preferences of consumers in high-income markets have demonstrated that many products elaborated by small producers from remote areas with high levels of poverty could also benefit from cooperation with these markets. These products range from artisanal goods, to inputs for distinct industries, to light manufacturing, to food products. Production and marketing of these products is organised through value chains. Each link in the chain involves distinct direct and indirect agents, which add value to inputs and/or intermediary products until the final product has been placed in export markets, even including the final distribution of the good.

The value chain focus has been utilised by development agencies to complement poverty alleviation programmes. The project for Poverty Reduction and Alleviation (PRA) of the US Agency for International Development (USAID) has been one of the pioneers of this in Peru. Under the PRA, value chains of distinct products have been fostered, ranging from agro-industrial products to artisanal goods and small manufacturing, which have then gained placement in international markets. The chain for trout is one of the successful chains achieved by the PRA. Not only has it combined the natural advantages of raising this fish in Peruvian territory, but also it has managed to consolidate access to foreign markets through a great national producer and trader, Piscifactoría Los Andes.

Raising trout has a long history in Peru. The species was introduced in the country in the 1930s, with the import of eggs and fry brought from the US. The development of trout farming has occurred extensively, that is, by populating lakes and water sources. By the 1980s, there was a new effort to propel this activity through the construction of fish farms in various mountainous provinces of the country. However, raising trout did not take off as an economic activity and the infrastructure that was constructed was left underused.

In the 2000s, the Peruvian enterprise Piscifactoría Los Andes has made important efforts to begin trout export to foreign markets. These efforts have been complemented by the PRA project, with the development of trout value chains initiated in Junín, Huancavelica and Puno. The favourable results of the coordination between Piscifactoría Los Andes and small producers, promoted by the PRA, has led to the inclusion of trout in coordination programmes with other poverty alleviation projects, such as *Sierra Exportadora* (Export Mountain).

3.1 Linking poor producers to exporters and high-value markets

Although the initial investments required for trout production may be low, export of trout to international markets requires a series of sanitary certifications, which impose a high cost on producers and traders. The value chain for trout is divided into three well-

determined links: fry production, trout production and marketing. These links define the principal actors in the value chain. One company in Peru accounts for the majority of trout exports (90% as of 2006); the company is the largest company within the industry in Peru, and the oldest.

Piscifactoría Los Andes recognised that it would need to increase production in order to be able to begin to export trout. In 2000, the company decided to participate in the PRA project and initiated negotiations with producer organisations (SAIS). The company would provide the necessary capital as well as purchasing the fry and balanced food. The SAIS would hand over its production to the company, once the trout had reached the optimal size and weight. For its part, the PRA financed the contracting of several experts, who provided technical assistance to SAIS.

But weak contractual relations ...

Despite initial incompliance on the part of SAIS, the interaction allowed for Piscifactoría Los Andes to increase production and sell to the export market. The agreement between SAIS and Los Andes was broken, but the coordination model seems to have appealed to the company because it then continued to participate with the PRA in other regions. In fact, the company has signed an agreement with private company California's Garden de Oxapampa within the framework of a PRA project.

3.2 The experience of the Municipality of Acoria

In this case, the coordination was between the Municipality of Acoria and the Los Andes company. The agreement continues to the present day. In 2003, initial production reached 12 metric tonnes of trout per year and production is expected to reach 72 metric tonnes in 2008. In 2007, the municipal enterprise attained financial self-sufficiency and has managed to generate rotating employment for its community members (including single mothers and widows). The Municipality of Acoria is contemplating initiating trout farming in other locations in its jurisdiction.

There are several lessons to be learnt from this experience. In the first place, coordination agreements need to be put in place to facilitate investments in public infrastructure; management could be realised by a municipal company or by a company under a franchise agreement. Second, it is feasible to replicate coordination models on a small scale, but it is still necessary to include the same components of technical assistance and financing. Third, expanding the level of production of trout requires significant capital. The financial solvency of large producers and coordinators is vital.

3.3 The experience of Puno

In Puno, there are different institutions linked to trout farming. There are strong producer associations, such as the Association of Trout Producers (APT), which are relatively active in promoting technical assistance projects for the benefit of their associates. The Special Trout Project of Titicaca (PETT) is a state project promoting this activity. However, initiatives have not managed to coordinate the value chain strongly, as a result of budget limitations and overemphasis on the provision of basic training, to the neglect of other

activities. The low prices that are prevalent in the region, lack of credit, high levels of informality, lack of coordination of the actions of state organs and scant knowledge of marketing aspects of trout are the main obstacles to the development of this activity in Puno.

3.4 Conclusions

With respect to policy recommendations that can be derived from this study, in the first place, the focus on the value chain should be utilised for programmes whose main objective is to increase the dynamism of economic activity in a specific territory, as such programmes are not necessarily effective in alleviating levels of poverty.

In general, the value chains that have been coordinated are targeting foreign markets, which are subject to quality certification and sanitary norms that can present bottlenecks for small local producers. Moreover, coordinating the chain requires significant technical and financial capacity. In the examples discussed, such assistance has been forthcoming from the PRA, but project objectives have not always been achieved. It is important not only to provide technical assistance, but also to offer access to finance and to facilitate institutional development. Sensitisation programmes are recommended in order to promote the formalisation of producers and membership in associations, and to engender confidence and respect in the agreements.

Poverty alleviation programmes should be designed mainly to elevate basic poverty indicators, and not to coordinate with sophisticated markets. Poor producers generally manage a range of resources and activities in order to support themselves, and often consider that dedicating themselves exclusively to a single economic activity represents a high risk.

In parallel with the promotion of value chains that coordinate with foreign markets, it is necessary to work on the formation of value chains that coordinate with regional markets and the domestic market, in order to prevent prices falling from excess supply. To this end, it is necessary to work on the formation of regional markets and the provision of public goods in the form of physical infrastructure and market information systems.

The focus on demand promoted by the PRA project should be supported by the important activity of market intelligence. Only in this way will we be able to construct stable demand for local producers and ensure that market prices are adequate in order to generate sufficient utility to cover the risk that they face for their specialisation.

4. The wood product value chain in Central America: Honduras and Nicaragua

This analysis highlights the failure of two Central American countries with very different enabling environments (Honduras and Nicaragua) to develop their infant wooden furniture industries (or, in fact, any significant value addition to lumber), despite having abundant natural resources available and having experienced significant liberalisation of trade since the early 1990s. The link between trade liberalisation and trade growth is questioned, as are state-led approaches to natural resource management of forestry reserves.

The trade liberalisation policy promoted by Central American countries has not resulted in improved insertion of the wood furniture sector in international markets. The soil in Central American countries is predominantly forested; nevertheless, forest product exports do not constitute a significant portion of the region's international trade. The loss of forest cover is a common problem, one which has not been adequately addressed by public policy in some countries. Deforestation has mainly been a result of the demand for an increase in extensive agriculture and animal husbandry, which rarely make use of the felled timber. Export products from the forest have been concentrated in lumber, with little or no industrial transformation; the majority of industries that transform lumber have not progressed beyond small artisanal businesses oriented towards the domestic market. The levels of deforestation and the type of forest regulation adopted in some cases exacerbate the obstacles for small and medium-sized enterprises (SMSEs) dedicated to the transformation of lumber.

Table 4.1: Forest cover and use

Country	Territory	Forest use	Forest cover		Protected areas
Nicaragua	12,141.7km ²	78.6%	5,312.4km ²	43.8%	18.2%
Honduras	11,249.2km ²	87.7%	5,989.6km ²	53.2%	26.2%

The forest areas that are still protected in Nicaragua and Honduras are located in high and extreme poverty zones and, in the case of Nicaragua, in zones where the indigenous population and ethnic groups reside. Wood transformation workshops, which constitute the vast majority of this industry by far, are in a precarious situation: proprietors and workers form part of the working poor. The research summarised here seeks to explore the relationships between the regulatory environment in Honduras and Nicaragua, growth in traded wood products by micro, small and medium-sized workshops (MSMEs) and resultant impact on poor labourers.

4.1 Key differences in enabling environment

Honduras and Nicaragua both exhibit similar characteristics regarding resource endowment: the naturally occurring forest is found in zones with a high incidence of poverty, and generally in zones far from urban centres, with little or no infrastructure (although in Honduras part of the pine forest under management is near the main motorways). In Nicaragua, the forests that remain are located on lands that belong to

indigenous communities, which hold formal autonomy in terms of political administration. This was also the case in Honduras prior to the introduction of recent legislation – the Forest Law of 1992 – which stipulates that proprietors of forestry land should be those who inhabit the land. The law supports the inhabitants of forestry land by allowing them to make use of forestry products through forest management plans; it also provides for government support in elaborating these plans and obtaining permits. The application of the law in Honduras has advanced more rapidly in pine forests; moreover, the law stipulates that trees can be felled only once resin has been extracted, which promotes a greater use of resources and value addition activities for the poor rural population.

Table 4.1: Comparison of regulatory environment

	Honduras	Nicaragua
Ownership	The forest becomes the property of the landowner, who has possession and domain, and who constitutes the dealer of state lands.	The state is proprietor of the trees, in lands that belong to indigenous peoples and ethnic groups. These have the right to exploit the natural resources.
Use of resources	Communities are included in the conservation and exploitation of the forest. Functions related to the forest sector are concentrated in the forest conservation institute.	Only indigenous communities and ethnic groups possess the ability to administer and exploit the forest. Increased dispersion in the authorisation of permits for exploitation and weak capacity for control.
Allocation of permits	The state creates concessions of national lands with forest so that communities may exploit them.	The anti-deforestation law (<i>ley de veda</i>) was established for five species of wood. The police and army were included in the task of control.

In Nicaragua, the proprietor of the forest as a natural resource is the state, by constitutional resolution. A conservationist scheme has been developed, which has manifested itself as highly bureaucratic and expensive procedures to obtain permits, such as those needed by small proprietors or indigenous communities to access forest resources. Since 2005, the country has pursued an anti-deforestation scheme covering five high-demand species. However, this is far from resolving the problem of deforestation, which originated in the growth of agricultural areas. Despite efforts to conserve forestry resources in Nicaragua, improved forestry management techniques, such as those promoted in Honduras, seem to be more effective in reducing deforestation: the forest area under planned management represents 11.7% of the forest coverage; in Nicaragua this proportion is 2.3%.²⁵

The most conservative estimates place deforestation in Honduras and Nicaragua at between 70,000 and 100,000 hectares annually. In both cases, the legal and regulatory framework for the forest has been oriented towards impeding the authorisation of exploitation permits. But there are clear differences in the performance of each country to date in the achievement of this objective, related to the institutional context.

²⁵ Planned management means that the area can still be used; protected means it cannot.

4.2 The furniture production industry in Honduras and Nicaragua: Recent export performance

MSMEs dominate in the furniture and wood product industry. The effect of trade liberalisation on the forestry sector and the wood furniture sector in both countries presents substantial differences (see Figures 4.1 and 4.2). Wooden furniture exports from Honduras have expanded more rapidly than 'wood and wood products' (which have also been declining). In Nicaragua, although wooden furniture exports have increased their export value recently, 'wood and wood products' have declined at a far more rapid rate; this indicates quite a striking total reduction in wood product exports from 1994 to 2008 for Nicaragua.

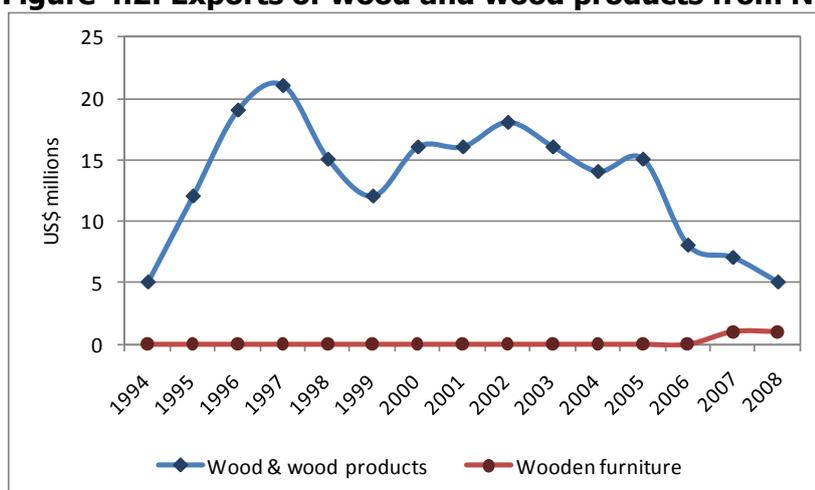
Figure 4.1: Exports of wood and wood products from Honduras, 1994-2008



Note: 'Wood & wood products' defined as Harmonised System (HS) Chapter 44; 'wooden furniture' defined as HS 940330/40/50/60.

Source: Sistema de Estadísticas de Comercio de Centroamérica (<http://estadisticas.sieca.org.gt/siecadb/Estadisticas/Info.asp?banner=OP1>). Data for 2008 are preliminary.

Figure 4.2: Exports of wood and wood products from Nicaragua, 1994-2008



Note: 'Wood & wood products' defined as Harmonised System (HS) Chapter 44; 'wooden furniture' defined as HS 940330/40/50/60.

Source: Sistema de Estadísticas de Comercio de Centroamérica (<http://estadisticas.sieca.org.gt/siecadb/Estadisticas/Info.asp?banner=OP1>). Data for 2003-2008 are preliminary.

In Honduras, the destination market for wood products is mostly international. The country case study authors note that the industry had already exported to international markets prior to liberalisation in the early 1990s. The US accounts for just over 40% of total wood products (processed and unprocessed) from Honduras. In comparison, regional markets are clearly much more important for Nicaragua: almost 30% of wood product exports (processed and unprocessed) are destined El Salvador; 20% are destined for Costa Rica.

Table 4.2: Honduras – export markets for wood products (processed and unprocessed)

Market	Average 2000-2007 (\$000)	Share (%)
All markets	78,857	100
US	32,926	41.8
Jamaica	11,126	14.1
El Salvador	7,518	9.5
Trinidad and Tobago	4,786	6.1
Barbados	3,483	4.4
St. Lucia	1,785	2.3
Unspecified	1,599	2.0
Nicaragua	1,383	1.8
Spain	1,269	1.6
Netherlands Antilles	1,264	1.6
Dominican Republic	1,009	1.3
Germany	933	1.2
Costa Rica	873	1.1
Panama	820	1.0
St. Vincent and the Grenadines	808	1.0

Source: UN Comtrade (<http://comtrade.un.org/db/>), data reported by Honduras.

Table 4.3: Nicaragua – export markets for wood products (processed and unprocessed)

Market	Average 2000-2007 (\$000)	Share
All markets	15,275	100.0
El Salvador	4,169	27.3
Costa Rica	2,765	18.1
US	2,586	16.9
Honduras	2,353	15.4
Dominican Republic	1,302	8.5
Cuba	760	5.0
Guatemala	630	4.1
Spain	308	2.0

Source: UN Comtrade (<http://comtrade.un.org/db/>), data reported by Nicaragua.

Who exports?

The case study makes it clear that in both countries smaller workshops do not export. In the Nicaraguan case, exports are in the hands of a small group of large enterprises, which are dedicated to extraction and export, and/or vertically integrated extraction, primary transformation (mainly plywood) and export. In the case of the furniture industry, only four of the largest enterprises export intermittently.

In Honduras, the majority of exports originate in businesses grouped in two organisations: the National Association of Timber Companies (ANETRAMA) and the Honduran Timber

Association (AMADHO). The authors note that the opportunities created by trade liberalisation have been seized by those agents who have access to the most resources, knowledge and infrastructure.

The organisation of producer/business association organisations in Honduras may help explain some of the performance differentials between the two countries. However, these aspects are not explored further by the country authors.

4.3 Conclusions and policy implications

Nicaragua could increase its wood product and furniture exports to the same level as those of Honduras, which has surpassed them in this regard and appears to be stabilising forests that have been exploited. In Nicaragua, while exports are minimal, and concentrated in unprocessed wood, the primary contentious issue is the continued deterioration of the forests, despite legislation to protect it. This is in stark contrast with Honduras, where more recent legislation has made it easier for inhabitants to use the forest and at the same time manage this use.

In Nicaragua, this has resulted in a high level of unemployment and underemployment, which could be alleviated by means of suitable development policy oriented towards the management of exports. Poverty dynamics related to wood product exports are not explored in detail in the case study, or compared for each country, which limits the strength of this argument.

5. Rural community-based tourism in Central America

This case study evaluates the outcomes of Rural Community-based Tourism in Nicaragua (five communities) and Guatemala (four communities), as an alternative to more mainstream tourist development. Despite strong community organisations (cooperatives) and some tourism natural assets (caves and culture) – and, in the case of Nicaragua, reasonable infrastructure and access to markets – the financial sustainability of initiatives has been badly affected by an inability to link with the main distribution channels (tour operators and hoteliers). The initial investment costs are high and barriers to entry are significant. Notwithstanding poor tourist flows, these have brought some economic and other benefits to the destination areas.

In Central America, tourist numbers exceeded 4.7 million in 2002 and 8 million in 2007. Guatemala has a tourist industry worth \$1.012 billion per annum, compared with \$239 million in Nicaragua. As a result, Central American governments have focused their efforts on attracting foreign investment to this sector (including through agreements in services).

The agrarian crisis of the period between 1990 and the early 2000s resulted in a reevaluation of the role of agriculture in the rural economy in both countries. Concurrently, there was a search for non-agrarian alternatives that would, on the one hand, sustain the rural population in their communities of origin and, on the other, elevate the standard of living in these communities. The latter goal has been the basis for the promotion of rural tourism, initially in the EU and subsequently through international cooperation, as an alternative approach for rural poverty reduction in developing countries. Nonetheless, not all of the options for rural tourism generate the necessary synergies to stimulate endogenous rural development.

As a result, there is a debate regarding the roles of collective action and leadership as well as the sustainability of initiatives. As a complement to this, we explore how the implementation of policies has impacted incentives for tourism and cooperation. For this analysis, we selected the countries where tourism has grown most rapidly: Guatemala and Nicaragua. In the Guatemalan case, we chose to systematise the experience of Rural-based Community Tourism (RCT) in one of the regions that is richest in natural and cultural resources, which, paradoxically, is also one of those reporting the highest indices of poverty and extreme poverty.

Fundamentally, the methodology seeks to systematise the experience of RCT in five communities in Nicaragua and four in Guatemala. To this end, two national teams shared methodologies, analysis of the initial results and comparative analysis of their experiences. Here, we present a comparative analysis of the tendencies identified in both studies, in order to determine the tendencies and policies at the regional level that facilitate the establishment of these alternatives for rural poverty reduction.

5.1 The experience of Guatemala and Nicaragua

Tourism as a generator of employment is polarising; that is, high salary jobs are few and require high levels of education, (languages, administration, accounting), whereas the remainder of the jobs are low income, such as in cleaning, security, waiting tables and

cooking in rural areas. In RCT, it is assumed that participants are not employees but managers, protagonist actors throughout the organisation and management of the process. RCT initiatives that function as collective enterprises favour poverty reduction not only through income increase but also by strengthening the management of development by relevant stakeholders. With this definition of RCT, it is possible to analyse the propensity of these initiatives to fully utilise the advantages of globalisation in Central American countries, specifically Guatemala and Nicaragua.

5.1.1 Guatemala

For the Guatemalan case, we selected the experience of the Candelaria Caves in Alta Verapaz. This is a complex where four indigenous Q'eqchi communities have organised a tourist product around the Sepalau Lagoon and the caves, which are an attractive geological formation, located in an area with substantial greenery and many water sources. To date, a sufficiently stable flow of visitors has not yet been achieved, which would enable residents to dedicate more of their time to the activity, thereby increasing their income. In this case, the promotion link is failing: participants do not benefit from a marketing strategy that would allow tourists in Guatemala City as well as foreigners to become aware of the opportunities offered in the locality. Nor have they managed to develop links with the network of national tour operators. Moreover, there is a need to develop peripheral products or complementary activities for those visitors who can spend the night and more than one day in the communities, which could be developed through a 'community route', allowing the visitor to experience the customs and cosmology of the Maya-Q'eqchi.

5.1.2 Nicaragua

In Nicaragua, five communities that have taken advantage of different rural attractions were selected, including those related to volcanoes, islands, indigenous communities, artisanal products and sightseeing. In contrast with the Guatemalan initiatives, which operate as an association of communities, the Nicaraguan initiatives are independent from one another and have a very low level of linkages between them and/or with other actors and services. Despite being located in the zone of greatest integration in terms of infrastructure and markets, the Nicaraguan initiatives tend to face the same challenges regarding market access as the Guatemalan ones, although some have begun to integrate with hotel chains, mainly near the city of Granada. Community leadership also tends to be a key element in the allocation of roles, allocation of individual income and community investment.

Table 5.1: Initiatives from the analysis of RCT and poverty reduction in Nicaragua

Initiative	Year	Organisation	Role of women
Rural Cooperative and Community Tourism Las Pilas – El Hoyo	1998	Cooperative	Management of finances
Community House La Granadilla	2002	Cooperative	Tourist services, food, management of finances
La Paloma, Pueblo Hotel, Ometepe	1995	Women's association	Leadership, organisation and rotation of roles, management of finances
Quetzalcóatl Cooperative	1985	Cooperative	Artisanal goods, distribution and administration of income
Guardatinaja Ecological Park	1994	Indigenous community, area association	Tourist services, food

Source: Barrera and Pérez (2008) in authors' paper.

5.2 Comparison of the effectiveness of RCT initiatives in Guatemala and Nicaragua

A review of experiences in the nine communities identified some positive processes, such as increases in household income, improvements in consumption, mainly clothes, and improvements in social investment related to basic infrastructure, such as schools, roads and health posts. According to community interviews in Guatemala, the extra income from RCT has led to an increase in family spending, on agricultural supplies and clothing for the family. In addition, there have been increases in planting areas and levels of food security, as well as improvements in the housing of those who participate. Income from RCT depends on the role and the rotation of each family, which can be in the kitchen, laundry or services to tourists, or in working as an area guide. Although participation in the service is voluntary, selection depends on the quantity of visitors and the social capital of the family. In contrast with their Nicaraguan counterparts, for Guatemalan indigenous communities language is the main factor of exclusion.

In Nicaragua, the common funds generated by RCT go towards scholarships for the children of members to attend university, school repairs and the establishment of cultural and athletic groups, as well as communal medical posts. This is correlated with distance from urban centre: initiatives that are closer to the city allocate money towards improving business conditions, such as for grocery stores, and developing the area and/or infrastructure. At the individual level, improved income has been reported and, in Guatemala, income driven by the tourist season is common.

Table 5.2: General changes since the implementation of RCT in indigenous communities in Guatemala

	Use of funds	Situation of the community before RCT	Situation of the community after RCT
Candelaria Camposanto	Maintenance and expansion of the site. Agricultural products and household expenditures.	Planting in small areas. Significant out-migration of labour. Distrust of tourists. Land sales.	Greater institutional presence. People are no longer afraid of seeing and attending to tourists. Conservation of trees. Greater income. Job creation. Land has increased in price.
Sepalau Catalzul	Paying guides, cooks, etc. Maintenance of the ranch. Personal consumption and household expenditures.	People were excluded from communication because there was no road.	Elaboration of artisanal goods. Renting of equipment (kayaks). Promotion of culture through <i>marimbas</i> . Investment in the highway, grocery stores. School repaired. Greater income.

	Use of funds	Situation of the community before RCT	Situation of the community after RCT
Bombil Pek	Maintenance. Doing business.	Production was very limited. Small landholdings and community disconnected and isolated. The communal house had been destroyed.	A path has been made to reach the small landholdings. The small landholdings are producing. Cultivation and sale of sugar cane. Communal house repaired.
Candelaria Mucbilhá	Maintenance of the site. Personal consumption and household expenditures.	The only income was from the sale of agricultural products. Women did not have an income. Houses were in very poor condition.	Work and income for women. Families spend more on clothing and food. Income in dollars. People purchase more tools. Improvement in infrastructure of houses and the community centre.

Source: Peláez et al. (2008) in authors' paper.

Table 5.3: General changes since the implementation of RCT in Nicaraguan communities

Initiative	Impact	Projects
Rural Tourism Cooperative and Community Las Pilas – El Hoyo	Participants have transitioned from day labourers on landholders' property to working for themselves.	Taking advantage of the resources of the reserve and avoiding deforestation. Development of beekeeping. Culmination of elaboration and implementation of a management plan. Declaration of a national park. Implementation of National Plan already being managed in Spain.
La Granadilla Community House	Library built. Children of the members of the cooperative receive university scholarships. Products such as beans, <i>pinol</i> , honey branded. Youth receive English classes. Dance group. Health post built.	Increasing the capacity of lodgings. Incorporating other attractions found relatively nearby and within the RCT Network. Sale of products generated and packaged (e.g. beans packaged in the UCA Tierra y Agua) in the community for tourists and/or other partners.
La Paloma, Pueblo Hotel, Ometepe	Reforestation of the lake coast. Improvement in family income.	Increasing organic communal gardens. English–Spanish school. Reception of more tourists and obtaining support from other international organisations.
Quetzalcóatl Cooperative	A competition takes place where participants display ceramic pieces. There is space for the sale of individual products and access to shipments to external markets.	Maintaining the identity of local artisans. Development of a San Juan de Oriente brand. Integrating San Juan de Oriente into the tourist supply of Catarina. Open spaces (local municipalities).
Guardatinaja Ecological Park	Improvement of houses. Improvement in income.	Construction of country lodgings. Interpretation centre, school in Nahual. Utilising the area for the cultivation of <i>pitahaya</i> .

Source: Barrera and Pérez (2008) in authors' paper.

5.3 Lessons learnt

Although tourism is a growing economic alternative, the initial investment is high and the barriers to entry to the market are rather high for rural communities. To date, in both

countries, cooperation has been the motor that has driven the establishment and development of initiatives to utilise the benefits of globalisation to enable the commercialisation of such services. In the case of Guatemala, the initiative was begun and is financed by USAID through the Peace Corps, and involves a series of services for community training. In the Nicaraguan case, each initiative is associated with a different source of cooperation, which have invested not only in physical infrastructure but also in funding, training and access to markets, both international and domestic.

The role of the state has been different in each country. In the Nicaraguan case, although the Institute of Tourism (INTUR) has defined a series of tourist routes as part of the Strategic Plan 2005-2009, the state does not have access to funds to support a direct plan of initiatives. The Guatemalan experience demonstrates that the state can support initiatives through investment in human capital, language programmes and client services. Moreover, it is possible to promote a certification process and standards which includes conservation of water sources, minimisation and treatment of waste and linking local providers with local job creation.

Investments in RCT in both countries have stimulated a process of growth in tourism to rural areas. Some barriers to entry for SMSEs that offer services in the tourist market have been overcome to some extent by public–private initiatives. However, Guatemala and Nicaragua have experienced different degrees of success in the development of RCT, in part because of the (in)ability of communities to link in vertically with tour operators.

Leadership at the community level, clear rules and transparent collective decision making are fundamental elements in the success of this type of local development initiative. The initiatives reviewed in Guatemala and Nicaragua have reached a point of maturity, which has enabled them to connect to the market. This connection continues to be developed, for example in Nicaragua through promotion of the rural tourism network, making individual contact with hotel enterprises and marketing.

About COPLA:

Comercio y Pobreza en Latino América (COPLA, or Trade and Poverty in Latin America) is a two-and-a-half year project that explores the linkages between trade, poverty and social exclusion in Latin America. It is coordinated by the Overseas Development Institute (ODI) in London with regional and country partners across the Latin America and Caribbean region, and is funded by the UK Department for International Development (DFID). Although there is an active debate in the region on the relationship between trade liberalisation on poverty, little attention has been paid to the different impacts on marginalised groups, whether they be women, youth, indigenous minorities or the rural poor. COPLA works to refocus that debate.

Contact COPLA Global:

Overseas Development Institute,
111 Westminster Bridge Road,
London SE1 7JD,
United Kingdom

Tel: +44 (0) 20 7922 0300

Fax: +44 (0) 20 7922 0399

Web: www.cop-la.net

Web: www.odi.org.uk

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