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Agri-food value chains and poverty reduction: overview of main issues, trends and experiences



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Agri-food value chains and poverty reduction: overview of main issues, trends and experiences

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1. Introduction

It is widely agreed that growth in agri-food output and incomes is essential for reducing poverty in most circumstances (Wiggins, 2005). Since the majority of the world's poor is dependent on agriculture for its income and food supplies, agricultural growth benefits the poor more than the growth of other sectors in an economy. A dynamic agriculture enhances labour productivity in the rural economy, increases wages and contributes to reducing absolute poverty (Timmer 2008, pp. 8; 54-55). Wadsworth (cited in DFID, 2004) points out that a yield increase of just one per cent reduces the share of those living on less than \$1 per day by 0.6-1.2 per cent. Lipton (2005) argues that, in theory, agricultural growth should cut poverty because farming uses more unskilled labour relative to capital, thus creating jobs and raising rural workers' wages; Farming generates returns to land – an asset some of the poor have besides their unskilled labour power; It also tends to push the price of produce including food down, to the benefit of most poor. Poverty reduction is most marked when these prices decline while production continues to grow because of higher productivity. Bangladesh has experienced this for some time (Hossain, 2002; Hossain *et al.*, 2003; Wiggins, 2005).

There is a continuing debate about whether poverty reduction is driven by these effects and their impact on wages and enterprise development or by economic growth (Future Agricultures, 2005). In either case, growth in agri-food output remains important for integrating the rural poor into economic growth process and, thus, reducing poverty, especially so for agricultural countries, such as sub-Saharan Africa, dependent on domestic food supplies (Timmer and Akkus, 2008, pp. 4-5);¹ As Hazel has pointed out, that agriculture is often the only option as an engine of economic growth in these countries (Future Agricultures, 2005).

Agricultural growth is important for growth in other sectors as well as for structural transformation and economic growth (Timmer, 2002, 2005, and Timmer and Akkus, 2008). Farm products can be processed and traded, while growing farm household incomes raise demand for non-agricultural goods and services. Through higher productivity, the agricultural sector provides food, labour and capital savings for urbanization and industrialization. Because processes of structural transformation are interrelated, non-agricultural growth will, in turn, stimulate the growth of agriculture. The ultimate outcome is convergence of rural with urban labour productivity (Timmer and Akkus, 2008, pp. 4 and 54). Well-operating markets for agri-food products and established linkages between the different parts of the agri-food system and with the rest of economy are, therefore, important preconditions for connecting rural and urban economies and are the long-term solution for agricultural growth, poverty

¹ What are alternatives to agriculturally-driven economic growth? Other sectors may grow more rapidly than agriculture, where historically it is difficult to sustain growth rates of more than five per cent annually over time (Wiggins, 2005). Mining and tourism are examples of sectors in rural areas that sometimes can achieve rapid growth rates.

reduction and economic growth, all the more so for those developing countries facing food shortages and marginalization in the contemporary global economy.

The historical data shows that no country, except city-states such as Hong Kong SAR and Singapore, has seen rapid economic growth without substantial growth of its agriculture (ibid.). In many instances, agricultural output expansion has preceded that of manufacturing. This was the case for the United Kingdom in the seventeenth and eighteenth century and for the recent East Asian growth stars, such as China, Indonesia, Republic of Korea and Taiwan Province of China.

Quantitative comparisons across countries using regression analysis tell a similar story. Irz *et al.* (2001) estimate that every ten per cent increase in farm yield is related to a seven per cent reduction in poverty in Africa and five per cent in Asia. Growth in other sectors has no such effect. De Janvry and Sadoulet (2002) use stylized models to show how improved farm productivity can reduce poverty in different circumstances.

Despite theory and empirical evidence emphasizing the crucial role of agriculture for economic growth and poverty reduction, the incidence of poverty among agricultural and rural households has been persistent over the last three decades (World Bank, 2008, p. 28). Rural-urban income disparities have widened with accelerated growth in non-agricultural sectors and despite rapid urbanization, making the convergence of rural with urban productivity very difficult (Timmer and Akkus, 2008). It is estimated that most of the poor will continue to live in rural areas and be dependent on agriculture until 2040 (World Bank, 2008, p. 29).

At the same time, global sourcing practices and innovation in processing, transport and logistics, have resulted in the rise of global agri-food value chains and production networks. The rise of global value chains (GVCs) creates new challenges and opportunities for cutting poverty. GVCs are making the industrial and economic development process more complex and challenging. Because the global system of production and trade is changing rapidly, it generates structural disturbances, volatility and uncertainty with which even developed countries can find it difficult to deal. The question is: can participation in the GVC-mediated industrial and economic development reduce this persistent poverty?²

This paper uses the GVC perspective to analyze developing and least developed countries' (LDCs) experiences from their involvement in global agri-food value chains and the potential impact this

² Barrett and Brown, (2002, pp. 4-11), discuss causes of persistent rural poverty in terms of lack of investment in human capital (education and health), lack of improvements in soil fertility, lack of access to new technologies and natural resource management practices, inadequate market access, lack of infrastructure and land access and lack of means to deal with various shocks. These issues are discussed in this paper.

involvement has on poverty reduction. The paper argues that this is possible but constraints are many, significant and deep. Much depends on the behaviour of the leading firms and consumer groups as well as on the developed and developing country agricultural trade policy. The paper discusses public policy issues providing recommendations for national governments and the international community. The paper concludes with several questions for future research.

The paper is organized in six sections. Following the Introduction in Section One, Section Two discusses globalization of agri-food industries and its main features and trends using the global value chain perspective. Section Three deals with global value chain governance and the role of lead firms. Section Four discusses the role of small farms in agricultural growth, development and poverty reduction. Section Five looks at the concentration and restructuring in the agri-food system from a rural development perspective. Section Six discusses how to incorporate fairness in trading as a corporate standard. Section Seven concludes with outlining main policy recommendations and underlining main issues for further research.

2. Main characteristics of agri-food Global Value Chain

2.1 Value chain perspective

Value chain perspective captures the sequence of related activities required to bring a product or service from material inputs to production, marketing, sales, final consumption and after sales services and, eventually, recycling. Technological changes, organizational innovations and policies of liberalization and deregulation in trade and investment have allowed for functional fragmentation of value chain tasks into distinct units in some value chains and for outsourcing these tasks to capable producers worldwide. Advances in information and communication technology (ICT), supply chain management (SCM), inter-modal transport and containerization have enabled the functional reintegration of specially dispersed fragmented production and consumption in real time and space, creating complex global-scale value chains and business networks (Memedovic, 2008, IJTLID, Volume 1, No 3, p. 228).

The GVC perspective introduced by Gereffi, Humphrey and Sturgeon, (2005) provides a framework for understanding industrial governance, or the non-market, inter-firm interactions and institutional mechanisms of coordination in these emerging global production systems. The inter-firm interactions in GVC are discussed with a focus on issues such as technology transfer, local capability building and changing patterns of production and trade specialization. Knowledge properties such as complexity, tacitness and partial excludability are used to explain various GVC governance forms.

Leading transnational firms (TNCs) are differentiated into retailers, branded marketers and branded manufacturers. The dynamics of their coordination power, or control over what will be produced, how, when and by whom it will be produced, as well as their market power is analyzed to understand and explain better the upgrading challenge developing country firms face when interacting with these firms.

At first, GVC framework, made a distinction between GVC driven by lead firm, either buyers or producers (Sturgeon, 2008, pp. 246-246; Memedovic, 2005). In the **buyer-driven agri-food value chains**, large buyers or retailers such as Aldi, Metro and Wal-Mart with core competencies in branding and marketing are the driving actors in creating, shaping and coordinating these chains. Innovation in these chains is more in branding and marketing than in manufacturing know-how. The large buyers' purchasing power in terms of volume determines their power over the suppliers to extract price margins and decide how, when, where and by whom the goods they sell are produced. These chains are typical of labour-intensive industries and highly relevant to developing countries.

In **producer-driven agri-food value chains**, leading firms in the chain, such as Monsanto, Cargill and Nestlé, control new technologies and production processes of crucial importance for positioning in the product market, and coordinate these chains and networks. These technologies and manufacturing capabilities are core competencies traditionally developed in home countries. These chains are typical of medium- and high-tech intensive industries. Branded processed food involves much value added from research, product development and marketing. For producers of branded food products, it is, therefore, of the utmost importance to maintain the value of the brand and avoid any forms of copying. For this reason, protecting intellectual property is becoming important for TNC location decisions.

Although this distinction between buyers and producers has been widely accepted, it is considered to be static. Technological changes and organizational innovations are allowing for deepening functional fragmentations and division of labour, even in research and development (R&D) activities. Cross-border value chain functional integration is now used in labour-, capital- and technology-intensive industries. Manufacturing firms are acting more as buyers, outsourcing production tasks and related risks to capable producers, which are able to meet required specifications and standards. The clear distinction between the two types of GVC thus becomes blurred (Sturgeon, 2008, pp. 246-246).

2.2 Mapping the chain

To understand better the characteristics of particular GVCs, analyses usually start with mapping the structure of specific value chains at the level of industries, sub-sectors and macro-production complexes. This involves:

- Understanding the technical characteristics of a specific chain

- Identifying all the major links in the chain
- Distinguishing links performed domestically from those performed abroad
- Understanding the knowledge flow along the value chain and where value added is created and captured
- Understanding the role of the lead firms in the chain and their nature
- Identifying the final markets that the chain is serving and their characteristics (price, quality, variety, delivery, capacity to innovate), and
- Competitiveness issues.

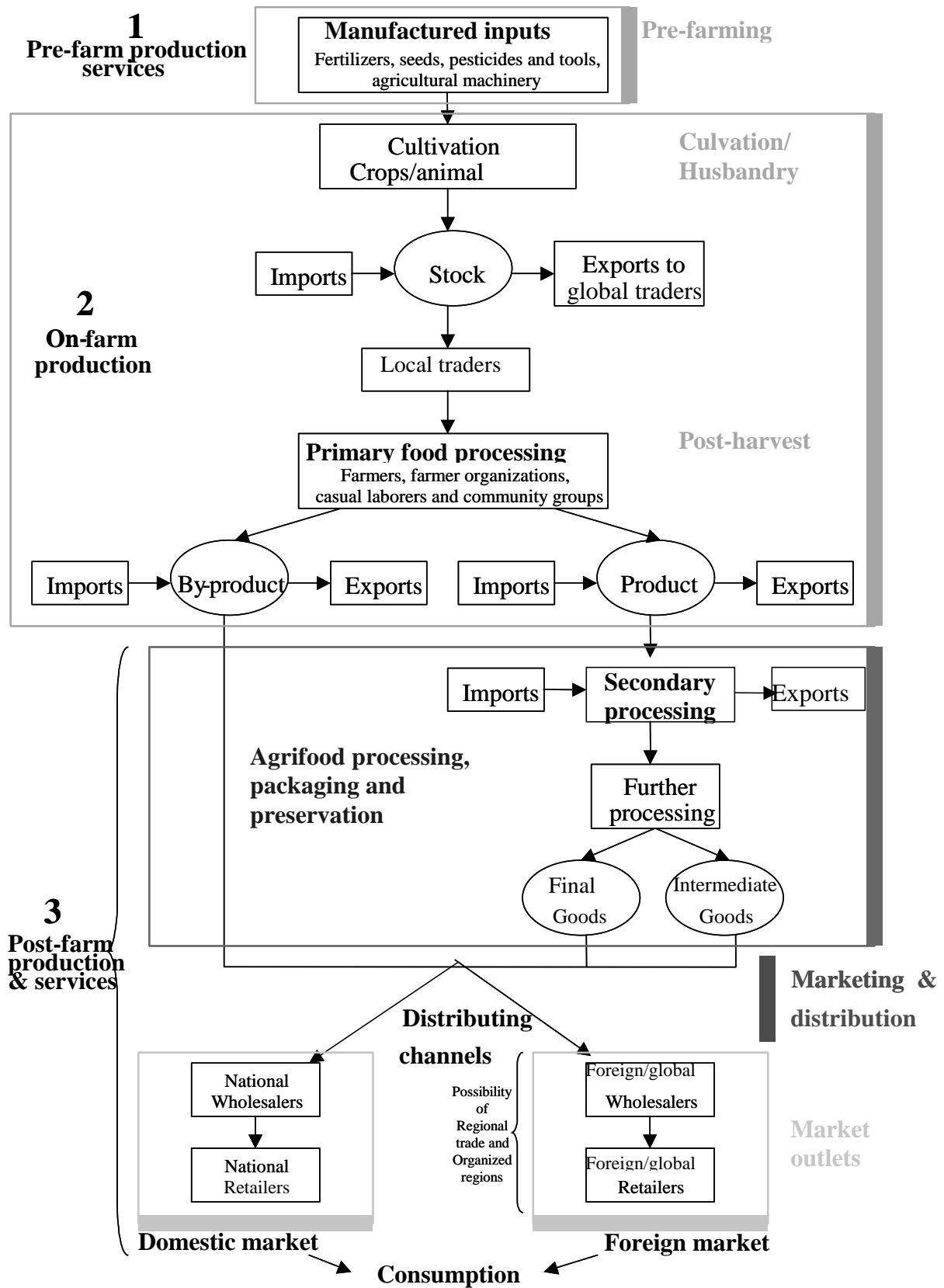
The agri-food value chain system includes primary production (farming), post-farm production, marketing and distribution services (domestic and international) and eventual recycling.³ The system covers more than 20 different industries and many commodity sub-sectors including grain, dairy, oils and fats, fruit and vegetables, confectionery and coffee. These industries are important for providing food but also for income and job creation in agriculture, manufacturing and services.⁴ They provide inputs to farmers (e.g., seeds and equipment, training, production and market information), promote entrepreneurship, raise demand for agricultural products and connect farmers with various consumers through processing, marketing, distribution and retail of agricultural products. They have strong backward and forward linkages with other parts of the economy. The progress in agri-food industries is transferred to other sectors through higher demand for inputs, technology, such as packaging materials, transport, communication and quality infrastructure.

The global agri-food value chain, as shown in Figure 1, starts with input manufacturers and ends with the providers of post-production services of marketing and distribution and consumers. The first stage of *agricultural inputs* includes manufacturing inputs such as fertilizers, seeds, pesticides, tools and agricultural machinery for crop cultivation and animal breeding. They constitute the pre-production services of the value chain. This stage is followed by primary food processing, *crops cultivation and animal breeding*, and by the creation of agri-food products and by-products. In the last stage, substantial investment in equipment is normally required.

³ Off-farm production and service is also called agribusiness in the literature.

⁴ According to the World Bank Development Report 2008, three of every four poor persons in developing countries live in rural areas (World Bank, 2008, p. 1). Agri-food industries create job for 22 million and offer job opportunities particularly for marginalized segments of the population such as women)

Figure 1 Global agri-food value chains



Source: Memedovic, UNIDO, 2004, adapted from Institute for Food Studies and Agro-industrial Development (IFAO), in Hamann, 2002.

Food processing follows a development path from such simple primary processing as drying and milling through more developed technologies, such as canning, to the most advanced technologies, such as cook-chill processing or designed functional foods.⁵ In LDCs, food industries are generally at the early stage of development employing simple technologies of drying and milling. They are often local industries, dominated by SMEs, although larger public companies exist in some countries. The downstream linkages in the value chain are less developed, with distribution and marketing services rare or non-existent.

Traditionally, in the most developed agri-food industries, added values are derived from downstream activities such as **high value added processing, incorporated product development and design, and distribution and marketing services**. The marketing and distribution of intermediate and final goods in local and foreign markets are considered a key to success in agri-food business. They constitute the post-production services of the chain. They connect farmers with final consumers as well as assuming a coordinating role between farmers, processors and final consumers.

Agricultural raw materials account only for a small share of the value of the final processed product.⁶ The general view is that the final market drives development of the food processing industry. Product characteristics and development are, therefore, considered important for market positioning. They affect the industries supplying raw materials, ingredients, packaging and processing machinery.

With the rapid structural changes in the agri-food system, which mirror structural changes in the global economy, some agri-food processing activities are becoming more internationalized and can be outsourced and offshored. By contrast, agricultural commodities that are more land and geo-climate specific and without major processing, such as rice, wheat flour, meats, fruits and vegetables, are less attractive for outsourcing.

Increasingly, TNCs outsource and offshore high value added segments of value chains, such as their corporate R&D facilities to developing countries. Rapid development of ICT has made this possible. The offshoring of R&D laboratories can create new knowledge by capitalizing on distributed scientific knowledge bases as well as from country-specific knowledge such as local taste, market structure, and local consumer preferences. Recent research results by Filippaios *et al.* (2009, p. 2) indicate the increasing importance of overseas technological affiliates for the leading food and beverage companies,

⁵ The food product is a ready meal; it is ready cooked and then chilled, in other words, the product only needs heating before use. Functional foods are those that provide health or medical benefits in addition to normal nutrients.

⁶ USDA (1996).

which reveals the degree of their technological internalization. Two variants of technological affiliates are distinguished: those related to knowledge adaptations and those related to knowledge creation.

Local firms in developing countries can also benefit from this trend in many respects. Offshoring R&D facilities to local markets, TNCs provide opportunities for local researchers and scientists to be employed in multinational companies and learn new technologies, skills and organizational methods. Local clusters can improve their knowledge of production technology and marketing and experience a positive spin-off effect for local firms. An important pulling factor determining the location for foreign R&D tasks is the availability of skilled personnel and dynamic business environment that can provide a certain range of services and facilities demanded by the TNCs. This requires building a progressive educational system starting with basic and vocational skills. It is essential that the developing countries and countries in transition give high priority to education (Reddy, 1997).

2.3 *Main trade and production trends*

The agri-food system has witnessed intra-sectoral transformation. The share of processed food in agricultural output increased while that of staples decreased, as discussed below. Two major trends in agri-food product trade can be also observed that indicate changes in developing country producers' capabilities. One is raising the share of developing countries in the global expansion of processed food exports. The other is the expansion of exports of high value agri-food products and non-traditional products.

Two important factors may have provided a significant demand-side impetus to the growth of processed food exports from developing countries. One was the internationalization of food habits, which is manifested in the growing importance of such processed food as canned fruits and vegetables, cereals and breakfast foods in consumption patterns and in eating out, in developed countries and large sections of the population in many developing countries. According to Athukorala and Sen (1998), international migration, the communications revolution and international tourism have contributed to this phenomenon. The other important factor relates to the rapid economic growth of such giant countries as China and India, boosting demand for more healthy diet that includes protein such as meat, dairy products and vegetable oil. On the supply-side, improvements in food technology, refrigeration and innovations in transport and logistics have made processed food easily tradable across countries.

Table 1 shows the trends in processed food exports in developed and developing countries during 1990–2006. World processed food exports grew some 7.2 per cent annually. The developing countries' processed food exports grew faster than that of developed countries and the world average. Their share in the worldwide expansion in processed food exports more than doubled, from 16 to 30 per cent,

during the period. However, developing countries accounted for just some 30 per cent of total world processed food exports in 2006.

Table 2 presents developing countries' processed food export structure in the same period. Important changes can be seen. The shares of processed and preserved of meat, dairy products, starch products, bakery products and beverages have risen, while those of such traditional items as processed fish products, preserved fruits, preserved vegetables, sugar and tobacco products have fallen since 2000. Four categories, including processed/preserved meat and fish, processed/preserved fruit and vegetables and vegetable and animal oils and fats each had the highest shares of total processed food exports in developing countries. Together, these four categories made up, on average, 67 per cent of developing countries' total processed food exports during the period.

Table 1 Processed food exports and growth rate of exports by country category, 1990-2004
Million US\$

	1990	1995	2000	2005	2006	Growth rate (%)
Developing countries	25,708	77,891	80,560	142,688	156,750	12.95
Industrialized countries	138,656	229,924	215,419	340,691	371,785	6.03
World	164,364	307,815	295,979	483,379	528,535	7.16
Shares in total for the World (%)						
Developing countries	15.6	25.3	27.2	29.5	29.7	
Industrialized countries	84.4	74.7	72.7	70.5	70.3	

Source: UNIDO calculations.

Developing countries accounted for 58 per cent of world exports of vegetable oils, valued at some 31 billion dollars in 2006. Developing countries share of exports of processed fish products was 54 per cent in 2006, with a total value of some US\$ 35 billion and a growth rate of nine per cent. Developed countries seem to be recapturing their share in this category. For processed meat products, developing countries' growth rate was 13 per cent, three times that of developed countries. Despite the impressive growth rates, developing countries exports of agri-food products, valued at US\$ 156.75 billion made up just 22 per cent of world exports in 2006. The share of industrialized countries in agricultural trade did not decrease significantly, perhaps owing to high levels of subsidies and continuous protection of agriculture.

Table 2 Composition of processed food exports for developing countries for developing countries, 1990-2006 (percentage shares)

<i>Categories of processed food</i>	<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>2006</i>
Processed and preserved meat	7.9	10.0	9.5	12.0	11.8
Processed and preserved fish	27.3	23.9	27.4	21.3	22.2
Processed and preserved of fruit & vegetables	14.9	10.3	10.6	10.1	10.4
Vegetable and animal oils and fats	21.0	21.9	17.9	20.2	19.7
Dairy products	0.4	1.3	1.8	2.4	2.3
Grain mill products	6.9	6.7	6.7	6.8	6.1
Starches and starch products	0.7	0.8	0.8	1.0	1.1
Prepared animal feeds	0.9	0.7	0.8	0.8	0.8
Bakery products	0.5	1.0	1.2	1.5	1.4
Sugar	8.9	7.3	5.7	6.0	7.2
Cocoa, chocolate and sugar confectionery	2.7	2.8	3.0	3.8	3.4
Macaroni, noodles and similar products	0.3	0.6	0.7	0.7	0.7
Other food products	4.1	4.3	5.2	5.3	4.7
Beverages	2.5	4.0	5.6	5.9	6.5
Tobacco products	1.1	4.5	3.1	2.1	1.7

Source: UNIDO calculations.

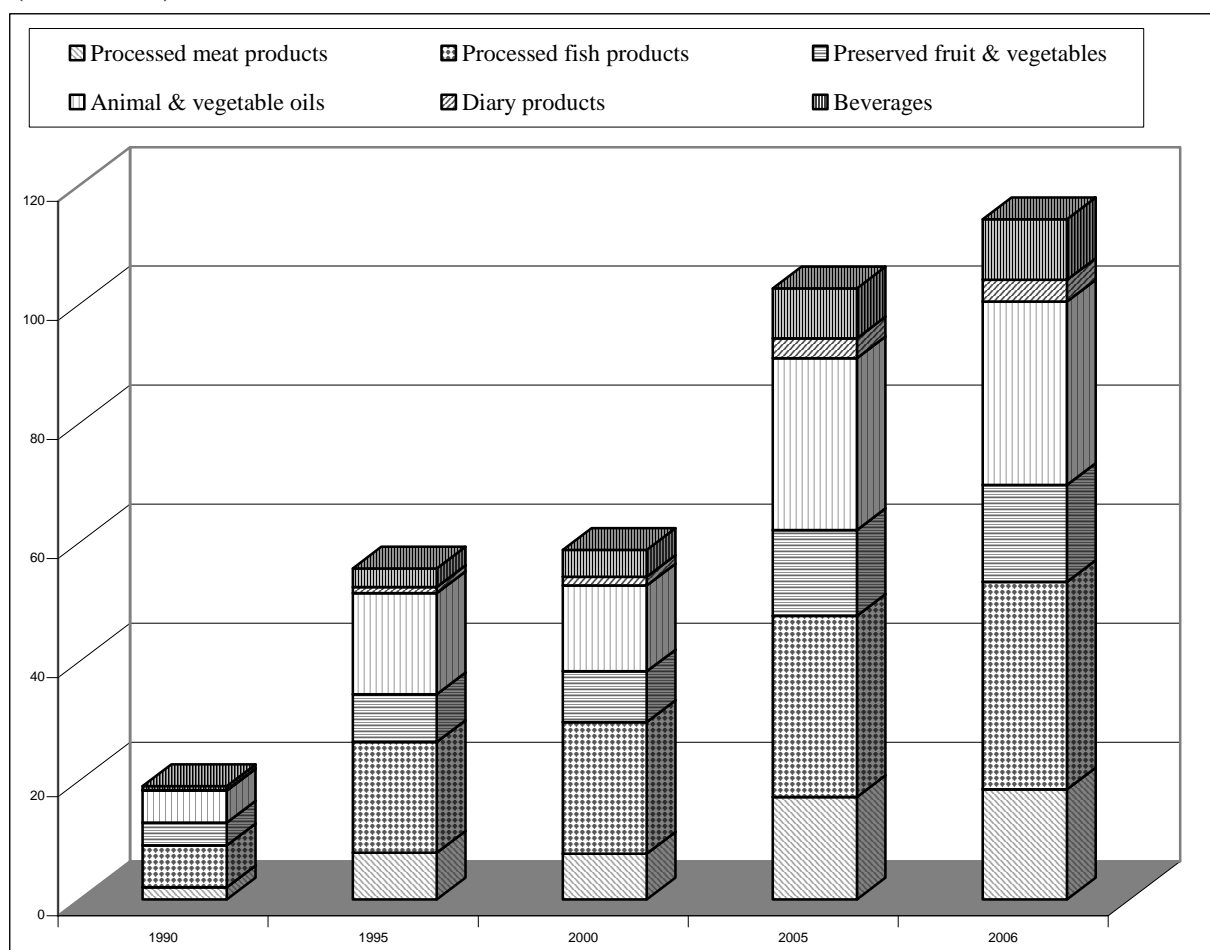
Table 3 Processed food exports for selected product categories, 1990-2006, Billion US\$

		<i>1990</i>	<i>1995</i>	<i>2000</i>	<i>2005</i>	<i>2006</i>	<i>Growth rate</i>
<i>Processed and preserved of meat</i>	Industrialized countries	30,50	45,94	42,49	63,28	67,44	4,58
	Developing countries	2,04	7,82	7,67	17,18	18,50	13,26
	World	32,53	53,76	50,16	80,47	85,94	5,68
<i>Processed and preserved of fish</i>	Industrialized countries	14,76	18,85	19,30	27,95	29,56	4,25
	Developing countries	7,00	18,59	22,08	30,44	34,83	9,29
	World	21,76	37,44	41,34	58,39	64,40	6,4
<i>Processed and preserved of fruit and vegetables</i>	Industrialized countries	10,40	17,41	16,90	25,95	29,41	5,97
	Developing countries	3,83	8,03	8,53	14,44	16,26	8,58
	World	14,22	25,44	25,44	40,39	45,67	6,8
<i>Vegetable and animal oils and fats</i>	Industrialized countries	7,20	13,34	10,85	19,70	20,81	6,46
	Developing countries	5,39	17,02	14,45	28,85	30,86	10,07
	World	12,56	30,41	25,30	48,55	53,67	8,3

Source: UNIDO calculations.

Figure 2 reveals an important expansion of developing country exports of higher value added agri-food products in value terms and considerable changes in the composition of these exports (Figures 3a and b). The most important change can be seen in traditional temperate products such as processed meat, dairy products, grain mill products, preserved animal feeds and animal and vegetable oils. The share of these products in world exports decreased slightly in 15 years (44 per cent), while their share in developing countries' exports rose from 25 to 34 per cent. The share of non-traditional products (fish and horticulture), of some 12 per cent, now exceeds that of the combined value of exports of traditional tropical products (coffee extracts, cocoa, chocolates and sugar), which made up some six per cent of the value of developing countries processed food exports in 2005.

Figure 2 Expanding developing countries exports of selected agri-food products, 1990-2006 (Billions US\$)



Source: UNIDO Calculations.

Table 4 shows, a small group of developing countries makes up the lion's share of processed food exports of all developing countries. Ten countries, Argentina, Brazil, Chile, China, India, Indonesia, Malaysia, Mexico, Thailand and Vietnam, together contributed 76 per cent of the developing countries' processed food exports in 2006 (Table 4). These were the winners in the processed food trade.

Figure 3a World manufacturing food exports

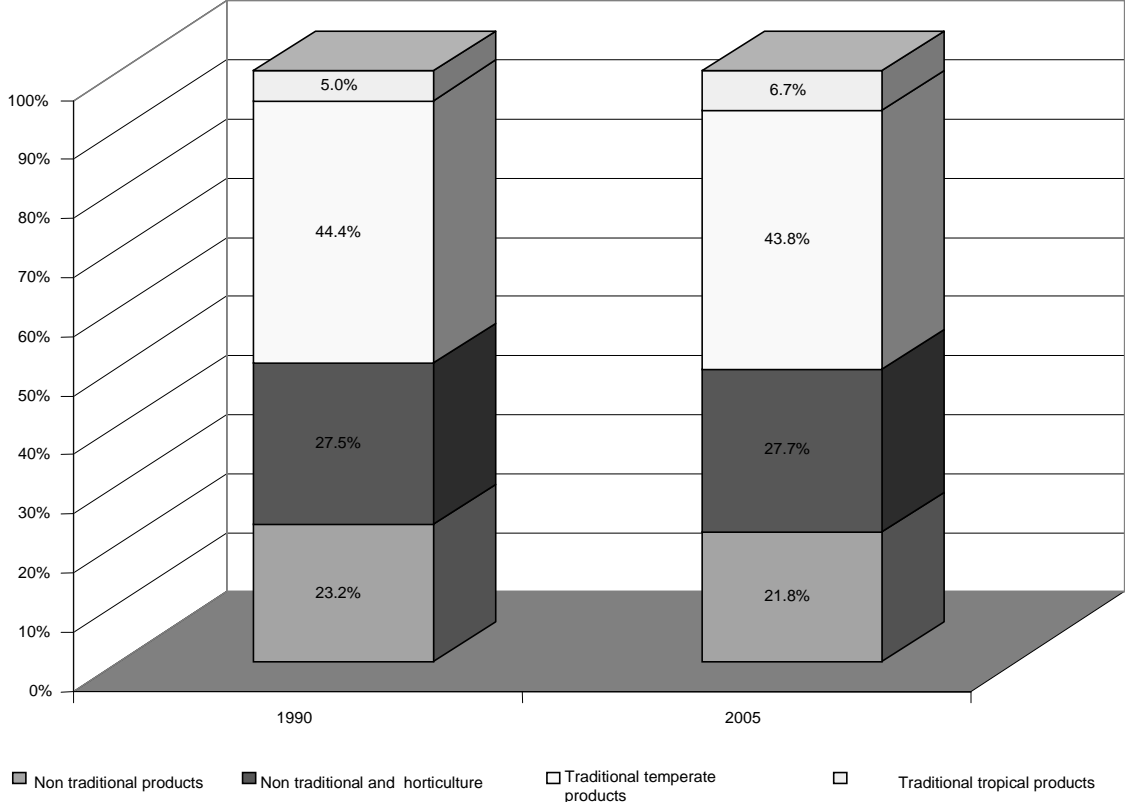
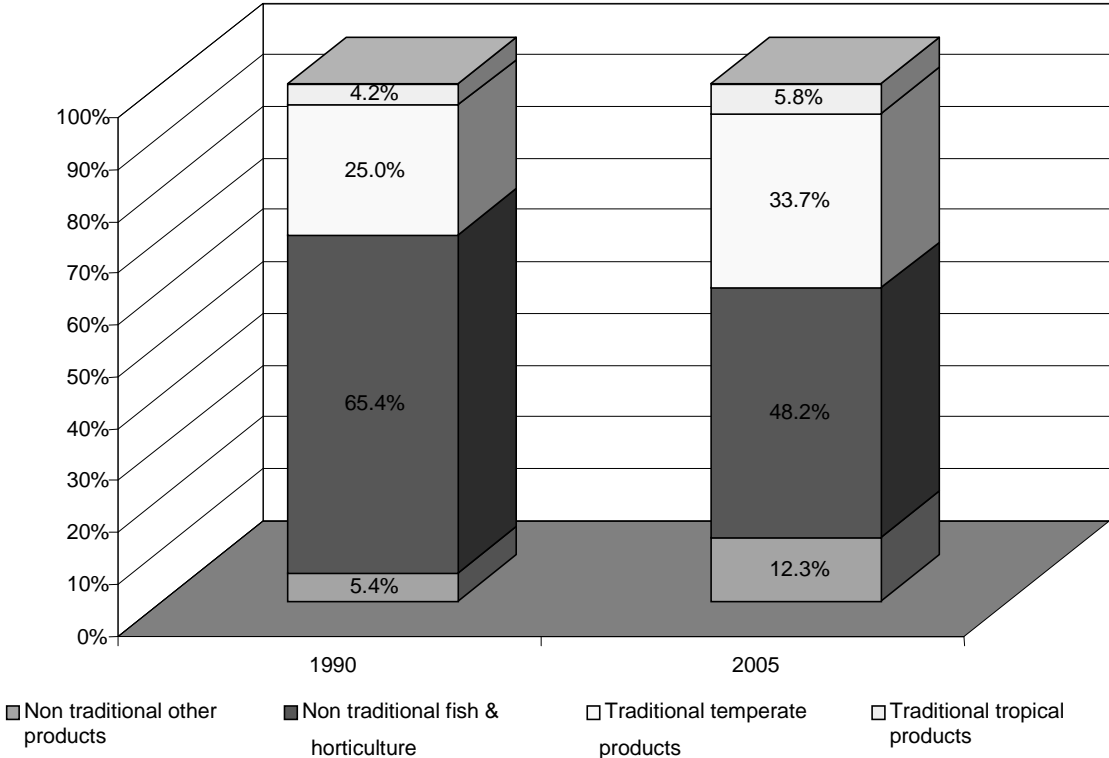


Figure 3b Developing countries' manufacturing food exports



Source: UNIDO.

Table 4 Developing countries exports processed food, 1990- 2005

Rank	1990		1995		2000		2005		2006						
	Country	Share of world processed food exports	Share of developing countries' processed food exports	Country	Share of world processed food exports	Share of developing countries' processed food exports	Country	Share of world processed food exports	Share of developing countries' processed food exports	Country	Share of world processed food exports	Share of developing countries' processed food exports			
		%	%		%	%		%	%		%	%			
1	Brazil	3.4	21.7	Thailand	3.3	12.9	Thailand	3.2	11.8	Brazil	4.2	14.4	Brazil	4.5	15.3
2	Thailand	3.3	20.8	Brazil	3.0	11.9	China	3.2	11.7	China	3.7	12.4	China	4.1	13.7
3	Malaysia	1.7	10.7	China	2.8	11.0	Brazil	2.6	9.5	Thailand	2.5	8.6	Argentina	2.7	9.1
4	China (Taiwan Province)	1.4	9.0	Argentina	2.2	8.7	Argentina	2.4	8.7	Argentina	2.5	8.4	Thailand	2.6	8.9
5	Indonesia	0.9	6.0	Malaysia	1.9	7.6	Malaysia	1.5	5.7	Malaysia	1.8	6.0	Malaysia	1.9	6.3
6	India	0.9	5.9	China (Hong Kong SAR)	1.5	6.0	Mexico	1.4	5.1	Indonesia	1.6	5.5	Indonesia	1.7	5.9
7	Chile	0.7	4.4	India	1.4	5.4	India	1.3	4.8	Mexico	1.3	4.3	Mexico	1.4	4.7
8	Mexico	0.7	4.2	China (Taiwan Province)	1.1	4.4	Indonesia	1.3	4.7	India	1.3	4.3	India	1.4	4.7
9	Turkey	0.6	4.2	Indonesia	1.0	3.9	China (Hong Kong SAR)	1.1	4.1	Chile	1.1	3.8	Chile	1.2	4.0
10	Ecuador	0.3	2.1	Chile	0.8	3.3	Chile	1.0	3.7	Viet Nam	0.9	3.2	Viet Nam	1.0	3.4
		13.9	88.8		19.0	75.2		19.0	69.9		20.9	70.9		22.5	75.9

Source: UNIDO calculations.

For developing countries, expansion of processed-food exports' means new opportunities for product diversification, adding value, jobs creating and increasing access for small farms and SMEs to global markets. The full-benefits of agricultural growth for poverty reduction can only be realized if better opportunities are created for inclusiveness of small farm producers and for SME growth in the current global economic setting.

According to the UNIDO Industrial Statistics Database 2006, developing country agri-food industries' shares in total manufactured value added (MVA) rose from some 11 per cent in 1995, to 22 per cent in 2000, and to 29 per cent in 2005. Although country coverage for these years seems to be incomplete, see note to Table 5. These shares did not change much for industrialized countries in the respective years. The contribution of processed food value added to GDP rose from 2.3 to 4.5 and to 5.9 per cent in developing countries, while that of industrialized countries decreased from 3.1 to 2.9 and to 2.5 per cent, in the respective years (Table 5).

Table 5 Contribution of agri-food industries to GDP

	<i>Agri-food value added in total MVA (%)</i>	<i>MVA/GDP (%)</i>	<i>Agri-food value added in GDP (%)</i>
<i>1995</i>			
Industrialized Countries*	15.9	19.5	3.1
Developing Countries	10.9	21.5	2.3
World	15.2	19.9	3.0
<i>2000</i>			
Industrialized Countries	16.4	17.7	2.9
Developing Countries**	22.0	20.4	4.5
World	16.9	18.2	3.0
<i>2005</i>			
Industrialized Countries	15.8	15.7	2.5
Developing Countries	29.0	20.3	5.9
World	16.7	16.6	2.8

* For industrialized countries, data were available for 29 countries in 1995, 40 countries in 2000, and 17 countries in 2005.

** For developing countries, data were available for 20 countries in 1995, 37 in 2000, and 15 countries in 2005.

Source: UNIDO calculations based on the UNIDO Industrial Statistics Database 2006.

3. Global Value Chain governance and the role of lead firms

A well-operating chain assumes a system of good governance. The complexity of international transactions in the ongoing process of globalization requires sophisticated forms of coordination not only in logistics and systems integration, but most importantly, in setting parameters by demanding reliable quality, speed and response to meet various standards of quality and food safety, and their enforcement along the value chain.⁷ According to Kaplinsky and Morris (2008), the ability to generate and appropriate rents is an important dimension of GVC governance and is central to the income distribution in GVCs from static and dynamic viewpoints. In many GVCs, producers from developing and least-developed countries operate in low-rent value chain segments, with low economic returns. The incentive to export in these chains is weak, as is the resulting supply response. Raising shares of total value chain returns are appropriated by those who were able to introduce barriers to entry in other segments of the chain. They distinguish four types of rents: those related to the size and power of competitors, those arising from access to scarce assets such as technology, information and market access, those related to product and process innovation, and those created outside the chain, for instance, by international agreements.

The most challenging tasks for developing economy producers are to understand the global value chains in which they participate, assess the pockets of rents (barriers to entry) that exist and are emerging in that chain and upgrade their capabilities so that they, too, can benefit from these rents (Kaplinsky and Morris, 2008). For instance, in cocoa or cotton value chains, the entry barriers are less than in the more consumer-driven chains. But these have proved sufficient to impose barriers to chain co-ordination in the liberalized context such as with cotton in Tanzania and Ghana. The most significant barriers are ability to command volume and negotiate prices (Gereffi, 1994; Gibbon and Ponte, 2005, pp. 124-125).

In the fresh-food sectors of agribusiness, the impact of standards on coordination costs is a major issue. Achieving the advantages of coordination and control at the least possible cost becomes the lead firms' goal in these chains (Humphrey and Memedovic, 2006). In food processing, the impact of standards is felt more strongly in costs. There are economies of scale in adherence to the hazard analysis critical control point, HACCP, for example, for processing plants. There are various studies of the costs of standards and the impact of these standards on smaller processors. A study of the costs of HACCP in meat-processing plants in the United States found that costs in the smallest 20 per cent of plants were four to seven times higher than in the largest 20 per cent. This study concluded that, "For smaller plants that produce commodity products that compete with commodity products from the giant plants, (the

⁷ Kaplinsky (2000).

cost differential) means an erosion of profitability and a necessity to either exit the industry or shift to other products” (Ollinger, Moore and Chandran, 2004, p. 18).

In some agri-food industries, product innovation is a key to remaining competitive. Winger and Wall (2006, p. 21) pointed out that a large number of new products are offered to retailers each year but product innovation is mainly incremental and there is a 75 per cent failure rate. Only a small share of new products is result of radical innovation. Relative to other industries, such as electronics or biotechnology, research and development activity is very low.

In other agri-food value chains, the demands emanating from the consumer end result in new expectations regarding quality or information to be provided by suppliers to supermarkets. The first-tier suppliers – those closest to the retailer –face the most formidable barriers. These suppliers have to add considerable inventory management tasks to their portfolio. In some chains, such as coffee and fresh vegetables, first-tier suppliers face a greater range of tasks and higher performance levels than second-tier suppliers.

For the poor in rural areas, a strategic option is to make their products more attractive to and in demand by foreign consumers, as well as access niche markets. Demand patterns can change quickly, creating new niche markets for products and process upgrading. A current example is the demand for shea nuts, harvested from trees that grow wild across the West Africa savannah. Shea butter has traditionally been used for cooking and as a body cream in West Africa, where much of the harvest is consumed. It has also been traded internationally for decades as a cocoa-butter substitute, especially in chocolate. More recently, the trade in shea butter for use in cosmetics has expanded rapidly, especially in North America. The global market for niche products partly based on shea butter is developing rapidly. The market value of raw shea nuts is low, but these developing markets offer opportunities to add value and involve SMEs and the women’s groups that often produce shea butter (Lovett, 2004).

Considerable market inroads can also be made through advertising and provision of information through retail outlets, as the agricultural sector communicates more with the end-consumer. Examples of good practice include Irish beef and pork from United States, which have provided more information to consumers through retailers and advertising. Producers in developing countries can benefit from rich-country consumers knowing more about developing countries’ products and from understanding that their own purchases and trade, in general, can play a part in improving poor persons’ livelihoods. Some consumers express their concern through purchasing fairly traded or organic niche brands, but the concern runs far wider among consumers. The growing middle classes in middle-income and poor countries, who shop more in supermarkets, may also change their buying preferences and look for

assurances that their purchases are benefiting poor. Given the values underlying a growing volume of purchases, the ability of poor countries with peasant systems of farming to provide healthy, unpolluted food and agricultural products, coupled with the acknowledged importance of agricultural development for poverty reduction, it should be possible to provide consumers with more information about these issues. This would make poor countries' and poor person's products more attractive and raise international demand for their goods, thus providing commercial organizations based there with greater opportunities in GVCs.

3.1 The role of lead firms

The global agri-food business is increasingly shaped by inter-firm GVC relationships, as well as high concentration and market power by leading companies along the entire agri-food value chain.⁸ Leading TNCs operate at each stage of the agri-food value chain, as input manufacturers (agrochemicals and seed companies), food processors and manufacturers, retailers and food service providers (Table 6). Their market spread and penetration and activity and product coverage are revealing (Table 7). Food manufacturers, retailers and food service companies differ by the geographical coverage of their operations (Table 8), with some more globalized than others.

In 2004, the market share of the four largest agrochemical and seed companies, such as Monsanto, Dupont, Syngenta and Bayer, reached 60 percent for agrochemicals and 33 percent for seeds, from 47 and 23 per cent in 1997, respectively (World Bank 2008, pp. 135-136). The rising economic power of top food manufacturers was compared with that of the half of Africa (Vorely, 2001, p. 3).

With inter-firms relations mediated by markets increasingly replaced by complex contractual arrangements in GVCs, food markets are becoming globalized, more complex, demanding and differentiated. Supplying global market demands just-in-time and year-round delivery. This has created demand for logistics and transport services. As competition has intensified, providers of these services have also entered into various partnership arrangements among themselves as well as with retailers and processors.

Leading firms' partnership arrangements in the global agri-food value chains have enabled them to maintain and gain competitive advantages through:

- a. Sourcing raw materials from the world market or from own suppliers in different parts of the world, enabling them to achieve the most competitive prices on input supplies and control raw material quality

⁸ See also Kaplinsky and Morris (2001)

- b. Having production, storage, refining and processing facilities and controlling transport in all parts of the world, enabling them to produce year round and avoid excess production capacity during seasonal fluctuations, with the resulting advantages of economies of scale and closer monitoring of changes in local preferences and consequent adaptation of the final product to match local changes
- c. Having presence in as many markets as possible, so as to exploit the benefits of global branding of their products and build a strong brand value - essential to a manufacturer of high-value food products - and limiting vulnerability to single-market fluctuations⁹
- d. Driving product and process innovations
- e. Driving a shift from quality control towards process control and assurance (HACCP) Strengthening their market power through pursuing horizontal and vertical integration.

Concentration has also been driven by new demands in US and UK capital markets for high returns on capital invested (12-15 per cent), which forms a central plank of the doctrine of 'shareholder value' (Gibbon and Ponte, 2005, pp. 11-15). Not all capital markets have developed the same expectations, but US' and UK's markets have been the most dynamic and demanding in this respect.

These factors have triggered a process of mergers and acquisitions among companies, which have become common practice in the agri-food system since 1980. TNCs have bought up many developing countries' firms and forming new partnerships and networks. Mergers and acquisitions have led to creation of horizontal and vertical integration in the agri-food value chain. Horizontal integration has been reached through mergers and acquisitions between competitors or producers of competitive products at each stage of the value chain, at the level of input manufacturers, food processors, food manufacturers and retailers. Vertical integration has been achieved through diversifying and entering into other stages of the value chain. As globalization has proceeded and markets become more integrated, it has been of key importance for leading players to react quickly to events affecting their raw material supplies, processing facilities or markets. The leading players have, therefore, developed strategic linkages to primary production (backward integration) and marketing and distribution (forward integration). Providers of seeds, pesticides and genetic crop technologies have consolidated horizontally and vertically. They have diversified from seeds, feeds and fertilizers into producing sweeteners and biofuels. Food processors have also integrated backward, into primary processing and forward to retailing and distribution.

⁹ In general, the more value-added and stronger brand a product commands, the higher internationalisation. In other words, product categories like confectionery, coffee, ice cream, edible oils and fats, sauces and snacks enjoy high internationalization, while product categories such as grain, dairy, red meat, fish and fresh produce are much less internationalised; Rabobank (1995).

Table 6 Key agents in agribusiness, their main activities and lead companies

<i>Key Agents</i>	<i>Main activities/products</i>	<i>Leading companies</i>
<i>Farm Inputs Providers: agrochemicals, seeds, live stock, crops and agricultural machinery suppliers</i>	Produce fertilizers, pesticides, seeds and agricultural machinery	Monsanto-the largest world seed company and seller of genetically modified crops; Cargill – provides animal nutrition, feed and ingredients for livestock producers Dow, Dupont, Bayer, Syngenta, Tyson
<i>Food Processors</i>	Buying of farm outputs/livestock and primary food processing	Cargill, ADM, Tyson, Smithfield Foods, Inc
<i>Food Manufactures</i>	Secondary food processing; producing final food products, branding and marketing	Philip Morris, Cargill
	Snacks, beverages, dairy, grocery, convenient meals	Kraft
	Beverages (carbonated soft drink, juices and water)	PepsiCo, Inc., Coca-Cola
	Beverages, dairy, prepared dishes, cooking aids, confectioners, biscuits, clinical nutrition, baby food	Nestlé
	Packaged food, food ingredients and food service products	ConAgra Tyson
	Chicken, beef and pork products, prepared food (pizza)	Unilever
<i>Food Retailers</i>	Discount food retailing Selling the final products General food retailing and selling the final products	Wal-Mart, Carrefour, Ahold, Aldi, Metro, Albertsons Tesco
	<i>Food Service Providers</i>	Hamburgers, chicken products, breakfasts, soft drinks Contract catering Pizza, chicken, seafood, Mexican food, hamburgers

Source: Memedovic after Lang *et al.*, 2006.

Table 7 Lead companies turnover, in 2004 US\$ billions

<i>Lead Companies</i>	<i>Turnover (home market currency)</i>	<i>Turnover, in US\$ billions</i>
<i>Food Manufacturers</i>		
Cadbury Schweppes	£6.7 bn	11.8
Coca-Cola	\$21.0 bn	21.9
ConAgra	\$14.5 bn	14.5
Danone	\$18.0 bn	18.5
Kraft	\$32.0 bn	32.2
Masterfoods / Mars	\$18.0 bn	18.0
Nestlé	CHF86.0 bn	67.2
PepsiCo, Inc	\$29.3 bn	29.3
Tyson	\$26.4 bn	26.4
Unilever	€42.0 bn (food €23.5 bn)	50.6
<i>Food Retailers</i>		
Ahold	€52.0 bn	62.6
Aldi	\$37.0 bn	37.0
Carrefour	€9.6 bn	109.2
Ito-Yokado	\$32.0 bn	32.2
Kroger	\$51.1 bn	51.4
Metro	\$56.4 bn	67.9
Rewe	€40.0 bn	49.1
Schwarz	\$49.1 bn	49.1
Tesco	£30.0 bn	60.2
Wal-Mart	\$256.0 bn	256.0
<i>Food Service</i>		
Burger King	\$11.0 bn	11.0
Compass	£11.8 bn	20.8
McDonald's	\$51.3 bn ¹	51.3 ¹
Sodexo//Sodexo	\$13.9 bn	\$13.9
Yum!	\$27.9 bn ²	\$27.9 ²

¹ McDonald's annual report gives the figure of US\$19 billion but higher figure is given to include sales of franchisees. ² Yum!'s annual report gives the figure of US\$9 billion but higher figure is given to include sales of franchises; company turnover in US\$, 2004 (as of 25/09/05 using www.xe.com conversion).

Source: Memedovic after Lang *et al.* 2006.

Table 8 Lead companies' geographical coverage of operations

<i>Lead firms in agribusiness</i>	<i>Headquarter location</i>	<i>Geographical spread</i>	<i>Number of countries presence</i>
<i>Food Manufactures</i>			
Cadbury Schweppes	London, UK	Worldwide	Not given
Coca-Cola	Atlanta, USA	Worldwide	200+
ConAgra	Omaha, USA	Americas, China, Europe, Australia	11
Danone	Paris, France	Worldwide	120
Kraft	Northfield, Illinois, USA	Worldwide	155+
Masterfoods/Mars	McLean, Virginia, USA	Worldwide	100+
Nestlé	Vevey, Switzerland	Worldwide	140*+
PepsiCo, Inc	Purchase, New York, USA	Worldwide	200+
Tyson	Springdale Arkansas, USA	Worldwide	80 +
Unilever	London, UK, Rotterdam, NL	Worldwide	150+
<i>Food Retailers</i>			
Ahold	Zaandam, NL	USA, Europe	6
Aldi	Essen, Germany	Not given	Not given
Carrefour	Paris, France	Europe, Asia, Middle East, South America, Africa, Caribbean	32
Ito-yokado	Tokyo, Japan	Japan, China, USA and others unspecified	18
Kroger	Cincinnati, USA	USA	1
Metro	Düsseldorf, Germany	Europe, China, India, Japan, Africa, Vietnam	30
Rewe	Köln, Germany	Europe	14
Schwarz	Neckarsulm, Germany	Not given	Not given
Tesco	Cheshunt, UK	UK, Ireland, Central Europe, Far East	13
Wal-Mart	Bentonville, Arkansas, USA	USA, Canada, South America, UK, Germany, Far East	9
<i>Food Service</i>			
Burger King	Miami, Florida, USA	Worldwide	60
Compass	Chertsey, UK	Worldwide	90+
McDonald's	Oak Brook, Illinois, USA	Worldwide	119
Sodexo/Sodexo	Montigny-le-Betonnex, France	Worldwide	76+
Yum!	Louisville, Kentucky, USA	Worldwide	100+

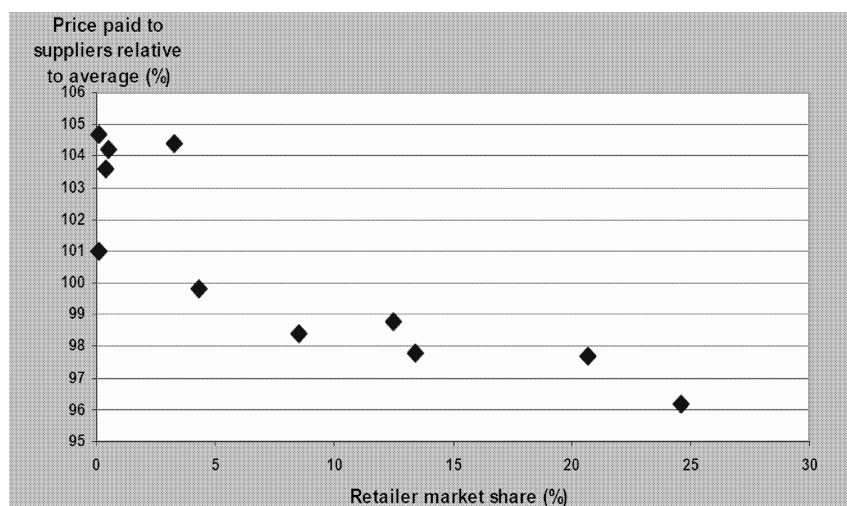
* data from Winger and Wall, 2006, p. 23

Source: Memedovic after Lang *et al.* 2006.

Food retailing has been radically changed by the supermarket revolution in the beginning of the 1990s (Flores, *et al.* 2006 and Dries *et al.* 2004; Readon and Timmer, 2005). In developed food markets, a dominant trend has been consolidation and internationalization of food retailing. The food retail chains have expanded through mergers and acquisitions of domestic and foreign retail chains. The US and West European food retail chains have expanded their operations in emerging markets in Eastern Europe, Southeast Asia and South America. By contrast, Japanese retail chains and department stores have concentrated their operations in Asian countries, particularly China. The food retail companies that have captured market share in transition economies have been mainly those with sufficient capital, international experience, and most importantly, strong branded processed food, which derives much added value from product and process development, product differentiation and research.

Consolidation of retail chains has strengthened their buying power in international and national food markets. Supermarkets have changed the traditional ways of selling agri-food products by smallholders to local markets and traders. Even relatively poor rural households now buy their staples from supermarkets. High concentration in retailing means higher purchasing and hence bargaining power of buyers over producers, which can push the producers' prices, and in turn, farmers' income down (Vorley, 2003); Figure 4 shows the correlation between the retailers' market share and their buying power and indicates the impact of retailers on the producers' prices.

Figure 4 The impact of retailers on the producers' prices



Source: Vorley, 2003.

In general, retailers (supermarkets) are facing strong competition to increase range, quality, freshness, traceability, safety and seasonal availability of goods as well as continuous, year-round supply. The power of retail chain own brands' and private labels' market share are forcing branded food products to face sharper competition, especially in the developed food markets.

As retail chains have become stronger and demand for product differentiation, just-in-time and year-around supply have increased, the food processing companies have further consolidated and internationalized to match the power of the retail sector. Lead firms' joint ventures, mergers and partnerships, downstream and upstream, have created many food-firm networks. Joint ventures between more than two companies have forced other companies to follow suit and create their own networks in order to remain competitive. With agri-food business consolidating through horizontal and vertical integration, market concentration along the value chain has risen, giving leading players greater economic power to control the entire value chain and decide what will be produced, how, and where and by whom it will be produced.

In 2000, the FAO Panel of Eminent Experts on Ethics in Food and Agriculture noted: "there are serious power imbalances arising from the concentration of economic power in the hands of a few". In many developing country markets, especially in LDCs, private-sector coordinators of value chains are in short supply. It is difficult for developing-country actors to retain or achieve a strong presence in leading positions, even in agri-based GVCs. Companies based in Africa, for example, have succeeded in achieving strong positions only as second-tier suppliers. When this happens, it is a result of: (i) being able to access the needed volumes of commodities, sometimes by trading in more than one country; (ii) there still being scope for producer leadership in the value chain such as in the case of cotton; (iii) development of local and regional value chains, out of which actors with regional networks emerge, and (iv) in some cases, acquisition of distribution and logistics capacities in commodity-importing countries. These successes are subject to mergers and acquisitions.

The search for capturing rents in the chain through controlling scarce assets or coordinating the chain to reach economies of scale may lead to barriers for producers rather than premiums for suppliers or producers. This underpins the arguments discussed below to bring fair-trade practices into the commercial mainstream and promote competition in order to cut oligopolistic opportunities. It is believed that fair-trade practices would ensure that returns to labour and small farmers were reasonable and the poor were not always the main losers from price squeezes. Pursuing on adequate competition policy would ensure that leading firms were unable to prevent competitors from challenging their cost structures and the control they have through value chain coordination.

The example of Chile's salmon industry studied by Phyne and Mansilla (2003) illustrates the dynamics. Substantial growth in Chile's salmon exports was reached because of its advantageous climate and cheap labour. Growth occurred despite international product price cuts. This was an example of growth with concentration. Specialist Norwegian companies, particularly in the feed-supply component of the

agri-food value chain, acquired major Chilean firms. The governance of quality in the chain by giant global retailers meant that salmon buyers were increasingly concerned with the whole chain and production process. Opportunities for SMEs remained because the price squeeze led leading firms to outsource some tasks. Those SMEs that cooperated and were able to upgrade survived in this buyer-driven chain. Successful companies moved from mass production to supplying differentiated merchandise and services.

The consequences for the Chilean poor, however, were less positive. As Phyne and Mansilla (2003) point out, much of the salmon industry is based in Chiloé, one of Chile's poorest regions. Workers became exposed to the industry's downturn and to measures to cut costs still further, such as automation of fish feeding. Conditions of work were poor, and there were few community benefits. Workers were easily dismissed, though in foreign-owned, unionized companies, wages and conditions were better. Similar developments were experienced in Chilean horticulture (Barrientos, 1997). This example illustrates the potential for GVCs to penetrate down to under-developed regions where many poor persons live and that much depends on how linkages in GVCs are leveraged for local development. Low local labour costs were a key reason for the industry's success, while investment in human development and utilities were missing.

For emerging market economies, linking to GVCs may be one solution to local and regional chain coordination problems caused by governance and market failures. They may make the difference between dynamic and pedestrian participation in a global economy.

3.2 Role of institutions: trade agreements and standard setting

Agriculture remains the most protected sector in many developed and developing countries, which makes it difficult for the latter to enter the foreign market. Continued protection of agriculture in OECD countries hampers export growth of some developing regions. Average applied tariffs on agricultural imports from developing countries are estimated to be 12 per cent in the United States, 20 per cent in the European Union, 17.5 per cent in Canada and 22 per cent in Japan.¹⁰ Tariffs applied by developing countries can also be high representing a constraint on expansion of South-South trade (FAO, 2004).

Besides much higher tariff barriers than those facing other sectors, there are quota restrictions, tariff escalation and a plethora of non-tariff barriers. Tariff escalation is pronounced in agriculture commodities, such as meat, sugar, fruit, coffee, cocoa and hides and skins, which are important to

¹⁰ Note that these averages provide only broad indication of relative tariff incidence and can be influenced by composition of trade flows by country and goods.

many of the poorest developing countries.¹¹ The food-processing industry includes some of the highest tariff escalation and tariff peak levels. Tariffs on fully processed foods in many cases are more than double these on basic food commodities. Tariff escalation discourages investment in agricultural processing in developing countries as well as blunting efforts to reduce dependence on primary commodities and diversifying into more highly valued products (FAO, 2004).¹²

Agricultural support measures and exports promotion policies in developed countries also distort trade and dampen international prices, to the detriment of developing country producers. These constraints lead to lower rates of export and agricultural growth than could be reached otherwise in LDCs and Africa (Gibbon and Ponte, 2005, p. 39).

A growing number of preferential trade agreements (PTAs) offer duty-free and quota-free access for LDC exporters to some developed country markets. Although opportunities for LDCs to expand their exports such as the European Union's Everything but Arms' initiative, have been underutilized in many cases (FAO, 2004). Some regional and bilateral trade agreements of the European Union and the United States with developing countries have provisions on rules of origin (RoO), which allow tariff and quota free access for developing country producers, provided their exports use importing countries yarn, fabrics and dyeing such as, the trade agreement of the United States with Singapore and the African Growth and Opportunity Act (AGOA). In some cases, RoO were complex, creating spaces for manipulation and have adversely affected competitiveness of producers, forced by RoO provisions to use fabric that is more expensive. They have constrained developing country producers to create backward linkages with the rest of the economy as well as to upgrade and diversify in the sector.

Such trade agreements may help the creation of alternative value chains and networks, thus creating more scope for developing country firm industrial upgrading within value chain. But recent studies also point out that regional cooperation on provision of regional public goods offers greater promise than regional trade agreements. The increase in cross-border interactions among neighbouring countries increases demand for the provision of regional public goods in a variety of areas such as market integration, environmental issues, technology transfer, regional transportation and telecommunication

¹¹ Tariff levels depend on the level of processing.

¹² According to Winger and Wall, 2006, p. 23 tariff data on 22 countries show that the average tariffs on fully processed products exceed those on primary products. This can range from two per cent for the United States to more than 40 per cent for Turkey. The average tariffs range from 30 per cent on fully processed goods to 20 per cent on horticultural products, 18 per cent on semi-processed items, and 17 per cent on primary products. Most countries have no tariff on raw cocoa beans, with the exception of Australia with an *ad valorem* tariff equivalent of one percent. Moving up the processing chain, *ad valorem* tariff equivalents tend to increase, with those on chocolate and other cocoa products ranging between 15 and 57 per cent. Tariff escalations exist in other commodity sectors such as coffee and oilseeds.

networks, technical standardization and harmonization, different custom and clearance procedures, and coordination of policies and programmes.

Standards may present a major barrier to market access for developing country producers, especially for small farms and SMEs in the current global setting. The reasons are several. One is that the scope of standards has broadened because they have been used increasingly to differentiate products and to add value to them in the eyes of consumers. This has resulted in an extended range of issues addressed by standards and various forms of certification, such as food safety, quality standards (ISO 9000), environmental standards (ISO 14001), labour standards (SA 8000), use of energy, water and other natural resources and recycling and re-use of material. In the agri-food system, standards also relate to production, handling and processing, which are designed to ensure that products meet certain desired physical characteristics, particularly product safety (Humphrey and Memedovic, 2006).¹³ The second reason is that food safety is viewed as a product of the value chain as a whole, from primary production to supply to the consumer. This means that risks have to be managed at all points in the value chain and traceability guaranteed, so that a particular product's chain history can be reconstructed. Strict process controls in the industry require a paper trail, and therefore literacy and an ICT infrastructure. They place increased demands on the physical testing infrastructure in terms of technological intensity and minimum costs of entry. This calls for collaboration between industry associations and the government.

Third reason is that complexity of the standard setting and enforcement has become higher. Standards can be set and enforced from inside the chain by some enterprises or their groups, or outside, by external agents, through international agreements (Humphrey and Schmitz, 2008). A combination of the two is also possible. The lead firm in the chain can impose standards outside the chain. In agri-food, standards can be created, adopted, applied and verified by different agents — private, public and collective — at different points in GVCs. In the fruit, vegetable and fish supply chains, for example, standards are created by a private organization (EUREP — association of European fresh produce importers and retailers) and adopted by its members, which is a process standard, enforced by certification of farmers. Private standards are related to introducing a label as guaranteeing superior safety, quality and environmental standards, through monitoring and certification of suppliers. Examples of standards developed by groups of firms and business associations include the EurepGAP standard,¹⁴ British Retail Consortium standard for food processing and Franco-German International Food Standard.

¹³ Hence the transition from product to process controls (standards) or adoption of management practices for the prevention and control of food safety hazards, with adoption by many countries of HACCP in food processing.

¹⁴ EUREP is an association of European fresh produce importers and retailers.

Standards can offer potential benefits for developing countries. They can be a source of technology transfer. They can be a means of monitoring markets, obtaining information on competitors and rationalizing costs, based on codified best international practice. Standards can help to cut technical transaction costs, information asymmetries and uncertainties between seller and buyer. Standards can even foster innovation and force developing countries to undertake such difficult tasks as upgrading skills and capabilities, mastering new techniques and setting up institutional infrastructure for accreditation, metrology, standardization and technical support and information.

With standards a new demands are placed on the physical testing infrastructure. The quality infrastructure provides a dual function: assurances to producers about the quality of inputs they use and safety of the products they sell and assurances to buyers through regular inspections of producers and products.

So standards and quality infrastructure can play a contradictory role. They can be used as a key performance indicator and driver for stretching suppliers' capability growth. They can also impose costs and barriers to entry. Costs of setting standards, knowledge about them, and certification by international standards agencies can be four to seven times more for SMEs than for large firms. If these costs are too high relative to the economic and export size of a country, standards can become a barrier to exporting. The emerging standards' environment can undermine commodities and state marketing boards as a channel for linking local farmers to global markets and standards.

For the leading buyers in GVC, standard setting and enforcement along the chain are costly, because they require asset-specific investments in relationships with specific suppliers. Such investments raise the costs of switching suppliers. Why, then, are lead firms prepared to incur such costs? Humphrey and Schmitz (2008) outline three reasons: product differentiation strategy, bundling of services with products and risk control. Products may be differentiated by changes in their design or in how they are made or delivered, or in their constituent components when they include services. The need for value chain governance increases with product differentiation, because buyers have to provide specifications of design parameters, or process parameters. This can have implications along value chains, so coordination of the chain is required.

Product differentiation can drive the specification and enforcement of process standards. Products may be differentiated according to a range of factors including claims about immaterial values such as origin, justice, beauty, health and environment, attributed to the product or by quality concerns related to the emergence of 'credence goods', which have been described as follows (Humphrey and Memedovic, 2006):

“A credence good is a complex, new product with quality and/or safety aspects that cannot be known to consumers through sensory inspection or observation-in-consumption... The quality and safety characteristics that constitute credence attributes include the following: food safety; healthier, more nutritional foods (low-fat, low-salt, etc.); authenticity; production processes that promote a safe environment and sustainable agriculture; “fair trade” attributes (e.g., working conditions)” (Reardon *et al.*, 2001).

A claim about such a good requires that it be made in a way that ensures the credence characteristics are present. Control of production processes becomes particularly important because some credence characteristics cannot be verified by inspection of the product. Therefore, the buyer must be provided with assurances about the process in order to establish the claim.

Product and process standards in value chains are associated with the risk control (Humphrey and Memedovic, 2006). Suppliers may be required to introduce specific quality management procedures as precondition of entry to their value chain. Concerns about product safety, as well as labour and environmental standards, expose lead buyers to the risk of loss of reputation when shortcomings are found in their suppliers. This creates the need for value chain governance. The risk of supplier failure is about maintaining high quality and well-defined images of brands, as an important element of many lead firms’ corporate strategy. In general, lead firms are interested to cut these costs and shift these tasks to other agents or outside the chain. As standards become more generalized and harmonized, external systems of enforcement may develop and gain credibility, leading to the reduced costs for monitoring, certification and governance in the chain.¹⁵

There is no single tendency for standard setting in GVCs: its costs and inflexibilities have to be weighed against the capabilities it offers for product differentiation and risk cutting (Humphrey and Schmitz, 2008). For global buyers, the value chain governance challenge is to maintain sufficient control over the value chain while lowering costs. The trade-off is likely to be expressed in different varieties of inter-firm governance in value chains. For small farmers and SMEs, the risk is exclusion and marginalization from agribusiness value chains, because large suppliers may favor small numbers of farms that can meet demand for quality and quantity.

For small farms and off-farm processors there are a number of critical questions:

- What type of support is appropriate for SME or small farmers so that they can meet standards requirements?

¹⁵ Various countries have tried to develop equivalent standards recognized by EurepGAP (see also footnote 29), so that they can meet its requirements while some of the elements of the standard to the conditions of national agricultural systems. The certification system is based on both accreditation of certification bodies and recognition by EUREP of equivalent standards. Harmonizing dozens of national food-safety systems will reduce the cost of monitoring and certification, long before legislators can do so under the *Codex Alimentarius* or WTO.

- What type of national standards is needed to be developed: for foreign, national and both markets or, alternatively, should national standards be established as a subset of international standards?
- What is the role of government in enforcing standards? How can affordable certification be developed in line with internationally recognized standards and can the costs of adjusting production systems to the new requirements be bared?

The case of Africa

In the most comprehensive, thoroughly researched study of agri-based global value chains in Africa, Gibbon and Ponte (2005, pp. 197-203) argue that many raw-material-producing countries in Africa have ‘traded down’ during the last half century. They simply have either been excluded or marginalized in world markets or have specialized in traditional variety or quality profiles or in more competitively priced products that are basic in quality. This is the result of a failure to meet new world-market expectations of product quality, volumes, lead times and prices, as well as from failure to shape the standards that characterize the new value chains to their advantage. Trading down also represents a prescriptive approach that recognizes this marginalization but argues, nevertheless, that companies in Africa can develop effective links to GVCs, based on high levels of specialization, economies of scale and simple and labour-intensive technologies, with products aimed at mass markets through large-scale retailers.

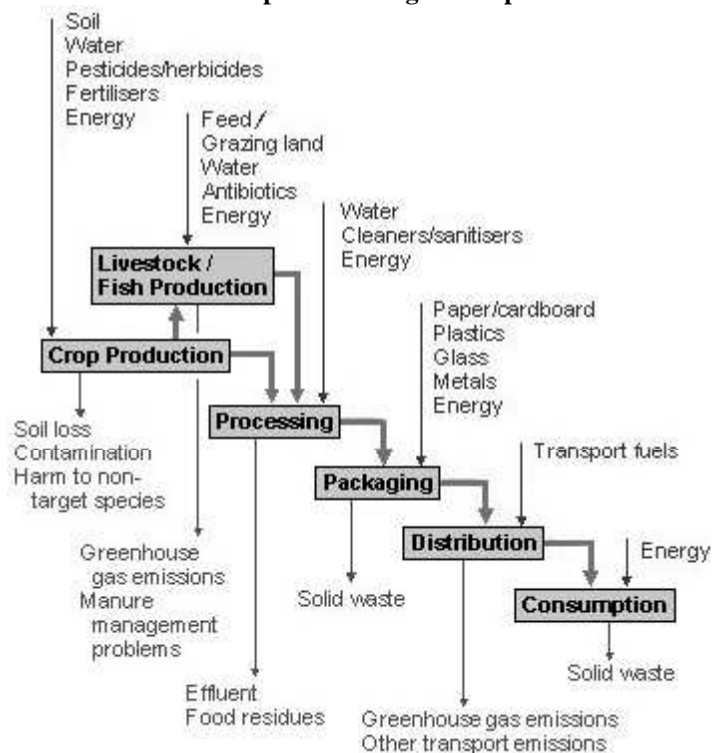
This is in contrast to ‘trading up,’ a strategy commonly seen in the global market place as essential to compete through developing flexible production systems, high value niche exports, upgrading technologies, multi-skilling employees and networks of SMEs (Gibbon and Ponte, 2005, pp. 202-203). Many countries have pursued trading up in recent decades, as they try to develop more commanding positions in world markets. The extent to which developing countries are able to pursue such strategies varies enormously depending on investment histories, skill bases and enterprise development trajectories.

Where African countries have succeeded, it has been through enterprises that have ‘traded down’ to increased specialization in competitively priced products or, in some cases, simply through passively accepting price premiums associated with traditional qualities or varieties. The scope for ‘trading down’ as a positive strategy should not be underestimated. Reaching economies of scale and fairly high specialization based on simple and labour-intensive technologies has enabled many Africa-based enterprises to gain footholds in GVCs focused on mass markets, competition through price and geographical spread of production. Gibbon and Ponte argue that these ‘Chinese-style’ approaches aimed at mass markets show better the realities of African endowments than do trading up strategies.

3.3 Environmental concerns

Analysis of the agri-food system contribution to economic development and poverty reduction should also take into account environmental concerns. Uncontrolled use of pesticides and fertilizers with heavy metals, as well as unsustainable agricultural practices aimed at higher agricultural yields, can have significant environmental consequences (see Figure 5).

Figure 5 Environmental impacts from agri-food production



Source: UNEP, 2000: <http://www.agri-food-forum.net/issues/index.asp> accessed 4/04/2009.

Depletion and natural resource contamination occurs throughout the agri-food value chain. Key environmental impacts from agri-food production such as exploitation and depletion of fisheries, deforestation and soil and water degradation and contamination, can lead to food insecurity, carbon emission escalation and loss of biodiversity.

The unsustainable use of natural resources has a direct impact on the livelihoods of rural poor. Over-fishing in coastal areas of the Philippines offers one example. Agricultural markets' protection and overproduction have worsened the position of small farmers. The pursuit of new global opportunities can lead to a reallocation of resources to the detriment of the poor. Extraction of groundwater for vegetable production export in Kenya, for instance, has a negative impact on those downstream in the value chain (Farrington J. and J. Mitchell, 2006).

Although the international community contributes to addressing these environmental issues through international agreements policy guidance, information exchange and capacity building, much of the price of conserving the environment is still being borne by the rural poor. There is a need for innovative collective actions to deal with these issues. New incentive mechanisms for environmental services that go beyond the now conventional consideration of carbon sequestration to other forms of environmental service and strategizing responses to climate change are required (Farrington J. and J. Mitchell, 2006). The needs of small farms in terms of investment in new practices and technologies for natural resource management in order to preserve natural base should also be targeted (Barrett and Brown, 2002, pp. 6-7).

Requirements for sustainable agriculture can be introduced into agri-food supply value chains, as a response to pressure from civil society and state regulation, or retailers' requirements. Retailers can use private process standards to set up technical norms and to cut transaction costs. For them, standards can be a strategic instrument to achieve product differentiation and strengthen their governance over agri-food supply chains, which can lead to market control, sharp competition and small farmers' marginalization. In pursuing their strategy of sourcing more sustainable products, leading food processors and retailers can transfer compliance costs and risks to suppliers, favouring well-capitalized farms, and, thus, negatively affecting small farmers' downstream linkages (Reardon *et al.*, 2001; Vorley 2001).

Supporting small farms and off-farm value chain participation, linking farmers to markets, enhancing the capability to adapt to standards and changes in demand and incorporating fairness in trading as a corporate standard are key issues to foster less-exclusionary global value chain practices for agri-food products.

Climate change and agri-food value chain

Emissions of carbon dioxide, methane and other greenhouse gases are changing the world climate and present new challenges for agriculture (for instance in the form of solar radiation, temperature, precipitation and the like). Climate change is considered to impact significantly on food supply and security. The effects include a shift in climate and agricultural zones toward the poles, changes in production and precipitation patterns and increased vulnerability of the landless and poor. Stability of global food supply will therefore, be affected by higher climate variability and extreme weather, as well as higher crop vulnerability to infection, pests and weeds.

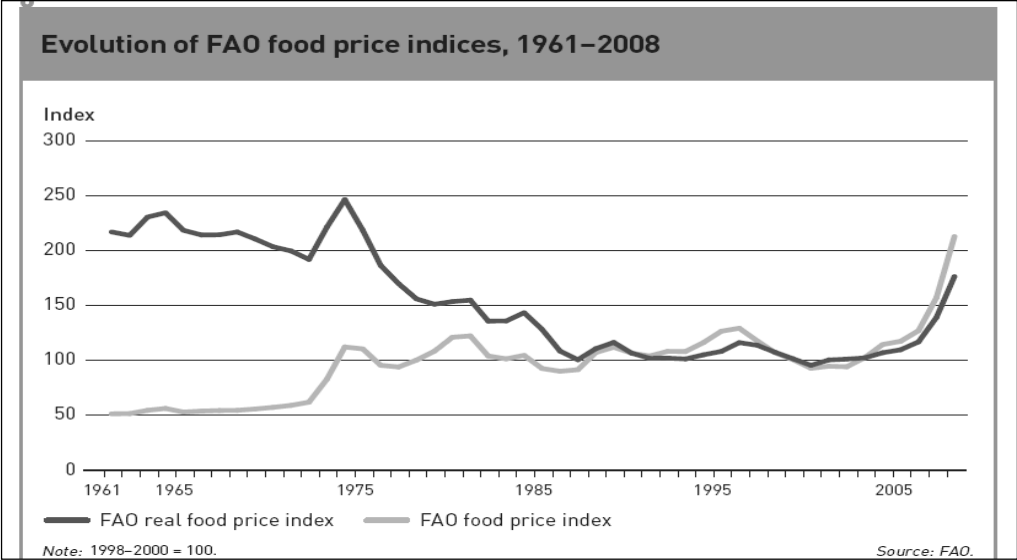
Developing countries are more vulnerable to climate change because of their location in mostly lower and warmer latitudes as well as lack of adequate resources to deal with the effects of climate change.

The most negative impact will be in areas where food production is already deficient. It has been estimated that agricultural production may fall by 30 to 40 per cent in India and 20 per cent or more in Africa and Latin America by 2080. The area most severely affected by declining agricultural production will be sub-Saharan Africa, where countries such as Senegal and Sudan and could face agricultural collapse, with a decline in food production of more than 50 per cent (Cline, 2004).

3.4 Rising food prices: drivers and effects

Food prices have always been subject to fluctuation, but the recent sharp rise in real food prices is considered unusual. According to the FAO price index, nominal prices doubled from 2002 to 2008 (Figure 6).

Figure 6 Food price indices, 1961-2008



Source: FAO 2008b.

In the real terms, food prices were four per cent more by mid-2008 then those in 2002. What are the factors causing the recent souring food prices? Various long and short-term demand and supply side factors are discussed in the literature. On the supply side, the following factors have adversely affected food supply and pushed food prices up are following (Rome FAO, 2008b, pp. 101, 107, 109, 116):

1. “Cereal stock cuts by major producers:” The world’s major cereal producers, such as China, the European Union, the United States and India, decided to cut their cereal stocks, thus contributing to the higher risk of food supply shortages in times of production shortfall, which can be caused by such ephemeral factors as extreme weather conditions. In 2006, droughts and floods resulted in a fall of the world’s cereal production by 6.9 per cent.
2. “Extreme weather events:” Extreme weather events are predicted to rise because of global climate change, thus contributing to higher price volatility in world food markets.

3. “Oil prices:” Energy prices more than tripled over the between 2003 and mid-2008. The increase has resulted in higher costs for agricultural production, due to the higher prices of material inputs such as fertilizers and chemicals produced from petroleum as well as transport, resulting in an upward pressure on food prices.

Growth in demand has coincided with cyclical and temporary factors adversely affecting supply. The demand factors are following:

- “Consumption pattern changes:” The higher economic growth in many developing countries has increased the purchasing power of their populations and with it, the consumption pattern in favour of more nutritious food products. Starch is replaced by more meat, dairy and vegetable oil products, which are dependent on cereal inputs.
- “Biofuel demand:” Increasing demand for biofuel stock has in turn increased the demand for agricultural commodities such as sugar cane, maize, cassava, oilseeds and palm oil, and has changed land use to produce crops for biofuels, contributing to the soaring food prices. It is estimated that the biofuel market consumed some five per cent of global cereal production in 2007-08.
- “Trade policies:” Some governments have tried to mitigate the impact of rising food prices by introducing export restrictions and bans on certain food commodities, thus reducing local producers’ incentives to increase their output as a response to higher global food prices. So, supplies remain low and prices high.
- “Speculative actions by large importers and financial investors:” Turmoil in financial markets may also have affected food prices. Financial investors have been involved in derivative markets in agricultural commodities expecting to achieve better returns than those from traditional assets. Speculative actions of pre- and re-stocking by large importers may also have contributed to soaring food prices.

It is estimated that the consequences of the soaring food prices will be felt in the increasing number of those suffering from chronic hunger¹⁶. At regional level, Asia, the Pacific and sub-Saharan Africa, which accounted for as much as 89 percent of those suffering from hunger in the world in 2003-05, will be the most affected. The prevalence of hunger and under nourishment raise the probability of a global food security crisis making the internationally agreed target of 420 million undernourished persons by 2015 difficult to achieve (FAO, 2008a; pp. 9-11).

¹⁶ The number of undernourished was more than 80 million higher in 2007 than in 1990-92.

3.5 *Looking to the future*

Work by Grievink *et al.* (2002), Humphrey (2005), Humphrey and Schmitz (2008) and Wilkinson (2008), identifies some main trends in the global agri-food value chain underscoring likely scenarios including:

- Further structural changes in the agri-food system, especially in developed countries, characterized by high dynamism and concurrent industrialization and de-industrialization, often referred as food manufacturing and food service
- Further development of vast information-technology-based systems, with buyer interest in speed and flexibility growing with ICT uptake and outsourcing and offshoring of fragments of innovation processes developing rapidly but integral product architecture still needed in some sectors
- Direct parameter setting and enforcement by lead firms continuing to be important in value chains
- Further efforts to satisfy consumer needs, especially those for ‘intangible’ values inherent in food
- Strengthening of TNC power and involvement in each stage of the agri-food system and further concentration along the value chain, especially in knowledge-intensive segments
- Concentration in retailing leading to concentration in sourcing makes economies of scale in chain governance easier to exploit with cost of developing procedures and control systems not increasing in relation to the number of suppliers supervised
- Faster growth of ‘non-traditional retail formats’ and spending on eating out in the catering industry
- Brands continuing to be important in enterprise strategy and parameter setting, so that markets may be dominated by 20–25 global brands
- Further development of local market niches serving the growing number of opponents of internalization of consumer behaviour, and
- Late and late-late developers achieving a comparative and competitive advantage in supplying global food chains.

4. Role of small farms and small- and medium-sized agribusiness for agri-food development and poverty reduction

Small farms and access to arable land are at the centre of the debate on the contribution of agricultural growth to poverty reduction.¹⁷ This is because the smallholders make up the lion’s share of farmers in developing countries — 85 per cent have farms with less than two hectares (World Bank, 2008, p. 90)

¹⁷ What is a small, medium or large farm is highly context-dependent and, therefore, not defined here. Most countries have their own definitions.

— and small farms are a continuous major source of jobs for the rural economy work force (Lipton, 2005).

Where land is fairly equally distributed (for instance in parts of Asia such as Indonesia and Vietnam and in Africa such as Burundi, Ghana, Rwanda, Tanzania, much of francophone West Africa and Uganda), agricultural growth based on small farms tends to have a greater effect on poverty than where landholdings are unequally distributed, such as in large parts of Latin America and parts of Africa (for instance, the former settler economies such as Malawi and Nigeria). The negative relationship between land distribution inequality and agricultural productivity has been confirmed by Vollrath's analysis (2007). Literature on agricultural productivity shows that there is an inverse relationship between farm size and factor productivity (Berry and Cline, 1979 and Carter, 1984, in World Bank, 2008, p. 90) providing the rationale for land access policies in favour of small farms or smallholder farming.

Farms with less than two hectares are increasing in many developing countries, especially in Asia while the average farm size is rising in the developed countries (Future Agricultures, 2005). As an organizational unit in agriculture, small farms or smallholder farming, have some advantages. They can employ family labour and a limited amount of hired labour, thus avoiding labour supervision problems, as well as use land more intensively. They can draw on local knowledge and provide food for themselves, thus cutting market transactions required for survival.

By contrast, the advantages of big farms are better access to manufactured inputs, technology, markets and technical services as well as greater ability to cope with quality assurance and manage risks¹⁸. Why, then, is the share of small farms rising? Market imperfections combined with population growth and inheritance systems can work against concentration of land ownership over time. There are other values attached to land such as social insurance, a basis for diversified livelihood portfolios and a fallback when life is difficult.¹⁹

In developing countries and in LDCs, many governments' efforts to promote large-scale farming have resulted in non-sustainable outcomes, especially in sub-Saharan Africa. In China and the former Soviet Union, collective farms as an organizational model in agriculture failed. On the other hand, government efforts that promoted small farms, such as in Asia, succeeded to use agriculture as engine of growth, as well as a basis for industrialization (World Bank, 2008, p. 91). But small farms, especially those more market than subsistence oriented, face several major challenges.

¹⁸ Colin Poulton, and Steve Wiggins, "Is there a future for small farms?" Overseas Development Institute; http://www.odi.org.uk/events/FutureAgricultures_2005/

http://www.odi.org.uk/events/FutureAgricultures_2005/meeting_2dec/index.html *ibid.*

¹⁹ *Ibid.*

Firstly, the modern agri-food system tends to be hostile to small farmers (Maxwell and Slater, 2003). Supply chains and supermarkets' buying agents prefer large- and medium-sized suppliers, who are capable of delivering quality products in large volumes. Although there are exceptions, as in China and Vietnam, where small farms are the norm, supermarkets adapt to this situation (Cadilhon *et al.*, 2005), or when there is a demand for niche and speciality products that can be supplied by small farms.

Secondly, changes in supermarkets' procurement practices favour larger food processors' suppliers and one-stop shopping, as they can reach economies of scope by supplying a diversity of products and lower transaction costs for the entire value chain (Reardon and Timmer, 2005, p. 63). Raising competition from supermarkets can push small retail stores and processors out of the market place but can also stimulate them to improve their capabilities.

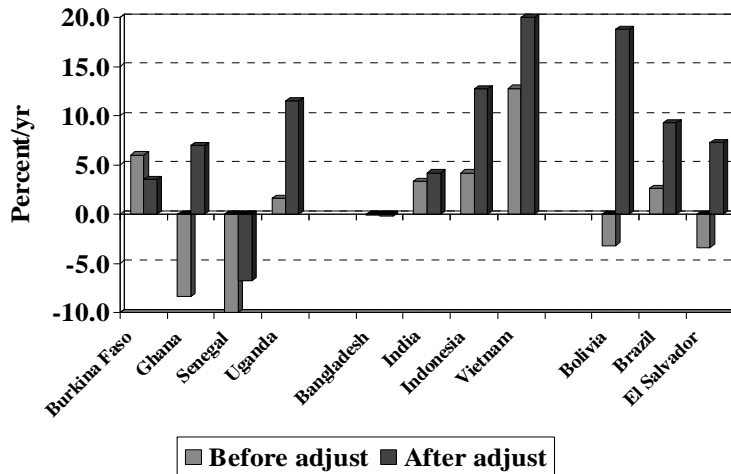
Thirdly, credit and insurance markets are biased against small farms and small agribusinesses, thus preventing them to invest in capital-intensive technologies. Larger farms can use more fertilizer and other material inputs, thus achieving higher gains in cereal yields, as shown by the experience of Brazil and Chile. Another important limiting factor is that, in some parts of the world, the rural labour force has been decimated by HIV/AIDS, with little investment in labour-saving technology to substitute (Future Agricultures, 2005).

Fourthly, large farms can cope better with price changes. Agricultural commodity prices follow a downward trajectory. It is unlikely that this trend will change because of growing Asian demand, unlike the case with minerals (Kaplinsky, 2005). Pursuing a policy mix of closed-protected markets and subsidies for production inputs that favour small farms is less permissible to developing countries under the current world trade regime than before, but the intensification of cereals production on small farms proves to be possible in the current trade regime.

Fifthly, it is easier for medium-sized and better-capitalized large farms to take advantage of export, or cash crop markets, which may provide more dynamic, diverse demand than producing for local markets (see Table 9) and can stimulate diversification within and from agriculture (Ellis, 2000). This is of relevance for the more agrarian LDCs, and agriculture commodity-dependent developing countries, where exports make up a substantial share of agricultural income growth, especially after the liberalization reforms resulted in disbanding state trading or export monopolies suggesting that agricultural growth is driven by exports in these countries (Figure 7). As data show, agricultural income

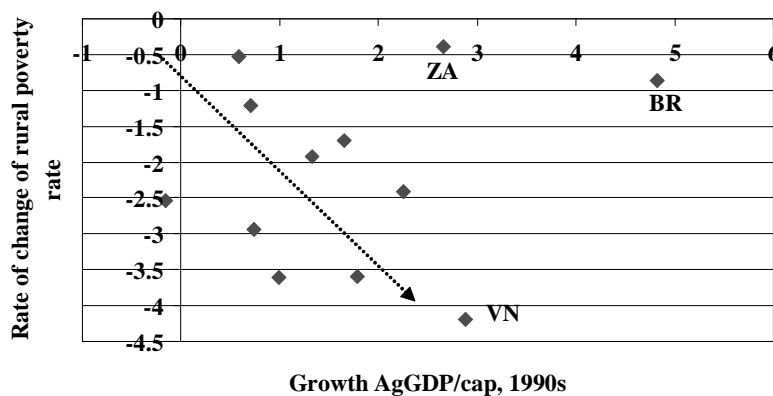
growth is often closely correlated to poverty reduction, especially in countries with low-income levels (Figure 8).²⁰

Figure 7 Growth rates of agricultural exports ten years before and after reforms



Source: World Bank, ARD, 2005.

Figure 8 Growth of agricultural GDP and rate of change of rural poverty

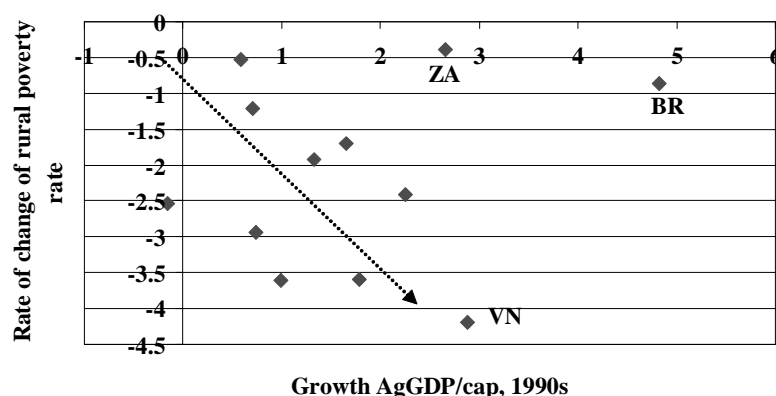


Key: ZA Zambia; VN Vietnam; BR Brazil

Source: World Bank, ARD, 2005.

²⁰ However, there are regional variations. In Latin America, for instance, high asset inequality levels mean that agricultural income or output growth is not a great poverty reducer. In addition, the long-term adverse terms of trade for agricultural commodities make reaching poverty reduction goal for many poor countries that are continuously dependent on agricultural commodity exports (for instance, 45 per cent of African export earnings and 68 per cent of LDCs were dependent on just one or two commodities at the turn of the century, Page and Hewitt, 2001), extremely difficult.

Figure 9 Growth of agricultural GDP and rate of change of rural poverty



Key: ZA Zambia; VN Vietnam; BR Brazil

Source: Word Bank, ARD, 2005.

Table 9 Changes in sources of income in Zambia in the 1990s

	<i>Small-scale farmers</i>		<i>Medium-scale farmers</i>	
	<i>1991</i>	<i>1998</i>	<i>1991</i>	<i>1998</i>
Food crops	77.6	40.9	75.2	18.7
Cash crops	3.8	5.9	4.3	60.2
Livestock	3.8	6.2	8.7	4.0
Non-farm business	1.5	24.2	1.2	11.1
Wages	12.7	11.0	9.6	3.1
Other	1.9	11.9	1.0	2.9
Total	100.0	100.0	100.0	100.0

Source: Word Bank, ARD, 2005.

4.1 How significant are global agri-food value chains as stimulants for agricultural growth and, therefore, poverty reduction?

Little published information, directly relates the benefits of being part of GVCs to SMEs, but other more general references to the benefits of supplying TNCs are discussed below. Among the advantages described by Kaditi and Swinnen (2003), the most important benefits of TNC subsidiaries are spearheading industrial restructuring in the host country through transfer of technology and management skills (Fellows, 2005). This forces local companies to adopt similar improvements in order to stay in business. Moreover, foreign subsidiaries act as demonstrators for local producers or directly help them, by providing technical or managerial training. In Central and Eastern Europe, Kaditi and Swinnen (ibid.) reported that rapid growth by local affiliates of food processing TNCs led to improved technical and managerial efficiency in former state-owned industries, new products and better marketing in domestic and export markets. There were also improved linkages between agricultural producers and food industries.

Besides creating direct jobs, TNCs create indirect jobs by purchasing goods from local suppliers.²¹ Supporters of globalization argue that, even if TNCs move their operations to new countries, local labour force can benefit from training and acquired skills can be transferred more widely in the local community (Kolodner, 1994). Local companies can learn about international trading opportunities from TNCs. Studies carried out in Hong Kong, Special Administrative Region, Taiwan Province of China, and Mexico show that local firms are more likely to develop their own export activities after TNCs had passed on a greater understanding of world markets (Hilary, 1999).

TNC supporters argue that TNC-mediated technology transfer enables communities to develop their own industries and that TNC linkages with local suppliers contribute to their productivity and their capability to supply other customers, thus underpinning future economic development (Kolodner, 1994). The 1998 Geneva Business Declaration states, “Multinationals have a well-proven record of improving social and environmental conditions in countries where they invest.” One UN report agrees that TNCs, “generally treat their workers better than do local firms” (Hilary, 1999). TNCs almost always pay higher wages than local firms.

Studies also report that participation in GVC raises small farmers’ income as much as 100 per cent and contract farmers reach significantly higher income than other farmers (Flores *et al.*, 2006; Ramaswami *et al.*, 2006 and Simmons *et al.* 2005, in World Bank 2008, p. 127). But small farms and small producers in rural non-farm economies cannot always respond to the opportunities created by GVCs. For them, access to GVCs in such traditional commodities as coffee, cocoa, tea and cotton and such higher value-added agricultural products as fresh fruits, vegetables, flowers, meat, dairy products, fish and shrimps, is not so easy. Rapid changes in international demand patterns for new goods, specified qualities, volumes and delivery times and new uses for established products can be difficult to respond to. Constraints include low technical and managerial skills, expensive and inadequately supplied inputs, low research and development (for instance on better seeds and planting materials), inadequate product and process innovation and lack of finance. These producers need to be better linked to promising GVCs while the terms on which they are incorporated need to be improved (Farrington J. and J. Mitchell, 2006).

International support to agriculture in developing countries has declined over the last 20 years (DFID, 2005b). Developing-country producers find it difficult to respond more vigorously to the shifting

²¹ For instance, Cargill, an international producer and marketer of food, agricultural, financial and industrial products and services, founded in 1865, employs 160,000 people in 67 countries; In 2008 fiscal year, Cargill reported net earnings of US\$ 3.95 billion on sales and other revenues of US\$ 120.4 billion.

demand patterns, not only abroad but at home, because of the developed agricultural markets' protection, especially for processed food in both developed and developing countries.

Given the above reasons, the potential role for regional and local value chains should be considered. Speed of urbanization and emergence of local middle and upper classes in many developing countries mean higher demand for meat, dairy products and fresh vegetables and fruits implying that national and local value chains can be potentially significant as stimulants for agricultural growth. This is especially true in countries with large domestic markets. But even in such smaller economies as West African states (Snrech, 1995) the growth of towns and more intensive areas of settlement create substantial opportunities for farmers. Local firms and farms can apply lessons learned from their participation in GVCs to supplying local markets: for example, where there is a tourist industry, such as Kenya (Minot and Ngigi, 2004) or growing urban middle-class markets with concerns for quality, reliability and volume.

In many developing countries' local or regional value chains, there are fewer barriers to entry at each point in the chain than in GVCs. So, in principle, producing for a growing and dynamic national market could provide more ready opportunities for poor farm households or agricultural firms than gaining access to global markets. Where farms are remote from urban markets and infrastructure is poor, there may be little domestic comparative advantage in producing some food crops and farms can find it difficult to compete with imports under liberalized trade regimes. In this case, it may be more profitable in remote regions to focus on high- or even low-value exports to world markets.

In the end, there is no escape from global agri-food value chains. The global approach to retailing is spreading rapidly in developing countries (*Development Policy Review*, 2003), and is blurring differences between local, national and global markets. Supermarkets now supply a growing share of food bought by wealthier consumers in developing countries. The consequences are serious for all farmers, especially for those seeking to sell their products in local markets. In countries where supermarkets have reached significant market penetration, even poor rural households buy their staples from them, since supermarkets can supply more cheaply as they usually source from large-scale commercial suppliers rather than from small farms.²²

4.2 *The post liberalization context*²³

There are more than 50 developing countries dependent for most of their export earnings on three or fewer agricultural commodities. Many of these are LDCs or small economies heavily commodity-

²² E.g. research by Andries du Toit *et al.* at the University of Western Cape, South Africa (see www.chronicpoverty.org)

²³ Liberalization here means IMF/WB-style reform agendas and WTO-inspired policies.

dependent, in some cases on only one commodity.²⁴ In sub-Saharan Africa, 45 per cent of export earnings are derived from primary commodities. Commodity dependence leads to persistent exposure to economic and other shocks, such as fluctuations in world prices and climatic or environmental hazards. Moreover, most of these countries lack such means as safety nets, forecasting technologies and other information systems to manage the shocks they are exposed to.

In theory, the freer trade regime under the WTO should be favourable to poor, commodity-dependent countries, small producers and poor labourers. In practice, however, several factors in the current international trading system have run counter to their interests (Gibbon and Ponte, 2005, p. 72):

- Synthetic substituted for natural products
- Overproduction's impact small farmers, with poorer, commodity dependent countries facing ever-stiffer competition as other producers have entered their export markets, horizontal expansion of commodity production leading to a relentless production increase, often ahead of demand, resulting in saturation of markets, recurring slumps and booms and long-term decline in commodity terms of trade, especially pronounced since the 1980s.
- Over-supply of world markets causing a decline in terms of trade, with demise of international commodity agreements resulting in lack of means to regulate supply. Public, often internationally financed, agricultural projects having helped new countries' entry into commodity production ahead of demand, contributing to oversupply and ensuring that consumers are the major beneficiaries of agricultural development in developing countries, new countries able to produce more cheaply, while 'old' producer countries having to adjust production systems or go out of business, over time, contributing to a concentration of production in some countries, developing countries compensating for less favourable terms of trade by increasing production and exports although, many LDCs being unable.
- Increasing food import bills, especially in LDCs, resulting in food imports exceeding the value of agricultural export earnings and food import growth exceeding GDP growth with the share of gross food import bills in GDP more than doubled for an average developing country, over the past three decades, being most pronounced in LDCs, where the value of food imports rose from some one to over four per cent of GDP.
- Countries finding it difficult to compete with internationally procured food, public international food aid paving the way by introducing imported food commodities that have gradually

²⁴ As many as 43 developing countries depend on a single commodity for more than 20 per cent of their total revenues from merchandise exports. Most of these countries are in sub-Saharan Africa or Latin America and the Caribbean and depend on exports of sugar, coffee, cotton lint or bananas. Most suffer from widespread poverty. More than three-quarters of these 43 countries are classified as LDCs, where annual per capita GDP is less than US\$ 900. Furthermore, recent data shows that few of the countries concerned are reducing their commodity dependency. In 14 of them, dependence on a single agricultural commodity actually increased between 1986 and 1988 and 1997 and 1999. Only seven succeeded in reducing their reliance on a single commodity.

changed consumers' taste and demand pattern, urban consumers shifting away from consumption of coarse grains and tubers or locally produced rice in favor of imported food staples, international markets setting taste and quality standards for all markets, which, combined with deregulation of food import markets encouraging food import bills to increase faster than export earnings or GDP growth in LDCs.

4.3 Institutional gaps

Following liberalization and deregulation policies, the withdrawal of state intervention, such as protection, subsidy, state enterprise, and marketing boards, from agricultural markets has been uneven, especially in developing countries. State action has not only monopolized purchase and sale of commodities but provided credit for purchase of inputs and agricultural extension services to farms, to counter market failures in these activities.

Marketing boards have often failed to be replaced either by private sector or other public action or, if so, it has been patchy or slow. Although the private sector was expected to emerge to fill the gap, in practice, there have been constraints on private investment. Demand for private ancillary services from small farmers has been weak because they usually lack access to adequate working capital, while emerging credit markets have failed to cater to their needs. At the same time, public investment in agricultural research and extension has been falling at national level. Despite evidence of high returns on capital invested in these activities, investment has favoured urban areas, while most countries have ignored their agricultural sector during the last three decades (Timmer, 2005, p. 9; DFID, 2005a).

Where there are exceptions to these trends, small farm incomes have been able to grow, with the poverty of those engaged in agriculture reduced. In those exceptional cases, public agencies had played important role. One example is cocoa in Ghana, where national poverty reduction in the 1990s could be substantially attributed to growth in cocoa, a major sub-sector contributing to Ghana's economic growth, which was steered by a state export monopoly (Aryithey and McKay, 2005). The Ghana Cocoa Board retained its export monopoly, while liberalizing the internal market for cocoa and remaining an important supplier of credit to buying companies and farms (*ibid.*).

The cotton sector in Burkina Faso is another example, where slow liberalization ensured that farmers were compensated for declining prices during the 1990s to the greatest extent possible, while the Government ensured a supply of material inputs enabling cotton production to be a major contributor to poverty reduction (Grimm and Günther, 2004). Yet another example is the liberalized cotton sector in

Zimbabwe, as discussed by Poulton *et al.* 2005.²⁵ Zimbabwe was widely regarded as the star performer among liberalized cotton sectors (Baffes *et al.*, 2004). Its smallholder seed-cotton yields were the highest among six countries studied (Ghana, Mozambique, Tanzania, Uganda, Zambia and Zimbabwe), despite extensive smallholder participation in cotton production during the 1990s: It has retained a reputation in international markets for producing high quality lint. Maintaining this reputation has been of major concern to the main players in the sector, who have worried that some new entrants may be more interested in quick foreign-exchange earnings than quality. In spring 2000, under the auspices of the National Cotton Council (NCC) - a policy discussion forum established by the Ministry of Lands and Agriculture to bring together all the main stakeholders in the sector — the cotton companies were committed to follow a common grading classification and grading procedures (*ibid.*). All buyers were expected to follow this common practice.

Zimbabwe is a rare case where many producers use inorganic fertilizer and pesticide on their seed-cotton crop, which is promoted through Cottco Company's widely admired credit scheme. Established in 1992, this scheme has continued to grow despite the entry of other competitors into the output market. Gordon and Goodland (2000) note that the exceptional debt repayment rates — a claimed 98 per cent over several years — are based on strong joint-liability borrower groups, supported by extension and training support from Cottco staff but backed up by the threat of asset seizure as a last resort in case of total default. Farmers who thrive within the scheme are invited to become members of Cottco's Gold Club, where, *inter alia*, they are entitled to cash loans besides the inputs provided in kind. These scheme's characteristics are probably as important for its success as the fact that Zimbabwe has fairly few buyers competing for available seed cotton. A new entrant into the cotton sector that was running a credit scheme has achieved much lower loan-recovery rates because of widespread side selling.

The above discussion and review of experiences points to need for more attention to the nature and process of liberalization and the issues of under-provision of governance public goods, which threatens the agricultural sector development in developing countries. Better understanding is required of the role provision of public goods for agricultural income growth and rural poverty reduction, as is that of different agents in their provision. Questions that need to be addressed here include:

- What mix of rural financial services best meets the needs of the poor?
- What are the market failures and how can they best be overcome?
- What is the impact of micro-finance initiatives on poverty?

²⁵ However, with the disrupted state of Zimbabwe's economy, it may be that this success story is now historic. Poulton *et al.*, 2005, http://www.imperial.ac.uk/agriculturalsciences/research/sections/aebm/projects/cotton_se_africa.htm#d

- What has changed in the way conventional financial institutions regard the rural poor that has allowed them to become bankable and insurable?

The imperative is to find new models for collective actions that draw on past experiences, such as partnerships with private sector organizations already within the value chain. Other priorities emanating from consultations with the private sector include improvements in market information, access to production finance and product certification schemes (Farrington J. and J. Mitchell, 2006).

5. Less exclusionary supply-chain practices

This section considers approaches to improve inclusion of developing-country producers in agri-food GVCs, so that the rural poor in developing countries can gain more from current globalization. But who are the rural poor?

Escape from poverty is widely associated with the rural non-farm sector or with rural-urban migration, leaving residual, but large, populations engaged in agriculture out, since diversification allowing accumulation of capital and higher productivity is achieved by few (Ellis and Bahiigwa, 2003, Ellis and Mdoe, 2003, Ellis, Kutengule and Nyasulu, 2003, Farrington J. and J. Mitchell, 2006). Most developing-country producers are small farmers who produce a limited range of products. They are often not organized in associations that could bulk supplies into the market, or provide inputs and services. They are politically weakly represented. The poorest farm households are often in the remotest regions, with the disadvantages accumulated from inherited poverty, ill served by infrastructure, and sometimes socially discriminated. Security of food, income and social position is often at the forefront of such person's concerns, since developing country governments rarely provide much social protection. At the same time, their exposure to environmental, climatic and economic hazards may be perceived to be on the rise. As a result, small farm households' decisions about development of production and livelihood are often geared as much as to cutting risk and vulnerability as to enhancing incomes. From a potential buyer's, as well as a farmers' view there are likely to be basic obstacles to engaging small farm households in market operations.

Small farm households increasingly rely on a diversified portfolio of activities for their livelihood. This is partly because agriculture no longer supplies them with enough of what they want — in some cases cash from sales of produce, in others food security through consumption of their own production. Such reliance may also be due to an excess of labour at farm level, seasonally or permanently, which can be more profitably engaged outside the farm. However, opportunities for jobs or self-employment in the non-farm rural economy are often limited, which throws the household back on farming or leads to migration.

Migration can be a way out of poverty, with remittances playing a substantial role in reducing poverty. But, it can also remove the best quality labour from farm operations. For households that do not emerge from poverty, casual work, often in agriculture, becomes a key source of income. In considering the potential of GVCs for poverty reduction, interests of casual labourers as well as that of small farm households need to be taken into account.

To complicate matters, small farm households and casual labourers are simply aggregate categories and do not represent reality well. They can be disaggregated by gender, with evidence in some countries that casual agricultural labour has been feminised. In others, women head the poorest farm households. For some casual labourers agriculture is their main source of income, while for many individuals and households it is a subsidiary one. Farm households can be further disaggregated by age or position in the life cycle, with peasant economies increasingly characterized by ageing household heads and, sometimes large numbers of dependent children. In regions with high HIV/AIDS prevalence, many dependent children will be orphans, and orphan-headed households have become common.

Farm households are characterized by varying and changing land tenure status. This affects risk and income distribution from farming. However, poverty is not static phenomenon. Persons become poor but do find escape routes, while others remain poor, even over long periods. Participation in GVCs can provide decent wages for some household members. Most of the chronically poor, however, remain marginalized, because they often cannot satisfy quality or productivity demands by big retailers. The balance of informed, popular opinion in the developing world is that inclusion in GVCs can be on adverse terms and that it plays an insignificant role in preventing or reducing poverty. This impression needs to be qualified by further research. In the South African wine industry, for example, it is possible to identify a growing divide between the smaller number of full-time farm workers following restructuring during the 1980s and those engaged through new labour recruitment agencies, on the one hand and poorer casual labourers who have less work and possibly lower wages when employed, on the other.²⁶

Several meanings of poverty

Absolute income poverty is usually described by a poverty line, a national measure, usually calculated based on adult calorie requirements, as well as on the international standard of the purchasing-power parity equivalent to US\$1 daily. Levels of material assets can also define poverty. While poverty is not simple to measure, an understanding of income fluctuations around a poverty line and underlying asset

²⁶ Impressionistic information presented at a seminar on the wine industry at the University of Stellenbosch, Western Cape, South Africa, in September 2005. We are grateful to Andries du Toit and Joachim Evert, seminar presenters, for this information.

portfolios is a sound start. For the last ten years, poverty has been seen as multidimensional, with deprivation in human development, political voice and participation taken into account together with income deprivation (CPRC, 2004).

In an interconnected world, relative poverty and inequality is probably a more motivating concept for the poor, as far as behaviour is concerned, than absolute poverty. GVCs link poor producers with rich consumers. Relative poverty and inequality are, therefore, built into and are essential aspects of human interactions mediated by GVCs in the absence of global governance.

The following discussion focuses on conditions under which GVCs can operate to reduce absolute income poverty among all these potential indicators and without denying the significance of other ways of defining poverty. Supply chains can become less exclusionary through:

- More participation by small- and medium-scale food processors and encouragement of upgrading possibilities
- Fostering a geographical spread of enterprise and extension of value chains to under-developed regions of developing countries
- Linking farmers to markets
- Focusing on local, national, supra-national regional and global value chains
- Adapting standards to suit marginalized producers
- Encouraging product differentiation, and
- Enhancing capability to trace products to their origins.

This section reviews each of these possibilities.

5.1 Supporting small agri-food businesses participation in GVC

Small agri-food businesses often do not participate in agri-based GVCs. Where TNCs in the food sector have sought to extend GVCs to developing countries, these have been usually with the large agri-processors in a particular country, with SMEs left out by such companies. Because SMEs have been largely uninvolved in such arrangements, they have enjoyed few of the benefits arising from liberalized markets or FDI. Their profitability and market share have, instead, often been severely and adversely affected by higher competition from imported equivalent products. In many developing country markets, increased participation of SMEs requires the state to play a facilitating role. The kind of roles states could play is discussed in section three.

In many situations, the enabling environment is not conducive to SMEs. Deliberate collective actions are required to prevent crowding out of the private sector by that of the state. Where markets remain substantially non-liberalized, as in southern African grain markets, closing or changing the role of

parastatals may be required to create space for medium-sized firms. This is a politically challenging task, as it means that politicians have to sacrifice short-term gains they can make through state control over input and output markets.

As discussed above, trade and investment liberalization and privatization in the agricultural sector may work better in some cases if pursued slowly and deliberately, rather than suddenly. The cotton sector in several West African states and cocoa in Ghana are examples. In the latter, the state retained an export monopoly while opening the internal market to limited and regulated competition over two decades. This allowed Ghanaian small- and medium-sized firms to develop the capacity to purchase cocoa for sale to the state Cocoa Marketing Company, a triple A internationally credit-rated organization, which organized finance for SMEs and ensured quality control when other countries were losing capacity in these respects (Shepherd and Onumah, 2003). For cotton in francophone West Africa, state companies retained export monopolies until well into the 1990s and, then, privatized and deregulated slowly enabling the new medium-sized firms to develop in a stable and organized way, much to the benefit of those countries and cotton producers. The contrast with the cotton sector in Ghana, where, unlike cocoa, liberalization was rapid and far-reaching, is clear. The sector was in disarray by 2004/2005 and in desperate need of re-regulation to prevent potentially viable medium-sized firms going bankrupt (Shepherd *et al.*, 2005).

Where the state has taken a back seat, participation in agricultural markets remains risky. Furthermore, there is often a scarcity of private investors, and, therefore equity, as well as entrepreneurs able and willing to undertake the difficult tasks of value-chain development and coordination.

Cases where sub-sectors have grown dramatically without state ownership include horticulture and fisheries. Minot and Ngigi (2004) compare horticulture development in Kenya and Côte d'Ivoire. They show that Kenya is, arguably, a stronger story than Côte d'Ivoire. In Kenya, smallholders produced roughly half of the horticultural exports, while, in Côte d'Ivoire, large estates produced these exports. Ivorian exports' growth was uneven and relied on preferential access to European markets, while, in Kenya, exports grew steadily to account for a third of exports. In Kenya, smallholder participation in exports was encouraged by extension and training, investments in small-scale irrigation and setting up links with exporters. According to a national rural survey in 2000, nearly a fifth of household income in Kenya came, on average, from fruit and vegetables. The market has become highly diverse, with a healthy internal market alongside the export-one. Small- and medium-sized processors have been operating in a market with limited state intervention. Exports are produced through vertically integrated operations, coordinated by the largest exporters but also through contracts between exporters and farmers. There are farmers' consolidators, especially in green beans, to ensure the scale required by

traders. The export sector became more concentrated during the 1990s, with eight to ten exporters accounting for four fifths of export volume in the early 2000s. Linking small farmers to exporters through a variety of channels and arrangements has been an important aspect of the success story in Kenya. The key here has been to allow FDI alongside domestic investment and attract international sources of finance.

Where supermarkets have penetrated developing-country markets, there is growing evidence that they select a few medium-to-large firms capable of delivering consistent quality at large volumes. Supermarkets prefer “one-stop shopping... a [supplier] firm able to supply a diversity of product lines in order to reduce transaction costs for the chain” (Reardon and Timmer, 2005, p. 60). Over time, this should create opportunities for SMEs to enter the value chain. But they will need to be able to overcome the impressive range of constraints illustrated by a study of Ugandan SMEs (Fellows, 2005). The study points out that there are several factors that prevent agri-processing SMEs from being able to supply the volumes of food required by buyers in GVCs at the specified quality. Some are specific to types of agri-processing, while others are more found across SME sectors. These factors may be broadly grouped into two categories, intrinsic and extrinsic factors. Table 10 summarizes them using the case of Ugandan SMEs.

Table 10 Constraints on agri-processing SMEs' participation in GVCs

<i>Intrinsic</i>	<i>Extrinsic</i>
<ul style="list-style-type: none"> • Under-developed business management/financial management skills • Low production capacities and plant utilization • Poor quality assurance skills and knowledge/inferior product quality • Selection of inappropriate technologies • Lack of understanding of the value of market research • Poor marketing knowledge and sales skills • Lack of technical skills in R&D and poor understanding of the importance of new product development • Underdeveloped entrepreneurial characteristics, selling or negotiating skills. • Lack of confidence, assertiveness and communication skills • Lack of trusting relationships and formalized network of linkages with suppliers and buyers • Little recognition of opportunities for product diversification or links between market research and product development • Lack of capital for expansion of production or upgrading of equipment • Inadequate cash flow 	<ul style="list-style-type: none"> • High cost of raw materials in some sectors • Negligible published market information, high cost of commissioned market research • Intense competition in some sectors, low demand in others. • High overhead costs in the form of utility prices and labour costs, poor services/utility infrastructure • Lack of local/affordable supplies of ingredients, packaging materials and equipment • Inadequate facilities for equipment production by local metal workshops, inadequate training in hygienic and safe equipment design • Lack of access to finance/high cost of finance • High taxes, poor tax administration, corruption • Poor support from research and higher education institutions and business support services • Poor coordination and cooperation between government institutions and the private sector • Lack of government industrialization strategy/conflicting strategies

Source: "Strategy paper for development of the small-scale food-processing sector in Uganda", Midway Technology, 1999, quoted in Fellows (2005).

5.2 Encouraging geographical spread of enterprise

A major way to involve more poor persons in GVCs is to set up or strengthen business environment conditions in remote or less favoured regions. Such regions may include mountains, coastal-, drought- and flood-prone areas. They may also simply be regions that have not benefited from enough investment in infrastructure and urbanization. Infrastructure and urban centres are of key importance for agglomeration of the medium-sized trading and processing firms that are often vital for equitable inclusion in global markets.²⁷

The state can contribute through infrastructure development, provision of high quality human skills, such as through technical education in particular and agricultural R&D. Local authorities and national government can contribute by investing in infrastructure and services for urbanization including business services, hotels and restaurants, as well as related research and productivity institutes, which trigger entrepreneurship. Risk capital is needed but may be scarce in such regions. Governments can

²⁷Recent findings point out that investment in basic infrastructure, such as rural roads, contributes significantly to poverty reduction (Diao *et al.*, 2008).

play an important role in attracting venture capital to under-exploited opportunities such regions provide. International venture capital such as the Commonwealth Development Corporation and venture capital attached to other similar bodies can also play a crucial role. An example is northern Ghana, as discussed in Box 1.

Box 1 Agri-business development in northern Ghana

Northern Ghana is the most under-developed part of the country and has the highest incidence of poverty. Changing global markets are likely to continue to be a prime source for added demand for goods produced and processed there. The second source is the growing demand from Ghana's and West Africa's urban areas. While demand for what northern Ghana can produce exists, making connections with these markets is a sophisticated business, requiring medium-scale enterprises with professional management and technical knowledge. The scarcest factors are risk capital, or equity, and entrepreneurs willing and able to develop and manage such businesses in the north. Government and donors have to persuade venture capital companies to take northern Ghana seriously. Banks would be willing to lend to companies that have adequate risk capital. The key sectors where investment makes sense are agriculture, especially out-grower schemes, tourism, especially the Mole game reserve, but also enough well-developed tourist sites around the north to encourage tourists to stay for a week and, possibly, mining. Private-sector companies and business associations have a key role to play in attracting businesses to these sectors. Removing barriers to within and across-border trade would promote growth substantially, as would investment in infrastructure development.

The few medium-sized companies that have set up in northern Ghana include a vertically integrated mango export firm, with an out-grower scheme; a Dutch-based multinational company specializing in fats, which is establishing shea nut purchasing and processing facilities across West Africa to capture a big share of what is becoming a lucrative market with the rapid development of cosmetic application and two Ghanaian vegetable oil companies buying soya beans from farmer groups. The first two cases are substantially motivated by corporate social responsibility and personal history to invest in the north. The companies have, however had difficulty putting equity and finance packages together. There are some farmers' and women's shea butter groups that are linking to global markets through NGO intermediaries. These companies and groups suggest opportunities. Providing stable economic and political conditions for their growth and fostering better connections with world markets would ensure that more companies invest.

Significant economic growth is possible in northern Ghana, despite its under-developed character. Yet, a substantial proportion of the population will be unable to participate because they live in areas that will remain without infrastructure for some time and in resource-poor households. For them, an alternative combination of policies is needed, such as social protection, including a basic cash transfer scheme, emphasis on widespread post-primary technical education enabling a search for better jobs, and public debate on migration leading to new policy initiatives to increase the benefits and cut the costs of migration.

Source: Shepherd et al. 2005.

5.3 Linking farmers to markets and group formation

Gorletti (Agrico, ANZDEC *et al.*, 2004) has provided five models of how the value-chain approach could be followed in a variety of situations commonly arising in many developing countries characterized by low agricultural commercialization and agrarian structure consisting mostly of

smallholder farmers. They include (i) “Farmer-to-Market Linkage Model,” (ii) the ‘Farmer-to-Enterprise Contract Model,’ (iii) “Large Private Enterprise Model,” (iv) “SME-to-Market Linkage Model,” and (v) “Supermarket Supply Chain Model.” What are the main characteristics of linkages in these five models?

In the “Farmer-to-Market Linkage Model,” farmers are linked to market services and other value-chain stakeholders through service-provider organizations. In the “Farmer-to-Enterprise Contract Model,” farmers are linked directly to enterprises through contract-grower systems. Two types of contracts are envisaged directly between enterprises and farmers and contracts indirectly through traders, NGOs and suppliers.

In the “Large Private Enterprise Model,” out-growers are treated as partners in the enterprise, rather than as mere contract suppliers. The large private enterprise provides a guaranteed market outlet for associated smallholders, as well as technical extension services and credit. For this model to be successful, however, the enterprise must exercise some management control over the smallholders’ production and post-harvest practices as well as take some responsibility for the general well being of the smallholder and his/her family.

In the “SME-to-Market Linkage Model,” enterprises are linked to market services and other value-chain stakeholders through the facilitation services of organizations and institutions such as NGOs. In the “Supermarket Supply Chain Model,” farmers are linked to supermarkets and large retailers through supplier organizations. The supermarkets and retailers are responsible for developing standards, quality specifications and contractual terms for suppliers. Suppliers are responsible for organizing individual farmers and farmer groups to supply perishable produce that meets those standards and quality specifications.

These five models suggest different types of interventions that have two common features; centrality of the commercial stakeholders in meeting consumer demand and making investment decisions to expand their businesses and service providers that, ideally, are not the initiators of change the providers of services demanded by the key stakeholders. These five models assume that investments are to be driven by commercial stakeholders in the pursuit of business opportunities, rather than by service providers. In practice, the driving force is often either a company, that wants the farmers’ produce or an NGO, or government agency that seeks to help the new market development. This is illustrated by an example from northern Ghana, where the organization of women’s group may outpace market demand in Shepherd *et al.*, 2005.

In northern Ghana, medium-sized companies are part of the market-led agricultural story with women's groups another. The Shebu Company in Savelugu, a subsidiary of Dutch oilseeds company Loders Croklaan, purchases low value shea nuts, potentially providing secure self-employment for thousands of women across northern Ghana. However, women can earn considerably more if they make shea butter, for which there is a rapidly growing and developing international market as well as a substantial local and national market. This market can only be accessed, however, if two conditions are met. The quality must be correct, and there has to be an intermediary to buy the butter. Many women's groups have now been established to process shea nuts, but they are not finding a ready market.

The UK Body Shop, which has been purchasing its shea butter from 10-12 women's groups since 2000, has solved the quality problem through training and testing engaging an NGO as intermediary. For Body Shop, this represents a regular supply of a quality product whose demand is expanding slowly in the United Kingdom, as well as corporate social responsibility (CSR). The US cosmetics market's use of shea butter is expanding more rapidly, monitored by the West Africa Trade Hub. An NGO-Mapronet, has been established, in Tamale, by a group of NGOs to act as a market intermediary. It could explore the US market to discover further end-users who could set up similar buying operations.

Role of contract farming

Contract farming represents a potentially more secure starting point for inclusive value-chain development than group formation. Yet the experience with contract farming has been mixed. Where supermarkets have entered developing-country markets and focused on buying fresh produce, practice suggests that many small farmers become involved in supply chains. However, supermarkets prefer to source from medium or large producers where possible because they can meet their demands for quality, safety and efficiency. Sourcing from large producers means lower transaction costs and risk for buyers.

Small producers can be involved in contract farming arrangements where there is scope for more production, such as in the case of large farms not producing enough, or there is more profitability in supplying the local market. The success of this arrangement depends on whether small producers are organized into producers' associations that can try to resolve the market failures they face. These organizations are necessary but not sufficient. They can help entry into the market, but other investments are needed. This is discussed in detail later in the paper.

Contract farming can lead to captive supply of crop or livestock. Because these stocks are supplied based on contract order, rather than through an open market mechanism, different prices can be expected (Vorley, 2001).

5.4 Local and regional value chains

Local and regional value chains may be as important, especially for small producers, as GVCs. There are positive examples such as in the case of Kenyan horticulture, where small producers benefit from an active and multi-layered local market (Minot and Ngigi, 2004) and bushmeat in southern Ghana (Box 2), which illustrates that operators upstream — in this case chopbar operators — can be as successful as the producers downstream. The value, however, is concentrated in the middle of the chain, among wholesalers and traders.

Box 2 The bushmeat value chain in south-western Ghana

The bushmeat trade comprises many different groups along the commodity chain including hunters, wholesalers, market traders and chopbars, or restaurants. In Takoradi, there is no optimal entry point for management intervention. Here, management policy may be most likely to succeed when all actor groups are involved. In Takoradi, rural hunters appear to make more profit per transaction than urban traders. The distribution of value is shown below. Bushmeat sales play an important role in rural livelihoods. Urban demand for bushmeat has had a major impact on wildlife around Takoradi. However, following the disappearance of vulnerable species, the remaining robust ones appear to be culled sustainably. Such post-depletion sustainable activity may be typical of mature, urban, bushmeat markets. Scarce conservation funds should then be concentrated in new markets where vulnerable species may be under threat but have not yet disappeared. The Takoradi evidence suggests that large urban centres can be sustainably supplied with bushmeat by robust species from an agricultural area. Properly managed, such a supply could permit the bushmeat trade to continue without threatening the survival of protected species consumed in both rural and urban areas and make a significant contribution to the cash income of rural households living in extreme poverty. Estimates of the national value of the trade range from US\$42 to US\$205 million across countries in West and Central Africa.

Source: ODI, 2004.

In Vietnam, the established trust and collaborative trading relationships among producers, assemblers and wholesalers developed to supply fruit and vegetables to Ho Chi Minh City have carried over into the relationships a supermarket has been able to establish with its cooperatively organized smallholder suppliers. Traditional collaborative relationships include wholesalers ordering in advance, offering training and lending money to suppliers. Many traditionally organized markets are based on collaboration. There is scope for building on these (Cadilhon *et al.*, 2005).

Local and regional value chains depend substantially on the nature and rate of urbanization. If urban growth occurs mostly in the largest or metropolitan cities, the added costs of supplying them especially from the hinterland may often be too great for local producers, so their products do not easily compete with imports from the world market. On the other hand, and simplifying greatly, geographically decentralized urbanization would generate demand for food and other agricultural commodities from

the local or regional countryside, which, in turn, would stimulate production of more competitive local products.

5.5 *Adapt standards*

A key target for Southern producer organizations and their Northern allies, such as NGOs, networks and alliances and donor agencies, is to influence the standard setters and standard-setting processes, so that standards are less exclusionary and suit the real conditions among Southern producers and workers better. In some of the standard-setting forums, there are open doors – the Ethical Trading Initiative and EurepGAP,²⁸ are reviewing standards to reflect the interests of smallholder farmers. In other cases, where standards are being set, new exclusionary agendas may need to be drawn up by Southern producer organizations, with donors supporting them.

To do this effectively, broad social movements across developed and developing economies may need to be enlisted to challenge some of the values on which standards are based. An example would be the sensitive issue of child labour and working-age limits. In countries or regions with high HIV/AIDS prevalence, not allowing children under the age of 18 to work may exclude the most vulnerable households from the organized labour market. It might be better to specify that provision of education and skill development be part of such youth employment.

Activists argue that TNCs in agri-food businesses need to be regulated because they can negotiate lower prices and can capture the resulting value within their systems, thus draining wealth from already poor rural communities. They can also make it difficult for small producers to participate in GVCs through imposing standards that act as barriers to entry. They are not accountable for their impact on society, human rights or the environment, with those affected adversely by their actions lacking access to judicial redress and corporate social responsibility being voluntary and highly variable (ActionAid, 2004).

There is a strong case for reviewing possibilities to regulate agri-food markets in favour of small producers, who risk losing out as the big brand manufacturers, giant retailers and massive food traders take ever-larger global market shares. The challenge is to find ways of managing supply to avoid gluts as well as to include social and environmental objectives. This involves “taking a fresh look at global and regional competition policy as a brake on excessive buyer power, with agri-food as a first priority” (Vorley and Fox, 2004, p. 2).

²⁸ EurepGAP is farm management standard established in the late 1990s by several European retailchains and their major suppliers. GAP stands for good agricultural practices. EurepGAP is now the world's most widely implemented farm certification scheme. Most European customers for agricultural products now demand evidence of EurepGAP certification as a prerequisite for doing business.

The exercise of buyer power across national boundaries highlights the major weakness of global regulation of competition. Economic globalization makes it necessary to consider world governance of monopoly and competition issues. No international competition standards exist to regulate corporate activity from one continent to another. In the United Kingdom, for example, the authorities' remit is over UK or EU consumers to protect their welfare against monopoly and seller power. The lower the consumer prices the better. The remit of these domestic competition authorities does not extend to overseas producers. If a UK-based company exerts buyer power to push down producer prices when it, or its suppliers, for instance, buy cocoa in Ghana or beans in Kenya, it is a matter for the Ghanaian or Kenyan competition authorities. There is heated debate on whether WTO is the appropriate forum to address global competition issues. The WTO Competition Law Framework is moving in a different direction: simplifying regulation across national boundaries to help transnational commerce and market access for industrialized-country goods and services (Vorley and Fox, 2004, p. 28).

Competition for products clearly has to be a consideration, as, for example, there is evidence of collusion among coffee buyers (IDS, 2001, p. 80). Unregulated export monopolies have been bad for producers, especially as tax take – the percentage of world market price remaining with governments – increases. It would be damaging to return to the same patterns, so governments with continued monopolies need to regulate these carefully. With private monopolies sometimes replacing state monopolies, and mergers and acquisitions leading to oligopolies, there is a case for regulation. However, governments see big as efficient and, so, are reluctant to contest mergers or regulate TNC activities for fear of deterring investment. This is especially the case in the many poor countries that have not benefited from foreign investment. It is difficult for small countries to regulate TNCs. They will find it difficult to have sufficient information on such companies and those companies will often be able to exercise significant influence over government policy and its implementation. The implication of this analysis is that there is a need for a new international mechanism to deal with these issues, especially in LDCs.

Although the arguments for regulating competition extend to human and social rights' protection, which may be overlooked by corporations, they are also practical. There may be too much competition as well as too little. Liberalization and deregulation can lead to market saturation, such as the situation in the Mexico fresh fruit and vegetable sector (Echánove, 2004) and price collapse and collapse of buyers or processors unable to assure their supplies in an excessively competitive market such as occurred in Ghana's and Tanzania's cotton sectors.

Regulation of competition can help to achieve equitable outcomes through regulatory on sales, auctions, import quotas, or export monopolies (Gibbon, 2003). But all these fall foul of current competition laws or liberalization measures. The most realistic alternative seems to be to persuade supermarkets and other buyers to source from smallholders and ensure smallholders are supported with low-cost accessible services, whether by government or the private sector.

In the longer term, Gibbon argues that a “turn of the political circle” is required and attention be given to smallholders in the buyer-driven system (ibid.). Allied with developing country and other producers consumers will have to question the values on which the practices of leading agri-food firms are based.

5.6 *Encouraging product differentiation and ability to trace products to their origins*

When products can be traced to origin – be it a region, specific producer or village – this may enhance their attractiveness to a segment of the market, especially where consumers in a specific location or region or the diasporas have links to those origins. WTO rules on trade discrimination may, however, affect developing countries use of origin to distinguish products in markets.

As Willkinson (2008) points out, within the agri-food sector, global NGOs such as Oxfam, Global Exchange and Greenpeace, have organized successful social global movements in organics, fair trade and Slow Food based on economic objectives. Once adopted by leading retailers, they have become the strategic goal for development of diversified local production systems and production processes that do not obey established industrial norms.

The differentiating factor and value added derived from it are defined by the certification scheme rather than by the retailer. If consumers are attracted by such differentiation, retailers are constrained to source products from those suppliers who are able to make the claim at the heart of the differentiating factor. In some cases, such as organic produce, this is not a major constraint. In others, such as “fair trade”, it may oblige supermarkets to source from small farmers, although there are some initiatives to extend the “fair trade” label to large producers.

6. Incorporating fairness in trading as a corporate standard

The aim of the “fair-trade” movement is to redirect some of the gains from globalization through GVCs to developing-country stakeholders, especially poor primary producers and low-wage workers. Developed-country retailers or brand-name manufacturers have appropriated most of the efficiency gains. Leading companies in GVCs have searched out the lowest-priced raw material suppliers and the lowest-cost producers, as well as greater flexibility of supply through outsourcing and contracts.

There is scepticism among trade analysts as to whether and how international trade in commodities or value chains along which commodities pass can produce unfair results (Box 14). As long as there is competition, how can this be? Box 14 argues that when there is significant power asymmetry among parties to a contract, the distribution of resulting benefits can be unfair. The worst-case scenario affects everyone, including producers. If producer prices are pushed below the cost of production, it is unlikely that production will be stable. The other values that markets seek to deliver — quality, volume and timeliness — may be threatened.

6.1 *Unfair trade*

The leading retailers are able to use techniques to shift risk to their suppliers, who, then, pass it down to their workers or smaller producers. Thus, those at the very end — poor workers and producers in developing countries — have to shoulder the burden of risk. For example, the UK Competition Commission has recognized the bullying tactics of supermarkets and a climate of apprehension among suppliers towards supermarkets, such as Tesco, which pays suppliers below-industry-average prices that do not cover production costs. Several tactics are used when supermarkets shift risk: lowering price at the last moment, only agreeing price once the product has been delivered, delaying payment, shortening lead times, not signing contracts, changing amounts at short notice, and product promotions such as two-for-one that are funded by suppliers. As shown in the figure below, prices paid by larger retailers can be lower than those paid by smaller retailers.

Vertical integration, a common feature of global agri-food value chains, provides other opportunities for unfair practices. Large companies can acquire local supplier companies and use their oligopoly position to keep producer prices low. The question of how much competition government should encourage is difficult. It is clear that there can be too much competition as well as too little and that reaching an optimal level is difficult for policymakers. They have little guidance. Although a complete absence of competition to strong international companies that have established branches in developing countries is likely to result in unfair trade, developing-country governments are likely to be reluctant to intervene. Because buyer-driven chains are common in agri-food value chains, having corporate actors to adopt fair-trade principles may be a way forward.

Some agricultural markets in developing countries suffer from lack of availability of information and access to markets including financial markets, while producers are sometimes unable to switch production techniques or outputs easily in response to market information. Middlemen may extract monopsonistic rents in driving prices below the cost of production. Some producers lack independent pricing information, pulling them at the mercy of the middlemen to whom they sell. Producers rarely benefit from organized futures or insurance markets that could protect them against fluctuating world

commodity prices. These sorts of market situations provide further opportunities for powerful actors to extract rents.

“Fair trade” is organized social movement that advocates the payment of a fair price to producers and deals with a set of rules and standards with regard to economic, environmental and social aspects of production and trade. The “fair trade” goal is to rebalance power between producer and buyer committing both sides to rights and obligations. Although “fair-trade” buyers are willing to pay fair prices and to maintain long-term relationships with suppliers, producers are obliged to pay a living wage and provide decent working conditions. It is characterized by several distinct practices (Nicholls and Opal, 2005):

- Direct purchasing from producers
- Transparent and long-term trading relationships
- Cooperation rather than competition
- Agreed minimum prices to cover the costs of production, usually set above market minimums
- Focus on development and technical assistance through the payment to suppliers of an agreed social premium, often ten per cent or more of the cost price
- Provision of market information, and
- Sustainable and environmentally responsible production.

“Fair trade” policies have been advocated, and sometimes put into effect, by NGOs committed to increase the returns to small producers and/or estate, large farm or plantation workers (Box 3). These NGOs have been sensitive to external evaluation, so the evidence on whether “fair trade” improves incomes sustainable for the poor is based on case studies and anecdotes, rather than on systematic research. A summary of what is available to date is given in Nichols and Opal (2005, pp. 205 ff.). This means that while “fair-trade” returns can add significantly to average national incomes, organizations often withhold part or all of the additional income to invest in collective services such as schools or health services. Women and children often do not benefit from this additional income, although there are groups of marginalized female producers that have been able to do so. More independent studies based on proper impact assessment methods are needed to begin to change this situation.²⁹

The “fair trade” movement calculates the extra income derived to producers as the difference between the floor price — an estimate of what a producer would otherwise receive — and “fair trade” market price, multiplied by the volume traded. This calculation indicates that tens of millions of dollars of additional benefit flow to producers.

²⁹ <http://www.nri.org/NRET/impactproject.htm>

Box 3 Fair Labour Organization initiatives

In remote areas of Ecuador, small producers have managed to move away from old practices with the implementation of many reforms. For example, 64-year-old Félix Antonio Ortega, farmer of organic bananas and cocoa from the association Cerro Azul, in the province of El Oro, became certified with the Fair Labour Organization (FLO) and he now gets a price that covers the cost of production. Félix is sure that he will be paid US\$9 for each box of bananas, from which export and additional expenses are deducted. Moreover, a fair-trade premium is subtracted to invest in the organization. Félix thus nets US\$6 per box, which is ideal in his opinion.

In four FLO-certified Brazilian producer organizations producing orange juice, some member farms are organically certified, others are in the process of transition from traditional to organic farming. Workers on non-fair-trade orange farms are usually employed on a temporary day-to-day basis, without legal registration. Contracting of temporary workers goes through organizational structures, the so-called “condominhos” and the FLO requests the registration of workers through them, so that workers have social security and salaries above the minimum wage through the “condominhos”, which, in turn, receive payment from the producers.

The FLO-certified cooperatives are implementing several projects from the fair-trade premium, a bonus on sales that can be spent on joint community projects. Coagrasol, a FLO-certified cooperative based in the region of São Paulo, provided computer courses for its workers’ children. It also implemented an education programme for illiterate workers and their families. People between the ages of 23 and 62 years attended the evening classes and once a month children of the region were weighed to deal with malnourishment. With the aid of the fair-trade premium, Coagrasol carried out a nutrition programme, supporting those in need of nutrition. Children from the area who are not related to the workers or farmers can also benefit from the Coagrasol projects.

Several producers from the FLO-certified Cealnor cooperative in the region of Bahia say that because of the fair-trade logo, they have an opportunity to sell their orange-juice concentrate to the international market for better prices. Previously, they sold their oranges to intermediaries who often cheated the producers by saying that they had never received any oranges. The producers had an unstable income and uncertain future. Today the extra money received for their fair-trade-certified produce, besides the fair-trade premium, has contributed to a better life for many. Also, most farmers say they get recognition and feel much more appreciated since they joined Cealnor. They participate in the marketing and commercialization of their produce and take part in the decision-making process of the cooperative. From the fair-trade premium received, they have, for instance, invested in equipment to make a multi-mixture tonic consisting of significant nutrients and vitamins to supply undernourished children from 0 to 6 years old. Some wives of the producers prepare and supply the children with the mixture of different types of flour, dried leaves, seeds and maize. The mixture is also sold in supermarkets in Bahia, which is one of the poorest regions of Brazil and where many children are malnourished.

The members of Apaco, a cooperative of the region Santa Catarina, have invested in equipment and conversion to organic produce through fair-trade benefits and the fair-trade premium. Some of the fair-trade premium money was donated to the local boarding school for girls who come from difficult family situations and regularly get psychological support in the form of games and therapy besides the educational programme.

Source: Fair Labour Organisation (2005) retrieved from www.fairlabour.org.

As of May 2004, there were 800,000 farm households involved, most of them organized in producer associations or cooperatives.³⁰ However, this approach has not yet been strongly and independently verified on the ground. The premiums that accrue to producer organizations are sometimes used to raise the social wage — i.e., to provide services to farm and worker households involved, rather than cash incomes (Taylor, 2002, p. 13). The key benefits from participation in “fair trade” are improved capabilities to negotiate trading relationships, better access to information and credit and great self-esteem from entering more equal trading relationships. Many of these are the result of producer organizations that participate in “fair trade” labelling, see Box 4 below for more on the value of producer organizations.

Box 4 Role of “fair trade” organizations

There is little direct evidence that food-processing SMEs are benefiting from linkages to TNCs, but there are many examples of them benefiting from links to fair-trade organizations (FTOs). Eleven organizations, including Traidcraft, Claro, Oxfam Trading and Ctm Altromercato, are part of the European Free Trade Association (EFTA) and similar organizations exist in North America and Australia. The aims of “fair trade” are stated as follows: “Fair Trade is a trading partnership, based on dialogue, transparency and respect, which seeks greater equity in international trade. It contributes to sustainable development by offering better trading conditions to, and securing the rights of, marginalized producers and workers – especially in the South. FTOs (backed by consumers) are engaged in supporting producers, awareness raising and in campaigning for changes in the rules and practice of conventional international trade” (<http://www.efta.int/content/about-efta/secretaries-general>).

They have provided significant benefits to agri-processing SMEs. Products include dried fruits, cocoa, coffee, rice, cooking oils, chocolate and honey. Three benefits identified in case studies are:

1. Access to high-value markets, which provide high returns and financial incentives to all the supply-chain partners.
2. Strong vertical linkages in the supply chain
3. High levels of mutual trust and commitment between partners

Technical assistance provided to suppliers by the lead firm is important, because of its direct benefits and because it strengthens vertical linkages and commitment between the chain partners (Ribbink *et al.*, 2005).

Today, “fair trade” organizations are the main avenue for many small-scale agri-processors in developing countries to enter GVC-type arrangements. There are other benefits to upstream suppliers, especially farmers, when “fair trade” organizations promote packages of measures to help farmers improve quality of raw materials supplied to agri-processors or efficiency of production and, thus, farming profitability.

Source: Fellows, 2005.

A major stream of work on “fair trade” in the agri-food value chains comes from Colorado State University. The work of the Centre for Fair and Alternative Trade Studies³¹ suggests that “the strength of the “fair trade” movement derives from its attempt to simultaneously alter production and trade

³⁰ <http://www.fairtrade.net/sites/impact/facts.html>

³¹ <http://www.colostate.edu/Depts/Sociology/cfats/research.html>

relations, challenging market competitiveness based solely on price. Though not a panacea, the “fair trade movement suggests a provocative new possibility for socially re-linking production, trade and consumption in a way which bridges the widening local/global divide and challenges the domination of the agri-food system by oligopolistic transnational corporations infamous for their socially and environmentally destructive business practices” (Raynolds, 2003). But studies have also (not surprisingly) revealed a mixed picture, as Box 5 illustrates.

Box 5 The benefits of two ethical trade schemes

What is the social impact of ethical trade schemes, particularly the kinds of benefits ethical trade provides for smallholder farmers and their livelihoods as well as for sustainable forestry? This study focuses on two cases linked to the “fair trade” movement: Brazil nuts collected from forests in Peru and cocoa grown under agri-forestry conditions in Ecuador. The evidence that benefits from “fair trade” accrue to smallholders and collectors of forest products is mixed. In Ecuador, the benefits accruing to small producers of the cocoa scheme included cash payments, more transparent weighing and grading systems, better returns on crops due to the vertical integration of the ethical trading chain and capacity-building benefits, such as organizational development, cultivation techniques and marketing. In Peru, Brazil-nut collectors participating in the ethical trade scheme did not perceive major differences between the ethical scheme and conventional trading chain. But there are also positive aspects of the Brazil-nut ethical scheme, such as electronic scales that improves transparency and advocacy efforts relating to improving the quality of exported Brazil nuts helping to maintain access to international markets. Most of the Brazil nuts and cocoa are now sold on conventional markets, although the “fair trade” markets have helped both schemes to become established on international markets. Non-monetary benefits, obtained through capacity building, are often underrated but are important to producers, particularly in the ethical cocoa scheme.

Source: Nelson et al. 2002.

There would appear to be significant benefits for marginalized producers from “fair trade.” These benefits derive from more than simply producer organization to encompass shortening the chain between organized producer and consumer, developing clearer and more direct communication and establishing a minimum of shared values on which consumption and production are based, which challenges conventional value chains to be more value-driven as well as being intuitively attractive.

The success of the “fair trade” movement has recently been seen in Nestlé’s launch of a new “fair trade” Nescafé, in 2005. That such a major brand name has taken the issue so seriously is a tribute to the extent to which rich-country consumers are valuing what they consume in different ways as well as to the influence of the “fair trade” movement. But Nestlé has not committed itself to how much “fair trade” coffee it intends to buy or sell. Sceptics argue that the big coffee companies have made a fortune during the recent period of oversupply and sustained low producer prices — and that a commitment to alleviate hardship through trading more fairly is not credible.

Could “fair trade” be more widely used in corporate behaviour? Since some corporate actors have been at the forefront of the argument that trade is not, or cannot be, unfair, it would be surprising if this happened. However with consumer pressures, the small but growing share of some markets occupied by “fair trade” products, the increasing linkage between “fair trade” and organic standards and the responsiveness of major corporate players to changing consumer preferences, it is not impossible that this will happen and that “fair trade” labelling will move from alternative to mainstream.

6.2 Role of labour standards

Large- and medium-sized producers probably account for the largest share of agricultural and food products entering GVCs. Great corporate power means that risk is passed down the value chain to developing-country farmers, women and children as well as permanent, migrant and temporary workers, with the result that employment becomes more precarious. There are fewer workers with permanent contracts. Few farmers have long-term contracts. Workers can be fired for being sick or pregnant. Working conditions are hazardous, with long working hours leading to health problems. Employers may prefer to hire vulnerable workers unlikely to join trade unions. Managers and owners may harass women. Workers are exposed to the consequences of economic downturns. They are often easily dismissed. Jobs are vulnerable to automation.

Different types of firms may treat workers and contract farmers differently. It may be that foreign companies or those associated with international firms are under greater pressure to improve conditions and act responsibly, these often serving as the standard setters. In Chile’s salmon industry, for example, foreign firms paid higher wages and allowed unions to operate (Phyne and Mansilla, 2003).

Core labour standards are increasingly included in company, industrial or sectoral and independent codes of practice in agribusiness, which have proliferated since 1990. Sometimes there are layers of codes applied, a minimum set by an industry, complemented by a company code, for example. Sectoral codes are becoming common in agribusiness. Most of these focus on food safety but also have well-developed social provisions covering labour rights, working conditions and issues such as workers housing. Some company codes separate social codes from food safety, agricultural health and environmental standards (Tallontire and Greenhalgh, 2005).

There is considerable variability in the content of these codes, such as child labour with minimum permitted ages ranging from 14 to 18. Some codes curtail the freedom to associate and bargain collectively. Protection for non-permanent workers is generally weak, and coverage of gender issues is generally poor, though there are exceptions (ibid. p. 13; Barrientos and Dolan, 2003). Few codes as yet deal with issues of concern to smallholders — such as contracts, terms of trade and grading systems. As

a result, smallholders may face additional barriers to market entry if they are excluded from supply chains (Tallontire and Greenhalgh, 2005, pp. 17-19).

Do such codes make a difference in practice? Although codes have proliferated, there is little independent monitoring. The social auditing is limited and generally of the discredited fly-in snapshot type, where auditors may not be expert in the social issues or understand the context. Using focus group discussions participatory social auditing is more likely to pick up issues of vulnerability and include casual workers in its coverage, as well as such secondary stakeholders as local government, NGOs, and trade unions (Auret and Barrientos, 2004). A serious social audit is likely to reveal issues of sexual harassment, often buried, as women tend to be in subordinate positions in the workforce (Ibid.).

An evaluation by the UK Ethical Trading Initiative of food and apparel supply chains suggests that committed companies with integrated supply chains allowing companies a high level of influence over suppliers could have a positive impact. The most positive effects on labour conditions were in health, safety, working hours and wages. The least effects were on freedom of association, discrimination and provision of regular employment (Tallontire and Greenhalgh, 2005, p. 20). A case study of South African wine codes is presented in Box 6.

Box 6 South African wine codes

From the findings of a long-term study of codes in the South African wine and Kenyan flower sectors were published, it appears that permanent workers in code-adopting companies enjoy better conditions, especially regarding wages and written contracts. However, both the Ethical Trading Initiative and Natural Resource Institute studies raise concerns about whether codes are truly benefiting all workers. They also raise methodological issues regarding attribution. It has proved difficult to link impact to any one specific code or untangle the effects of codes from broader structural processes, for instance, recent trends to recruit temporary or contract labour, rather than permanent staff, in South Africa).

Source: Tallontire and Greenhalgh, 2005: 20.

6.3 *The role of producer organizations and cooperatives*

Producers' associations can help to develop organizational capacity of small farmers and enable them to leverage more benefits, and to lower the risk from contract farming. They can provide technical assistance and input credit to small farmers, but they, then, face two problems: the need to recover product and advances from the farmers.

Problems that producers' organization face can be managed if contracts are enforced, farmers are well organized and competing firms are barred from poaching contract farmers. Excess competition can undermine these conditions. The role of government is to provide a legal framework for contracts and

their enforcement, quality infrastructure, to meet products standards, and information provision to overcome market failure of information asymmetries (Reardon and Timmer, 2005, p. 62).

The case for involving producer organizations in value chains is strong, and has already been partly made in relation to “fair trade”. Small producers are under pressure from bigger ones and estates or plantations. Farming organizations helps them acquire agricultural inputs collectively at lower prices, commercialize their products to negotiate more advantageous conditions with buyers and attract them with bulk supplies and acquire new infrastructure. “In order for *ejidatarios* (members of the collective farms) to defend themselves against these agents (of mango exporting firms in Mexico, who rent peasants’ orchards in order to assure their supply), it is clear that they must form honest and representative organizations” (Echanove, 2004, p. 26). Even cooperation, however, has limits. It cannot combat the oversupply of markets due to the expansion of both traditional commodities and non-traditional exports around the world into lower cost locations. Forming honest and representative organizations is less than straightforward and probably benefits significantly from a sympathetic external environment, either a policy one that allows producer organizations to do business free from political and bureaucratic interruption or the presence of external facilitating agencies, whether NGO or private sector that can offer support.

Some donors have supported producer organizations as an investment in social capital to fight rural poverty and improve returns on other types of investment. Producer organizations are generally in unfavourable positions compared to buyers due to market failure information asymmetries, low skills’ levels and limited control over financial resources and influence over political decision-making processes. As a result, donors or governments can sometimes force their own views and objectives on them, which can lead to misunderstandings and transform them into donor and government tools. This led to the demise of many cooperative movements during the 1970s and 1980s. Such experiences have left a strong and perhaps given the circumstances, healthy distrust of cooperation among potential members.

Producer organizations can be divided into two types: service providers and marketers. Usually they are organized as cooperative societies, and these are sometimes service providers. The famous cooperative movements generally focus on supplying quantity for instance, citrus fruit from Outspan/Capespan in South Africa, Israel and Morocco (Gibbon, 2003, pp. 619-620). With supermarkets’ focus on quality, these organizations have lost bargaining power in the market and have tended to switch their supply to the lower-quality end of the international market. Other cooperatives, in coffee, cocoa and other tropical commodities, that were linked to state-run or influenced marketing systems tended to lose out to private companies following liberalization and exported to lower value destinations.

If cooperatives and other producer organizations are to thrive in global value chains, there is an imperative to work with cooperatives on quality, product innovation and marketing, for which external support is required from buyers, government or NGO. The marketing aspects should normally involve buyers, perhaps as an act of corporate social responsibility if not a straightforward commercial approach to collaborative commerce, so that small producers have access to the value chain. There is also a need to work with cooperatives on their social policies as they can turn into exclusive clubs. From an individual member's perspective, once one has joined, one wants the cooperative to include just as many members as it takes to reach economies of scale. Beyond that, there is no perceived advantage in expansion. Members who default or do not produce to standard drag the whole membership down, so others will try to exclude them. The South African citrus cooperatives effectively excluded smaller black farmers. Various strategies can be adopted to deal with these issues, such as keeping cooperatives reasonably small to facilitate the relationships of trust needed to make them work well, federating them in apex institutions to take advantage of scale and spinning off new rather than expanding existing cooperatives.

Concern for consistency with democratic projects, promoted by some donors, leads to the support of producer organizations as an investment in social capital to fight rural poverty and improve returns on other types of investment. In this respect, producer organizations often require construction- and reconstruction-phase support as well as balanced technical, economic and political partnerships through the learning-by-doing process, which eventually shifts power relationships among donors, government and civil society. In some cases, it may be that local markets offer more manageable opportunities for producer organizations than GVCs as illustrated in Box 7, by the case of “Je Ka Fere” (“let's market together”) farmers' association founded in Senegal in 1997.

7. Conclusion

The survey of developing countries' involvement in agri-food GVCs and their potential impacts on poverty reduction leave several unanswered questions. Those pertain to the extent to which and how leading firms in buyer-driven value chains, for example, are likely to respond to growing consumer pressure to be fairer to small producers in developing countries, developing-country producer organizations and their allies are able to interact with and influence the standards-setting bodies and leading companies and the extent to which producers' organizations can rise to the challenges of participating in GVCs.

Through a combination of strategies, developing countries have some scope to enhance their roles in GVCs, though the constraints are many, significant and deep. Nevertheless, much will continue to depend on the behaviour of the leading firms and consumer groups in developed markets, which have

set so much of the agenda to date. Influencing this behaviour is probably as important as influencing developed-country governments to open up access to their agricultural and industrial markets.

Box 7 “Jε Ka Fere” farmers' association in Senegal

Jε Ka Fere is a farmers' association established in 1997 in Senegal bringing together 20 village associations. It specializes in rice processing and marketing. To market rice based on quality, Jε Ka Fere participated in high-performance rice-milling equipment tests along with the Agro-Enterprise Centre. Then, the association initiated a capacity-building project for quality rice production with the aid of financial partners found by the NGO Afrique Verte. The African Development Fund provided project funding of US\$129 million to buy efficient rice-milling equipment. Jε Ka Fere annually organizes a rice exchange for trade networking, where Afrique Verte facilitates negotiations and agreements are signed between Jε Ka Fere and traders. Qualified specialist in management, negotiations and legal advice, and the Provision of Services Centre support the organization. After finalization of contracts, Jε Ka Fere distributes the amounts required for collection to its grassroots affiliates. Jε Ka Fere has several shortcomings, such as the inability to deal with large traders who handle large amounts of rice and the distribution of remainder rice.

Nevertheless, the association contributes significantly to innovation processes. During rice exchanges, Jε Ka Fere offers incentive buying prices of CFA Fr 220 per kg, thus encouraging investment and increasing productivity and innovation processes. For the new “etoile du Delta” rice promotion, a high prices of CFA Fr 350 per kg were reached. Specific examples of the association's influence on innovation include the guarantee of remunerative prices (CFA Fr 200-220 per kg) and average volume of 600-700 tonnes of rice sold annually through this mechanism. Similarly, new processing-equipment purchases offer a better opportunity to make rice more competitive and its prices more reasonable.

Jε Ka Fere negotiate prices for producers on a transparent basis, with NGO Afrique Verte operating as facilitator. Currently, Jε Ka Fere concentrates on collecting enough working capital of its own, most of which is required for rice collection, which comes only from traders through cash payment. Some CFA Fr 20 of the negotiated price is earmarked for covering packaging and transportation charges and very little for the independent functioning of Jε Ka Fere. The association is funded by membership fees, sales commissions and threshing-machine charges.

Source: OECD, 2005.

Can participating in GVCs reduce absolute poverty? It appears that the tools to ensure that this happens are, as yet, weak, particularly if there is a focus on the poorest, resource-poor farm households and casual labourers. The reality is that high economic concentration combined with the control of GVCs through setting standards, whether technical or social, is likely to exclude many poor households. The combination of concentration and low commodity prices is serious and possibly lies behind the rapid, distress migration out of agriculture in search of opportunities elsewhere. Still, there is reason for hope. Producer organizations can and do make a difference. Strengthening them and creating international alliances may enable greater influence over standards setting and the social values lying behind the standards

If adequately monitored and with strong commitment from participating companies, codes of practice, can make a difference. More rigorous impact assessment is still needed on “fair trade.” However, the qualitative evidence is sanguine in a qualified way.

7.1 Policy recommendations

Analytical and policy tools to sharpen the focus of key players in value chains on resource-poor households and casual labourers are needed. Strengthening producer organizations, especially their ability to lobby international consumer organizations and standards-setting bodies, would be a considerable service. Providing an information service to consumer organizations and individuals worldwide about agri-food production in developing countries could be influential in consumer choices.

Currently, agri-food GVCs are regulated, if at all, by voluntary codes and initiatives. A major issue for the future is whether international regulation of some aspects of agri-food markets is needed to make trade fairer, reduce exploitation of vulnerable groups and develop standards of information for consumers, which assist the marketing of poor countries’ products. In the meantime, there is scope for significant technical assistance to developing-country firms to enable them to improve their situation in value chains, as well as develop standards and codes that help to reduce poverty and increase market share.

Agriculture remains an important base from which poor households seek to diversify their livelihood portfolios and improve their lives. If agriculture is to prosper, it will be necessary to correct the significant under-provision of public goods in the sector. Research and extension services are grossly under-resourced. Provision of transport infrastructure and urban development are utterly inadequate in many agrarian regions. Increased resources should be allocated to such public services in future, especially in LDCs (Box 8).

Box 8 Recommendations

In the case of Uganda, Ribbink *et al.* (2005) concluded a study of GVCs with the following recommendations for the Government. Foster private-private partnerships by removing bureaucratic barriers and providing fiscal incentives to new supply-chain initiatives:

Stimulate involvement of government agencies, such as agricultural research institutes, in supply chains' development

1. Stimulate practical research aimed at supply-chain development
2. Organize platforms for public and private actors to discuss problems in the private sector and find common solutions
3. Invest in basic infrastructure and utilities
4. Offer fiscal incentives for sustainable use of natural resources as well as innovative or high-risk investments.

Agencies involved in supporting SMEs involved in GVCs were recommended to:

5. Help link local businesses with national, regional and foreign companies, to build trade relations or set joint ventures
6. Establish a commercial code that included property rights and fair judicial processes
7. Facilitate development of training and technical assistance to producers to help them improve their performance and entrepreneurial development
8. Reduce the amount of paperwork involved in support to the private sector in order to cut costs in time and money spent on project proposals and reports
9. Be more business like in support to the private sector, by focusing on those producers that show potential, charging clients for services and setting targets that can be objectively measured
10. Avoid market distortion, which may result from subsidizing some producers at the expense of others
11. Support initial start-up or experimentation costs of a new supply chain, where these activities would otherwise not take place and with a clear exit strategy within a limited period
12. Facilitate certification of producers by promoting a more competitive market for service providers and cost-efficient certification procedures.

The following recommendations were given for private sector companies operating GVCs.

13. Maintain a strong focus on high-value exports
14. Carry out a careful selection of business partners according to criteria based on experience
15. Nurture long-term relationships throughout the chain, built on mutual trust and transparency as well as ensure that all businesses in the chain understand each other's tasks and responsibilities and the implied interdependency.
16. Lead firms to invest in building a close relationship with suppliers by assisting farmers to access extension services, developing and implementing a quality management system with clear and measurable standards and developing an effective communication system
17. Suppliers to provide reliable information about production capacities and inform their buyers about possible changes that could affect their operations
18. Promote a business attitude among producers based on contracts, purchase orders and production and quality targets, by engaging them in the production monitoring and administrative systems, sharing information about market requirements, training and savings mobilization.
19. Draw up and agree a code of practice to establish clear trading rules
20. Search for strategic alliances with other exporters.

Source: Fellows 2005.

References

- Action Aid. 2004. "Power Hungry: Six Reasons to Regulate Global Food Corporations." Action Aid International.
- Agrico, ANZDEC, ACI, Sodev Consult and HB Consultants. 2004. "Inception Report for the Agribusiness Development Project GOB/ADB TA 4139-BAN." Prepared for the Government of Bangladesh and the Asian Development Bank by Agrico Limited, New Zealand, in association with ANZDEC Limited, Agri-food Consulting International, and Sodev Consult, Dhaka, Bangladesh, pp 45.
- Aryithey, E. and A. McKay. 2005. "Operationalizing Pro-Poor Growth: a Country Case Study on Ghana", <http://siteresources.worldbank.org/INTPGI/Resources/3426741115051237044/oppqghana.pdf>.
- Athukorala, P. and K. Sen. 1998. "Processed Food Exports from Developing Countries: Patterns and Determinants," *Food Policy*, 23(1): 41-54.
- Auret, D. and S. Barrientos. 2004. "Participatory Social Auditing." Brighton: Institute of Development Studies, Working Paper.
- Baffes, J., T. Akiyama, D. Larson, and P. Varangis. 2004. "Policy Reform Experience in Cotton Markets. Commodity Market Reforms: Lessons of Two Decades." World Bank, Washington DC.
- Barret, C. and D. Brown. 2002. Agriculture and Rural Development: Lessons for Christian Groups Combating Persistent Poverty, Department of Applied Economics and Management, Cornell University, New York.
- Barrientos, S. 1997. "Gender, Flexibility and Global Value Chains." *IDS Bulletin*, 32 (3).
- Barrientos, S. and C. Dolan. 2003. "A Gendered Value Chain Approach to Codes of Conduct in African Horticulture." *World Development*, 31 (9), pp. 1511-1526.
- Bhalla, S., A. Karan, K. and T. Shobha. 2005. "Rural Casual Labourers, Wages and Poverty: 1983 to 1999-2000." in A. Shepherd and A. K. Mehta, "Chronic Poverty and Development Policy in India." New Delhi, Sage, pp. 86-147.
- Bird, K. and A. Shepherd. 2003. "Livelihoods and Chronic Poverty in Semi-Arid Zimbabwe," *World Development*, 31 (3).
- Cadilhon, J.-J., A.P. Fearn, P.T.G. Tam, P. Moustier and N.D Poole. 2005. "Collaborative Commerce or Just Common Sense? Insights From Vegetable Supply Chains, in Ho Chi Minh City." *Supply Chain Management*, 10 (3), pp. 147-149.
- Cline, W. R. 2004. "Trade Policy and Global Poverty." Washington: Center for Global Development and Institute for International Economics.
- CPRC (Chronic Poverty Research Centre). 2004. "Chronic Poverty Report." www.chronicpoverty.org.
- Cowlshaw, G., S. Mendelson, and J. M. Rowcliffe. 2004. "The Bushmeat Commodity Chain: Patterns of Trade and Sustainability in a Mature Urban Market in West Africa," *Wildlife Briefing Paper No. 7* (June), Overseas Development Institute, London.

- De Janvry, A. & E. Sadoulet. 2002. "World Poverty and the Role of Agricultural Technology: Direct and Indirect Effects." *Journal of Development Studies*, 38 (4): 1–26.
- DFID(a) (Department for International Development). 2005. "Effective Policy and Public Expenditure Reform for Pro-poor Agricultural Development." Working Paper 8, London: DFID, Policy Division, Renewable Natural Resources and Agriculture Team: Working Papers on Agriculture.
- DFID(b) (Department for International Development). 2005. "Official Development Assistance to Agriculture." Working Paper 9, London: DFID, Policy Division, Renewable Natural Resources and Agriculture Team: Working Papers on Agriculture. *Development Policy Review*, theme issue: "Food Policy Old and New" 21: 5-6.
- Diao X, S. Fan, D. Headey, M. Johnson, A. Nin Pratt and B. Yu (International Food Policy Research Institute-IFPRI, Development Strategy and Governance Division). 2008. "Accelerating Africa's Food Production in Response to Rising Food Prices," IFPRI Discussion Paper 00825. November 2008.
- Dries, L., T. Reardon and J. F. M. Swinnen. 2004. "The Rapid Rise of Supermarkets in Central and Eastern Europe: Implications for the Agri-food Sector and Rural Development," *Development Policy Review* 22(5): 525–56.
- Echánove, F. 2004. "Globalization and Restructuring in Rural Mexico: the Case of Fruit Growers." *Tijdschrift voor Economische en Sociale Geographie*, 96 (1): 15-30.
- Ellis, F. 2002. "Rural Livelihoods and Diversification in Developing Countries," Oxford University Press, Oxford.
- Ellis, F. and G. Bahiigwa. 2003. "Livelihoods and Rural Poverty Reduction in Uganda," *World Development*, 31 (6): 997-1013.
- Ellis, F. and N. Mdoe. 2003. "Livelihoods and Rural Poverty Reduction in Tanzania," *World Development*, 31 (8): 1367-1384.
- Ellis, F., M. Kutengule, and A. Nyasulu. 2003. "Livelihoods and Rural Poverty Reduction in Malawi", *World Development* 31 (9): 1495-1510.
- Food and Agricultural Organization (FAO). 2004. "The State of Agricultural Commodity Markets," FAO, Rome.
- FAO. 2008a. "The State of Food and Insecurity in the World 2008," FAO, Rome.
- FAO. 2008b. "State of Food and Agriculture 2008." FAO, Rome.
- FAO. 2008c. "Improving Competitiveness and Development Impact." Report of The Agro-Industries Forum Global, New Delhi (India), 8-11 April 2008, organized by the Food and Agriculture Organization of The United Nations, United Nations Industrial Development Organization, International Fund For Agricultural Development, and Food and Agricultural Organization.
- Farrington, J., P. Deshingkar, C. Johnson, and D. Start. 2006. "Rural Livelihood Futures: Concepts and Evidence from India." Delhi and Oxford, OUP.
- Farrington, J. and J. Mitchell. 2006. "How Can the Rural Poor Participate in Global Economic Processes?" *Natural Resource Perspectives* 103, ODI.

- Fellows, P. 2005. "Participation in Global Value Chains by Agroprocessing SMEs in Developing Countries." Background paper prepared for UNIDO project on Global Value chains and production Networks.
- Filippaios F., M. Papanastassiou, R. Pearce, and R. Rama. 2009. "New Forms of Organisation and R&D Internationalisation among the World's 100 Largest Food and Beverages Multinationals," *Research Policy*, 1032-1043, Elsevier.
- Chen, S. and M. Ravallion. 2008. *The Developing World Is Poorer Than We Thought, But No Less Successful in the Fight Against Poverty*, Policy Research Working Paper 4703, Developing Research Group, The World Bank, Washington DC.
- Flores, L., T. Reardon, and R. Hernandez. 2006. "Supermarkets, New-generation Wholesalers, Farmers Organizations, Contract Farming, and Lettuce in Guatemala: Participation by and Effects on Small Farmers." East Lansing, MI: Michigan State University, Department of Agricultural Economics, Staff Paper.
- Overseas Development Institute. 2005. *Future Agricultures Meeting Series*, London, http://www.odi.org.uk/speeches/FutureAgricultures_2005.
- Gereffi, G. 1994. "The Organization of Buyer-Driven Global Commodity Chains: How US Retailers Shape Overseas Production Networks", in G. Gereffi and M. Korzeniewicz, (eds), *Commodity Chains and Global Capitalism*, Westport, CT, Greenwood Press.
- Gereffi, G., J. Humphrey and T. Sturgeon. 2005. "The Governance of Global Value Chains," in *Review of International Political Economy* 12(1): 78-104.
- Gibbon, P. 2003. "Value-Chain Governance, Public Regulation and Entry Barriers in the Global Fresh Fruit and Vegetable Chain into the EU," *Development Policy Review*, 21: 5-6.
- Gibbon, P. and S. Ponte. 2005. "Trading Down: Africa, Value Chains, and the Global Economy." Philadelphia, Temple University Press.
- Gordon, A. and A. Goodland. 2005. "Production Credit for African Smallholders: Conditions for Private Provision." *Savings and Development XXIV* (1): 55-83.
- Grievink, J., L. Josten and C. Valk (eds.). 2002. "State of the Art in Food: The Changing Face of the Worldwide Food Industry." Cap Gemini Ernst & Young, Reed Elsevier.
- Grimm, M. and I. Günther. 2004. "Operationalizing Pro-poor Growth: A Case Study of Burkina Faso." prepared as part of the Operationalizing Pro-poor Growth Programme, World Bank, Washington D.C.
- Hamann, K. 2002. "Globalization Trends in the Food and Agro-industries Value Chains and the Future Competitive Situation," Background paper prepared for UNIDO
- Hilary, J. 1999. "Globalisation and Employment," Panos Briefing Paper No 33.
- Hossain, M. 2002. "Promoting Rural non-farm Economy of Bangladesh", Centre for Policy Dialogue–IRRI, *Policy Brief 3* CPD, Dhaka, Bangladesh.
- Hossain, M., D. Lewis, M. L. Bose, and A. Chowdhury. 2003. "Rice Research, Technological Progress, and Impacts on the Poor: the Bangladesh Case (Summary Report)," Discussion Paper No 110,

Environment and Production Technology Division, International Food Policy Research Institute, Washington DC.

- Hubbard, M. ed. 2003. "Developing Agricultural Trade Basingstoke." Palgrave Macmillan.
- Humphrey, J. and H. Schmitz. 2008. "Inter-firm Relationship in Global Value Chains: Trends in Chain Governance and Their Policy Implications," *Int. J. Technological Learning, Innovation and Development* Inderscience Publishers, Vol. 1, No. 4, 2008, 258 – 282.
- Humphrey, J. and O. Memedovic. 2006. "Global Value Chain in the Agri-food Sector," UNIDO, Vienna, <http://www.unido.org/doc/60033>.
- IDS (Institute of Development Studies). 2001. "The Value of Value Chains: Spreading the Gains from Globalization," Brighton, IDS Bulletin, Vol. 32, No 3.
- Irz, X., L. Lin, C. Thirtle and S. Wiggins. 2001. "Agricultural Growth and Poverty Alleviation." *Development Policy Review*, 19 (4): 449–466.
- Kaditi, E., and J.F.M. Swinnen. 2003. "Multinational Investment, International Trade and Contracts in Transitional Economies: A Case Study for Food Industries," Dept. of Economics, Katholieke Universiteit Leuven.
- Kaplinsky, R. 2000. "Globalisation and Unequalisation: What can be learnt from Global Value Chain Analysis?" *Journal of Development Studies*, Vol. 37, No 2: 117-146.
- Kaplinsky, R. and M. Morris. 2001. "A Handbook for Value Chain Research", paper prepared for the IDRC, <http://www.ids.ac.uk/ids/global/pdfs/VchNov01.pdf>.
- Kaplinsky, R. and M. Morris. 2008. "Value Chain Analysis: A Tool for Enhancing Export Supply Policies." *Int. J. Technological Learning, Innovation and Development*, Inderscience Enterprises Ltd., Vol. 1, No. 3: 283 –308.
- Kaplinsky, R. 2005. "Globalization, Poverty and Inequality," Cambridge, Polity Press.
- Kolodner, E. 1994. "Transnational Corporations: Impediments or Catalysts of Social Development?" Geneva, UNRISD.
- Lang, T., G. Rayner and E. Kaelin. 2006. "The Food Industry, Diet, Physical Activity and Health: a Review of Reported Commitments and Practice of 25 of the World's Largest Food Companies," Centre for Food Policy City University Northampton.
- Larsen, M. 2002. "Is Oligopoly a Condition of Successful Privatization? The Case of Cotton in Zimbabwe", *Journal of Agrarian Change* 2 (2): 185-205.
- Lipton, M. 2005. "Can Small Farms Survive, Prosper, or be the Key Channel to Cut Mass poverty?" Presentation to FAO Symposium on Agricultural Commercialization and the Small Farmer, Rome.
- Lovett, P. 2004. "The Shea Butter Value Chain: Production, Transformation and Marketing in West Africa", *Technical Report No. 2*, West Africa Trade Hub/USAID.
- Memedovic, O. 2004. "The Global Value Chains in Agro-Food Industries: What Prospect for Upgrading by Developing Countries?" Background paper for the UNIDO project on GVC and Production Networks: Prospects for Upgrading by Developing Countries, UNIDO, Vienna.

- Memedovic, O. 2005. "Inserting Local Industries into Global Value Chains: Opportunities and Challenges for Upgrading: With a Focus on Asia" UNIDO, Vienna. <http://www.unido.org/en/doc/33091>.
- Memedovic, O. 2008. Special Issue on Global Value Chains and Innovation Networks: Prospects for Industrial Upgrading in Developing Countries. *Int. J. Technological Learning, Innovation and Development (IJTLID)*, Part 1 Guest Editor: Editorial, Inderscience Enterprises Ltd. Vol. 1, No. 3: 228.
- Minot, N. and M. Ngigi. 2004. "Are Horticultural Exports a Replicable Success Story? Evidence from Kenya and Côte d'Ivoire," Discussion Paper EPTD No 120, MTID No. 73, International Food Policy Research Institute, Washington, D.C.
- Nicholls, A. and C. Opal. 2005. "Fair Trade: Market-driven Ethical Consumption." London, Sage.
- Maxwell, S. and R. Slater. 2003. "Food Policy Old and New," *Development Policy Review*, 21: 5-6.
- Nelson V., A. Tallontire, and C. Collinson. 2002. "Assessing the Benefits of Ethical Trade Schemes in Cocoa (Ecuador) and Brazil Nuts (Peru) for Forest Dependent People and their Livelihoods," *International Forestry Review* 4 (2): 99-109.
- OECD. 2005. "The Family Economy and Agricultural Innovation in West Africa: Towards New Partnerships," Paris, Sahel and West Africa Club Secretariat.
- Ollinger, M., D. Moore, and R. Chandran. 2004. "Meat and Poultry Plants' Food Safety Investments: Survey Findings". Technical Bulletin 1911, Washington DC: United States Department of Agriculture, Economic Research Service.
- Page, S., and A. Hewitt. 2001. "World Commodity Prices: Still a Problem for Developing Countries?" London, Overseas Development Institute.
- Phyne, J. and J. Mansilla. 2003. "Forging Linkages in the Commodity Chain: the Case of the Chilean Salmon Farming Industry, 1987-2001," *Sociologia Ruralis*, 43 (2): 108-127.
- Poulton, C., P. Gibbon, B. Hanyani-Mlamb, K. Kydd, M.N. Larsen, W. Maro, A. Osorio, D. Tschirley, and B. Zulu. 2004. "Competition and Co-ordination in Liberalized African Cotton Market Systems", Imperial College at Wye World Dev., Vol: 32: 519 – 536, http://www.imperial.ac.uk/agriculturalsciences/research/sections/aebm/projects/cotton_se_africa.htm#d.
- Rabobank International. 1995. "The International Food Industry." Utrecht, Rabobank International.
- Ramaswami, B., P. S. Birtal, and P. K. Joshi. 2006. "Efficiency and Distribution in Contract Farming: The Case of Poultry Growers." Washington, DC: International Food Policy Research Institute (IFPRI), Markets, Trade and Institutions Division (MTID) Discussion Paper Series 91.
- Raynolds, L. T. 2003. "Forging New Local/Global Links through Fair Trade Agro-food Networks," in R. Almas and G. Lawrence (eds.), "Globalisation, Localisation and Sustainable Livelihoods" Aldershot, Ashgate: 57-68.
- Reardon T, J-M Codron, L. Busch, J. Bingen and C. Harris. 2001. "Global Change in Agri-food Grades and Standards: Agribusiness Strategic Responses in Developing Countries." *International Food and Agribusiness Management Review* 2(3).

- Reardon, T. and C. P. Timmer. 2005. "Transformation of Markets for Agricultural Output in Developing Countries since 1950: How has Thinking Changed?" in R. E. Evenson, P. Pingali and T. P. Schultz, *Handbook of Agricultural Economics: Agricultural Development: Agricultural Development*, Vol. 3, *Farmers, Farm Production and Farm Markets*, Elsevier Press.
- Reardon, T., S. Henson and J. Berdegue. 2007. "Proactive Fast-tracking Diffusion of Supermarkets in Developing Countries: Implications for Market Institutions and Trade" *Journal of Economic Geography Advance Access*, Vol. 7, No 4.
- Reddy, P. 1997. "New Trends in Globalisation of Corporate R&D and Implications for Innovation Capability in Host Countries: A Survey from India." *World Development*, 25(11): 1821-1837.
- Ribbink, G., P. Nyabuntu, and S. Kumar. 2005. "Successful Supply Chains in Uganda – a study of three successful chains in the coffee, dried fruit and fresh vegetable sectors." Research Report, Business Services Market Development, Department for International Development, UK.
- Shepherd, A., A. McKay, C. Jebuni, R. Al-Hassan, and A. Whitehead. 2005. "Economic Growth in Northern Ghana" Overseas Development Institute/Centre for Policy Analysis, London/Accra.
- Shepherd, A. and G. Onumah. 2003. "Ghana", in Hubbard, M., ed., *Developing Agricultural Trade* Basingstoke, Palgrave Macmillan.
- Simmons, P., P. Winters and I. Patrick. 2005. "An Analysis of Contract Farming in East Java, Bali, and Lombok, Indonesia," *Agricultural Economics* 33(S3): 513–25.
- Snrech, S. 1995. "Les transformations de l'agriculture ouest-africaine: evolutions 1960–1990. Défis pour l'avenir. Implications pour les pays sahéliens", mimeo no. Sah/(95) 451 Club du Sahel, Paris.
- Sturgeon, T.J. 2008. "Mapping Integrative Trade: Conceptualizing and Measuring Global Value Chains", *Int. J. Technological Learning, Innovation and Development*, Inderscience Publishers Enterprises Ltd., Vol. 1, No. 3: 237.
- Tallontire, A., C. Dolan, S. Smith, and S. Barrientos. 2005. "Reaching the Marginalised? Gender Value Chains and Ethical Trade in African Horticulture" *Development in Practice*, 15 (3-4): 559-571.
- Tallontire, A. and P. Greenhalgh. 2005. "Establishing CSR Drivers in Agribusiness," University of Greenwich, Natural Resources Institute, London.
- Taylor, P. 2002. "Poverty Alleviation through Participation in Fair trade Coffee Networks: Synthesis of Case Study Research Question Findings," Denver: Colorado State University, Sociology Department, Working Paper.
- Timmer, P. 2005. "Agriculture and Pro-Poor Growth: An Asian Perspective," Working Paper 63, Center for Global Development, Washington, DC.
- Timmer, P. 2009. Supermarkets, Modern Supply Chains, and the Changing Food Policy Agenda, Working Paper 162, Center for Global Development, Washington, DC.
- Timmer, P. and Akkus, S. 2008. The Structural Transformation as a Pathway out of Poverty: Analytics, Empirics and Politics, Working Paper 150, Center for Global Development, Washington, DC.

- USAID (United States Agency for International Development). 2005. "Competitive Strategies for Agriculture-related MSES: From Seeds to Supermarket Shelves," USAID.
- Vorley, B., "Food, Inc. Corporate Concentration from Farm to Consumer," London, UK Food Group, International Institute for Environment and Development, undated.
- Vorley, B. 2001. "The Chains of Agriculture: Sustainability and the Restructuring of Agri-food Markets," *Opinion, the International Institute for Environment and Development (IIED)*.
- Vorley B. 2003. "Food, Inc.: Corporate Concentration from Farm to Consumer," London: UK Food Group.
- Vorley, B. and T. Fox. 2004. "Global Food Chains: Constraints and Opportunities for smallholders," OECD/DAC Povnet Pro-poor Growth Task Team, Helsinki.
- Vollrath, D. 2007. "Land Distribution and International Agricultural Productivity," *American Journal of Agricultural Economics* 89(1): 202–16.
- Wadsworth, J. 2004. "Agriculture and Poverty Reduction: Unlocking the Potential," DONORS CORNER April 2004, DIFID
- Wiggins, S. 2005. "Agricultural Growth and Poverty Reduction: Scooping Study for IDRC," Overseas Development Institute, London.
- Wilkinson J. 2008. "Global Values Chains and Networks in Dialogue with Consumption and Social Movements," *Int. J. Technological Learning, Innovation and Development*, Inderscience Publishers, Vol. 1, No. 4, 536-550.
- Winge, R. and G. Wqall. 2006. "Food Product Innovation," A background paper, Agricultural and Food Engineering Working Document 2, FAO, Rome.
- World Bank, 2005. *Agriculture, Rural Development and Pro-poor Growth*, The World Bank, Washington, D.C.
- World Bank. 2008. "World Development Report 2008: Agriculture for Development," The World Bank, Washington DC.
- UNIDO, 2008. The Importance of Agro-industry for Socioeconomic Development and Poverty reduction, Discussion Paper prepared for side-event on: "How Agro-industry Can Help Eradicate Poverty," UN Commission on Sustainable Development, 16th session, New York.



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