5. Markets: the link between households and the economy

The last two decades have witnessed substantial economic growth and livelihood improvements, which have particularly benefited the world's urban inhabitants. Despite this progress, however, close to half of the developing world's population still lives on less than $2/day. As discussed in Chapter 2, most of these poor people live in rural areas, where they are largely isolated from the growth in urban areas, and agriculture is the primary determinant of their livelihoods. As rising global incomes lead to faster increases in expenditure on non-staple foods, opportunities should materialize for rural smallholder farmers to participate indirectly in the urban growth process by producing and marketing higher-value food products, particularly those derived from livestock. However, this promise of agrifood development, broader domestic food security and poverty reduction remains far from fulfilled because many practical and institutional barriers continue to limit effective market access for the rural poor.[17]

This chapter examines linkages between market participation and livelihoods, with special emphasis on linking the rural poor to urban growth through agrifood supply chains. The chapter begins with an assessment of the relationships among poverty incidence, poverty density and proximity to markets. It then reviews the growth in demand for ASFs in developing countries, and the associated supply responses. The chapter highlights the diversity of supply and value chains in developing countries and the large range of barriers to market access commonly faced by small-scale producers. It concludes by suggesting ways of overcoming these market access barriers and identifying actions that governments could/should undertake if they wish to support poverty alleviation through smallholder market integration.

URBAN ECONOMIC GROWTH AND RURAL LIVELIHOODS

Markets[18] are major determinants of livelihoods in modern economies, and improved market access has proved to be a potent catalyst for poverty alleviation in transition economies. In developing countries, rural populations' sustained emergence from subsistence and poverty depends on them becoming market participants. Figure 5.1 illustrates the relationship between market access and poverty in Viet Nam. Figure 5.1B shows the contours of poverty incidence (percentage of the local population below the poverty line, with red being the highest and green the lowest). In Figure 5.1A, formal markets are represented by squares

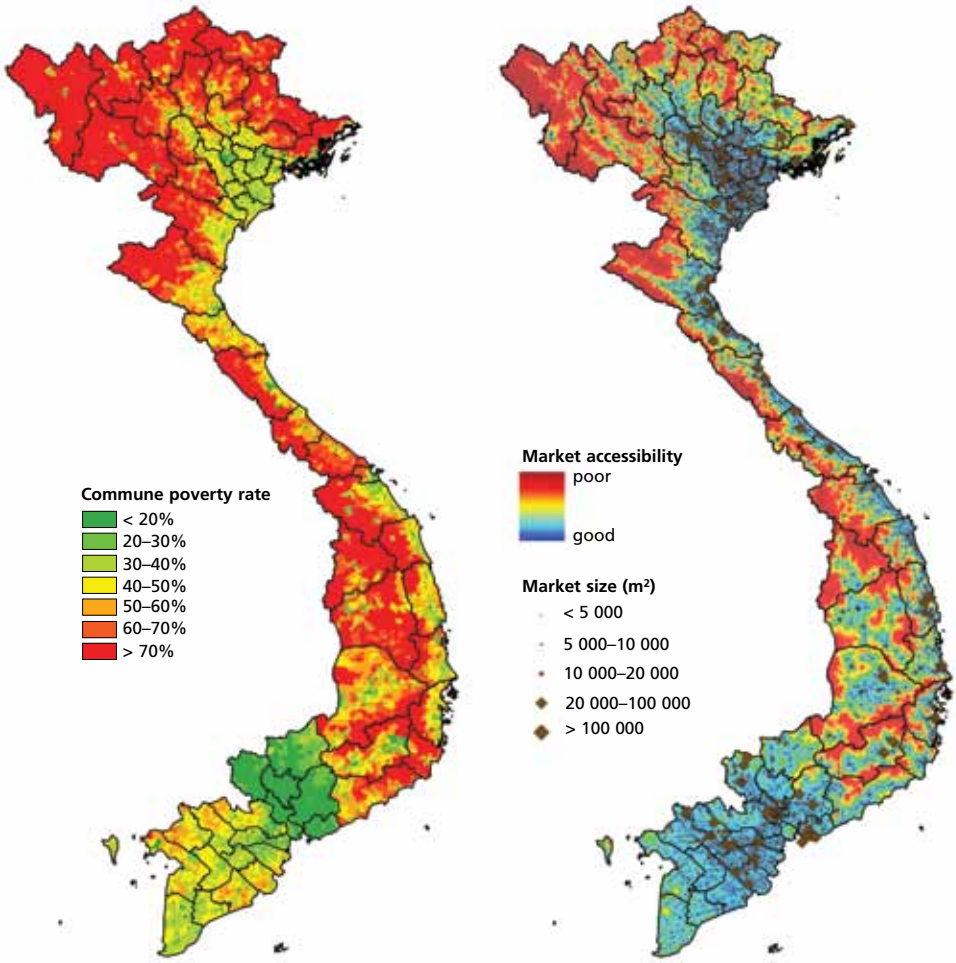
[17] This issue received attention in the 2008 *World Development Report* (World Bank, 2008). This chapter examines more detailed aspects from a livestock perspective.

[18] Linkages between households and markets are multidimensional. Households can offer labour and resource services in factor markets, purchase consumer goods and agricultural inputs in commodity markets, and market agricultural products directly or sell to intermediaries in agrifood supply chains.

FIGURE 5.1
Market access and poverty incidence in Viet Nam

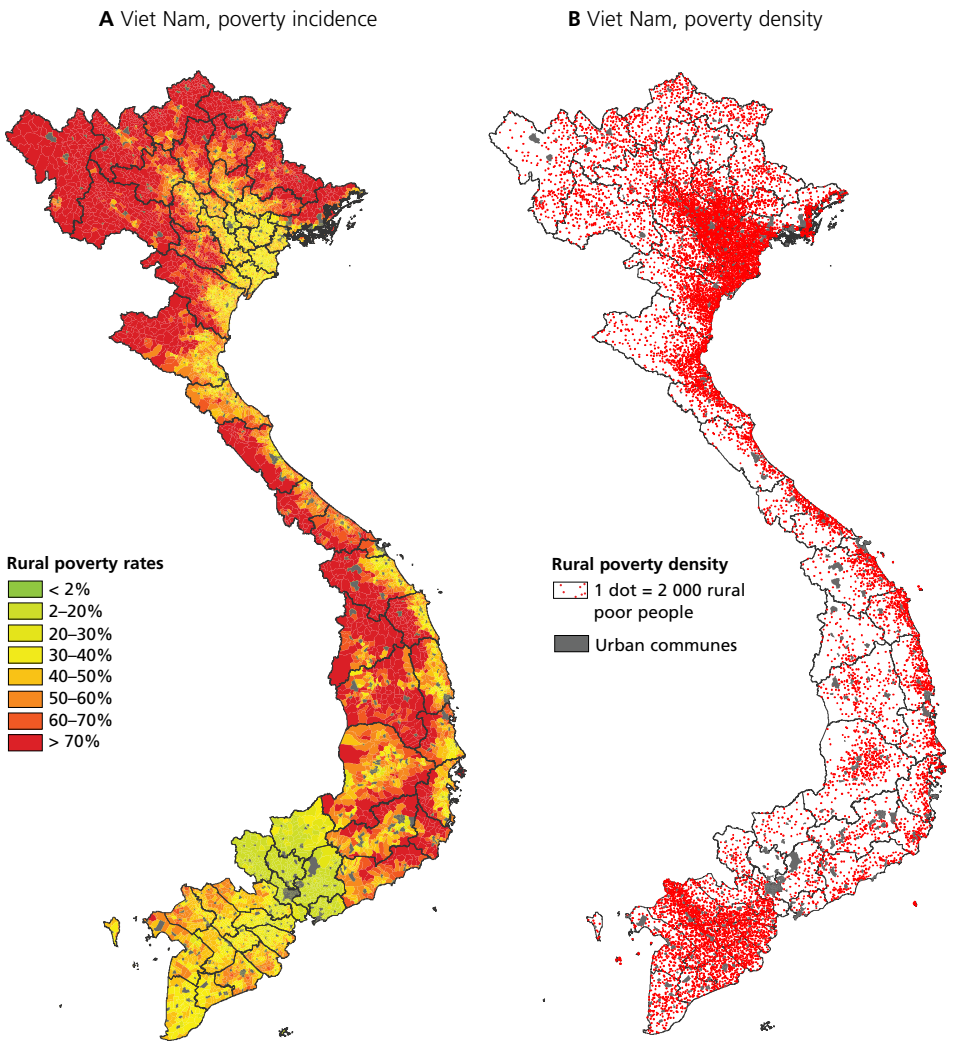
A Market access

B Poverty incidence



Source: Epprecht and Robinson, 2007.

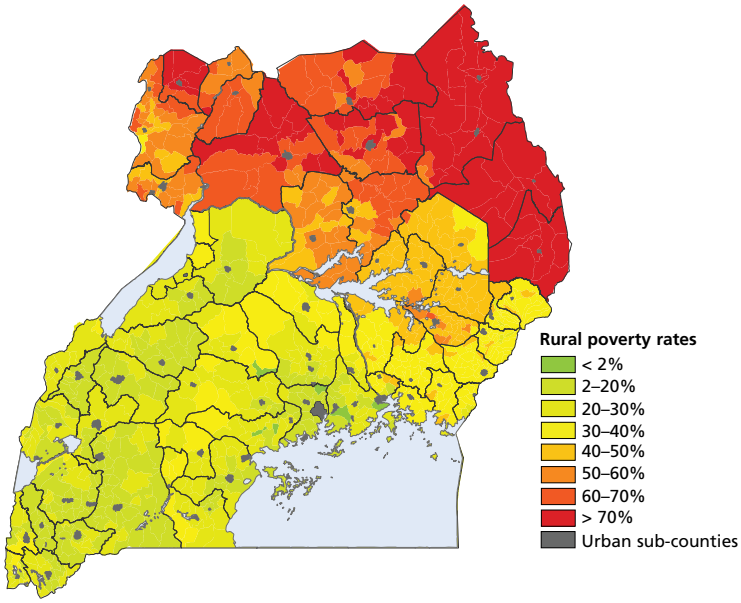
FIGURE 5.2A
Poverty incidence and poverty density in Viet Nam, 1999



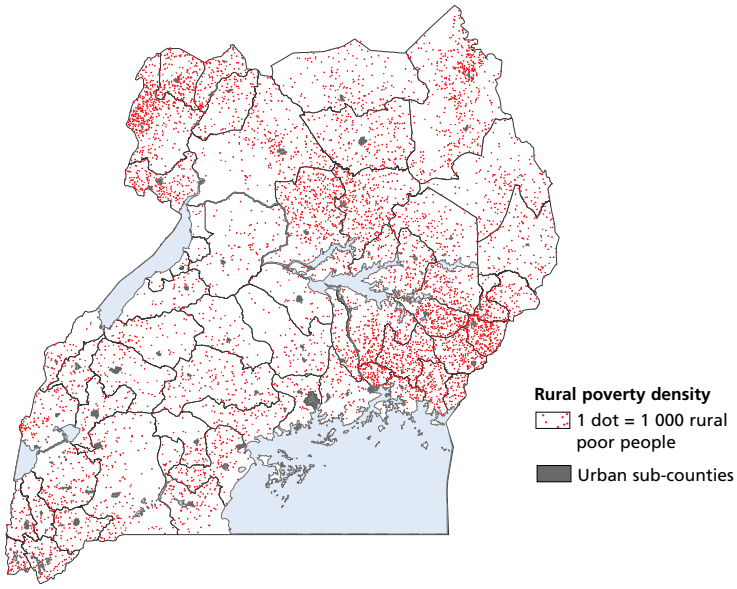
Source: Data from Epprecht *et al.*, 2007.

FIGURE 5.2B
Poverty incidence and poverty density in Uganda, 2005

C Uganda, poverty incidence



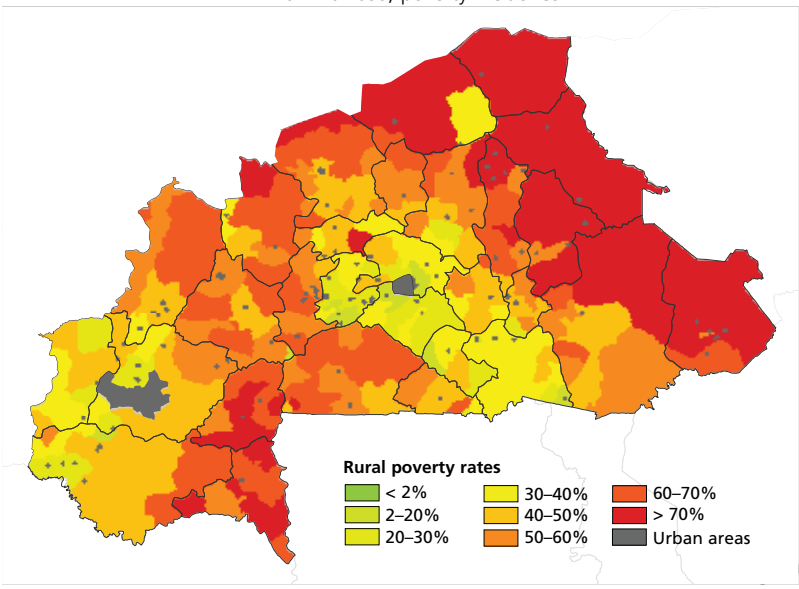
D Uganda, poverty density



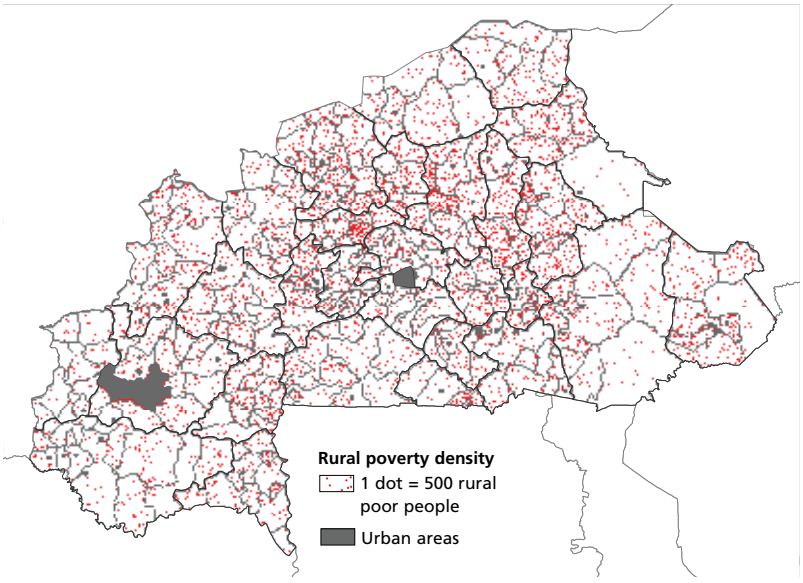
Source: Data from MAAIF *et al.*, 2010.

FIGURE 5.2C
Poverty incidence and poverty density in Burkina Faso, 2006

E Burkina Faso, poverty incidence



F Burkina Faso, poverty density



Source: Data from Kabore, Kone and Ouoba, 2009.

(whose size is proportional to the size of the market). Clearly, poverty incidence (or headcount) is lower near markets, and rises with increasing distance from markets. This finding applies across the vast majority of developing countries.

However, poverty incidence describes only how common poverty is in a given location, and not how many poor people could be affected by a policy or programme that targets that location. As Figure 5.1 makes clear, poverty incidence can be very high in remote areas with little if any market access.[19] Targeted market access policies for reducing poverty in these areas could be quite expensive, requiring large commitments of scarce public investment funds for transport, communication, health and education infrastructure, without helping the majority of the poor. In low-income countries, public funds have high opportunity costs, which make such expenditures difficult to justify on the grounds of cost-effectiveness.

A further implication from this comparison relates to the linkages among growth, trade and poverty reduction. Poor people living in proximity to urban areas may be able to participate in growth induced by trade-oriented industrialization, while the rural poor will not be touched directly by these forces. In the long run, rural households may be able to participate indirectly in urban growth through migration and participation in food markets, particularly if they diversify towards products with relatively high income elasticities (e.g., meat, speciality vegetables, fruit, etc.).[20]

Most developing economies are undergoing fundamental and sustained demographic transitions as their populations shift from rural to urban residence. This process is sharply increasing urban agrifood demand and presents expanding opportunities for those who remain in the rural sector. Which benefits of growing urban food demand go to rural smallholders and which to rapidly expanding agrifood industries will depend to a significant extent on policy decisions. Without public commitment to promoting smallholders' market participation, it is likely that this group will be economically marginalized, while urban growth masks continuously rising inequality.

GROWTH IN DEMAND FOR LIVESTOCK PRODUCTS IN DEVELOPING COUNTRIES

The last two decades witnessed rapid growth in demand for livestock products in developing countries. The main sources of this growth were continued population growth and rising per capita incomes in developing countries (see Chapter 2). Because livestock products have high income elasticities of demand in low-income countries, rising per capita incomes have been the dominant factor in many countries, which explains why the period has seen increasing per capita consumption of livestock products in emerging economies.

As shown in Table 5.1, from 1995 to 2005, the consumption of livestock products in developing countries grew much faster than the population, and than consumption in developed countries. However, the consumption growth was more rapid in some developing country regions and livestock product categories than others. With the exception of

[19] In northern Viet Nam, poverty incidence appears to be almost proportional to average elevation, reaching nearly 100 percent in mountainous areas.

[20] The first great wealth distribution in modern China occurred in the early reform period of the 1980s, when farmers were permitted to sell their own produce in urban markets, rather than delivering it to State intermediaries.

Table 5.1
ANNUAL GROWTH IN CONSUMPTION OF LIVESTOCK PRODUCTS, BY REGION, 1995 TO 2005 (PERCENTAGES)

Region/country	Bovine meat	Pig meat	Poultry meat	Eggs	Milk[a]
EAP	4.0	3.6	4.7	3.6	9.3
China	4.8	3.5	4.9	3.7	12.7
EECA	-2.7	-1.1	5.2	1.4	0.6
LAC	1.6	2.0	4.4	3.0	1.7
NENA	2.6	1.9	5.9	2.9	3.1
South Asia	0.2	0.5	5.2	5.1	3.3
India	-1.2	0.4	4.8	5.3	3.0
SSA	3.0	2.6	5.4	3.0	2.3
All regions	1.3	2.8	4.9	3.3	2.9
High-income countries[b]	0.2	0.9	2.6	0.8	0.8

[a] Excluding butter.
[b] Based on 2010 World Bank classification.
Source: FAOSTAT, 2010.

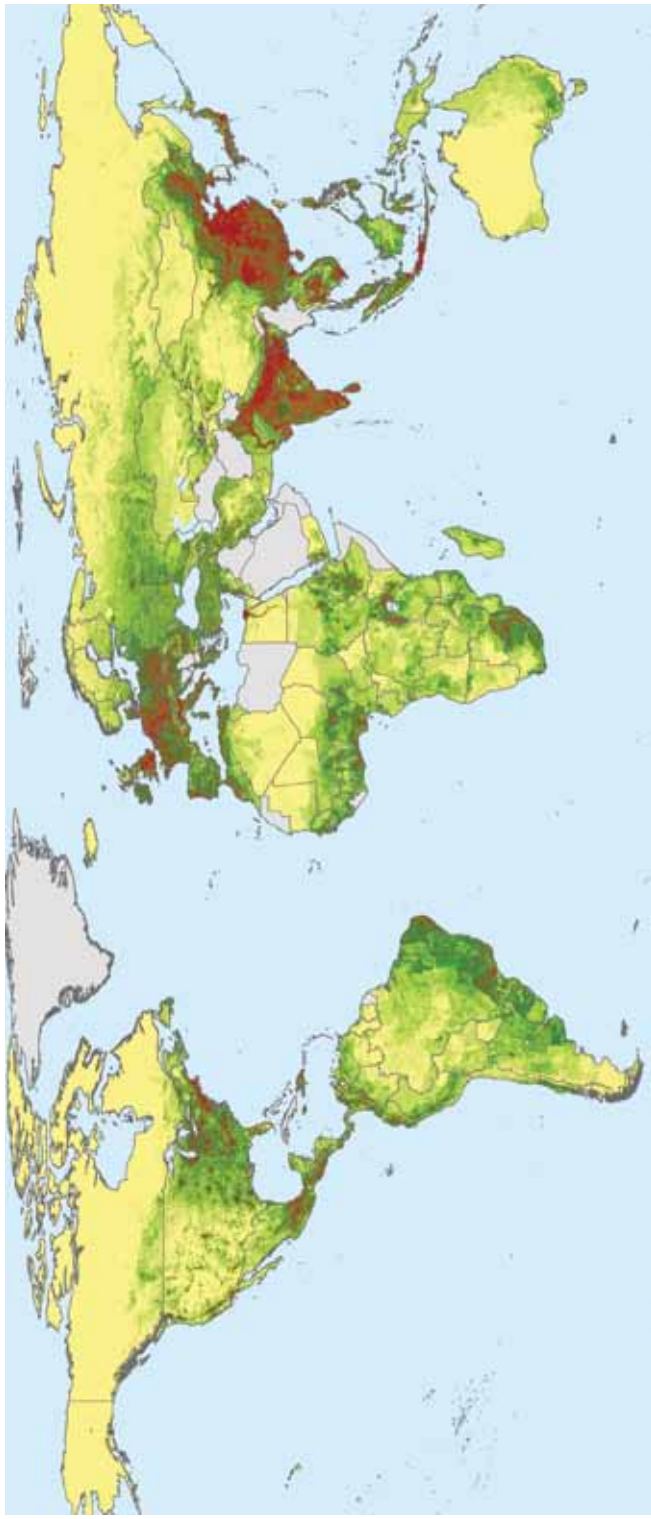
bovine and pig meat in Latin America and South Asia, annual demand growth for all major livestock products in all developing country regions ranged from a low of 1.8 percent (pig meat in the Near East and North Africa and milk in Latin America and the Caribbean) to a high of 8.1 percent (poultry meat in South Asia). Overall, the most rapid demand growth occurred for poultry meat, eggs and milk.

While livestock sector growth rates have been impressive, the significance of livestock production within countries is changing in important ways. Economic development is characterized by both a declining relative size of the agriculture sector in national economies and structural changes within the agriculture sector. In particular, as economic development advances, livestock can emerge as the largest single contributor to agricultural value added: in industrialized countries the livestock sector accounts for an average of 53 percent of agricultural value added, compared with about 35 percent in developing countries (FAOSTAT, 2010). This structural change in agriculture reflects human food consumption patterns, as described in Chapter 2.

Although developed countries have much higher average incomes than developing ones, food expenditure, including on ASFs, is just as concentrated (expressed as United States dollars spent per square kilometre), or even more so, in developing countries because consumers use a large proportion of their income to satisfy their need for food items (Figures 5.3 and 5.4). The current expansion of these already large ASF markets represents enormous income potential for the rural poor, many of whom already own livestock, to provide a complex array of goods and services (see Chapter 3).

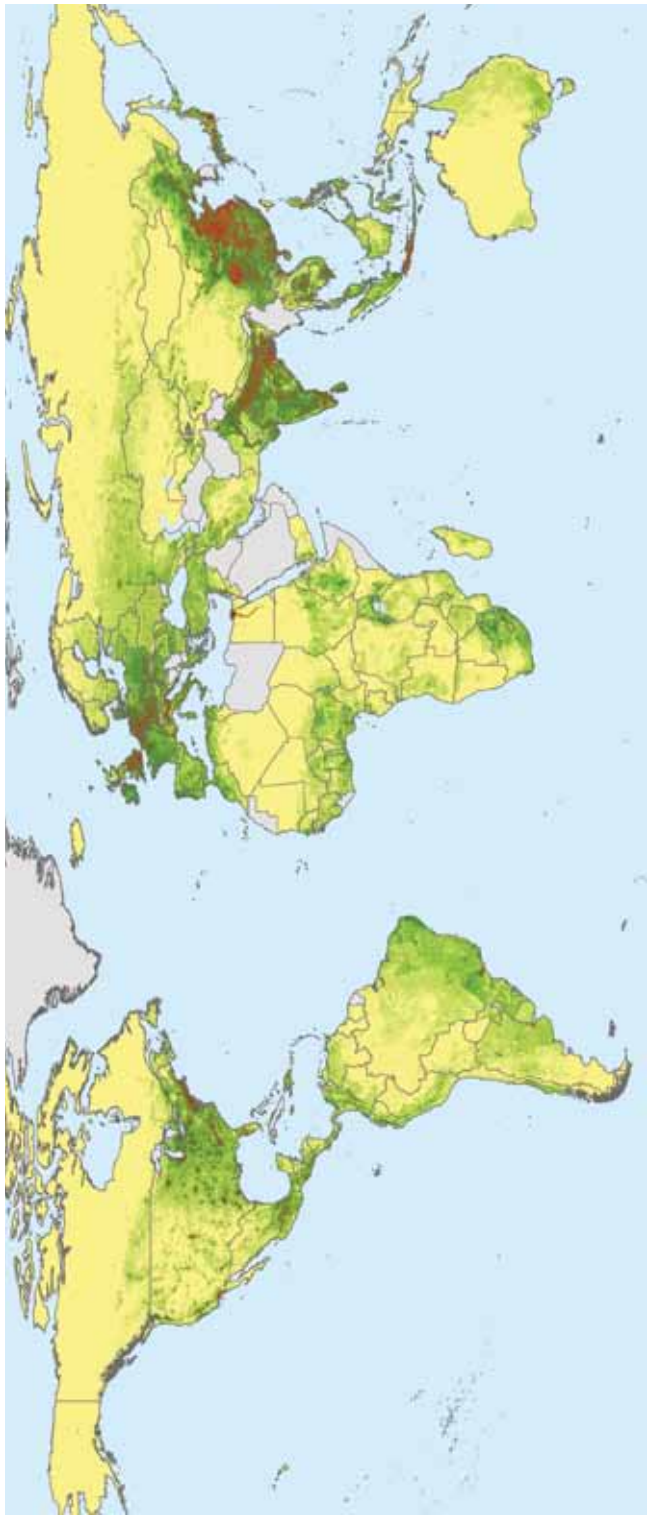
Unfortunately, livestock's vast potential for poverty reduction, associated with appropriate sector development and both its direct and indirect effects, remains largely untapped.

FIGURE 5.3
Food expenditure density



Source: Otte *et al.*, 2008.

FIGURE 5.4
Meat and dairy expenditure density



Source: Otte *et al.*, 2008.

There are many reasons for this:

- Market and institutional imperfections, including inadequate public animal health services and limited access to credit, together with a pervasive array of information and access barriers constrain the livestock-dependent poor from making greater investment in and better use of their livestock assets.
- The prevailing policy paradigm, in which livestock are considered an addition to, rather than an essential component of, smallholder agriculture leads to programmes and policies that fail specifically to address livestock-related market imperfections or capacity development.[21] Such imperfections usually favour large- over small-scale operators, and have a systemic bias towards industrialization and concentration along the livestock supply chains. They may actually exacerbate rural poverty and demographic instability.
- Unregulated expansion of the livestock sector can have adverse consequences for society, including public health hazards associated with zoonotic livestock diseases and/or environmental degradation from improperly managed livestock production systems. Such externalities disproportionately affect the poor, who depend heavily on the natural resource base for their basic needs and have limited capacity to cope with shocks.

Policy-makers in developing countries, and the international development community should aim to guide livestock sector development in ways that are sustainable while contributing to poverty reduction. Under current circumstances, with smallholder producers expected to constitute a significant proportion of livestock keepers for several decades to come (Nagayets, 2005), this approach will contribute to national food and civil security, expanding agricultural capacity from the bottom up while reducing inequality. The benefits of this policy emphasis will be increased by strong pro-poor multiplier effects extending across the urban and peri-urban lower-income and small enterprise networks that characterize agrifood supply chains in developing countries (see Chapter 4).

Rapid demand growth for livestock products in developing countries mobilizes resources on the supply side, while rural-urban demographic transitions require higher labour productivity in agriculture, and transport infrastructure to move greater volumes of agrifood products. Markets provide essential support for all of this, linking urban demand and sources of supply while mediating consumption and production through a web of product transformation activities and services between the farm and the fork. For rural household enterprises, responses take the form of diverse resource commitments, production and marketing decisions, depending on initial endowments, capacities, customary livelihood strategies, information, attitudes towards risk, and other factors.

It has been amply demonstrated that as agricultural household producers make the transition from subsistence production to a market orientation, income can improve significantly. Income growth via expanded market engagement can come from two sources: increased sales volume, and higher profit per unit. The former would result from higher output and/or more output being diverted from own consumption to the market; the latter can arise from higher product quality, economies of scale or other cost advantages and/or improved bargaining power. Table 5.2 gives an example of the relative magnitudes by which agricultural households' income and its sources increase with the degree of market participation.

[21] For instance, issues related to the seasonality of feed availability, common property resources, water and livestock insurance receive little attention in the policy agendas of most developing country governments.

Table 5.2
TOTALS AND PROPORTIONS OF AGRICULTURAL HOUSEHOLD INCOME, BY SOURCE AND LEVEL OF MARKET PARTICIPATION IN VIET NAM (THOUSAND DONG [VND])

	Market orientation of agricultural households					
	Subsistence[a]		Semi-commercial[b]		Commercial[c]	
Income source	Total income	(%)	Total income	(%)	Total income	(%)
Agriculture	3 277	94	6 370	83	15 245	84
Other	195	6	1 307	17	2 989	16
All sources	3 472	100	7 677	100	18 234	100

[a] < 25 percent of own production sold in the market.
[b] 25–75 percent of own production sold in the market.
[c] > 75 percent of own production sold in the market.
Source: Maltsoglou and Rapsomanikis, 2005.

From the differences in mean incomes, it appears that increasing market participation to the semi-commercial level is associated with a more than doubling of average household income. In Viet Nam, most agricultural households (59 percent) are already semi-commercial, while the poorest 11 percent remain subsistence farmers. Of course there may not be a direct causal relationship between commercialization and income for this group, but the results strongly suggest that households can improve their income prospects by increasing their participation in markets.

As incomes rise in developing countries, demand for livestock products grows, in terms of not only quantity but also quality and product variety. Enterprises at all scales, from local vendors to urban supermarkets, will differentiate their production capacity to meet these evolving tastes, whether they operate in local, national or foreign markets. Much literature has documented the emergence of such markets, but identifying where and how policies can make this process more inclusive of the rural poor remains a major challenge. Most agricultural and rural households in developing countries are unlikely to be recruited directly into agrifood industrialization. Even intermediate stages of agriculture sector consolidation, such as contract farming, appear to be undertaken at a scale well beyond that of the average smallholder farmer. Industrialization of the agrifood sector is inevitable in most countries, but if the transition proceeds too swiftly it could seriously undermine equity and social stability. At the moment, urban demand growth represents an important opportunity for all domestic food producers, and should be appreciated for its inclusive development potential. The result will be self-directed poverty alleviation, which in most countries would be a welcome alternative to increased rural marginalization and/or sustained fiscal commitments to transfer payments.

At present however, the potential for increased livestock demand to improve domestic livelihoods in developing countries is not only far from being realized, but is possibly even receding. Table 5.3 shows the development of trade balances in various livestock product categories in developing regions, from 1990 to 2007 (the most recent year for which figures were available at the time of writing). For simplicity, quantities of bovine and ovine meat are combined as ruminant meat, and those of pig and poultry meat as non-ruminant meat.

Table 5.3
NET IMPORTS OF LIVESTOCK PRODUCTS, AND ANNUAL CHANGE, BY REGION, 1990 TO 2007

Region/ country	1990[a] ('000 tonnes)			2007[a] ('000 tonnes)			Annual change[a] (%)		
	Dairy products[b]	Ruminant meat	Pig and poultry meat	Dairy products[b]	Ruminant meat	Pig and poultry meat	Dairy products[b]	Ruminant meat	Pig and poultry meat
EAP	5 850	780	409	12 502	1 479	3 253	5	4	13
China	974	[123]	[415]	2 308	73	179	5	3	5
EECA	[520]	22	19	[2 585]	645	19	[10]	22	0
LAC	4 361	[595]	[111]	2 389	[2 357]	[3 126]	-4	[8]	[22]
NENA	4 627	405	36	4 687	641	265	0	3	12
South Asia	645	[71]	0	582	[496]	13	0	[12]	33
India	1 009	[72]	0	[519]	[494]	[3]	-3	[12]	[17]
SSA	1 496	102	115	2 710	115	847	4	1	12
All regions	16 459	643	468	20 285	27	1 271	1	-17	6

[a] Values in square brackets are net exports/growth rates of net exports.
[b] Milk equivalent.
Source: FAOSTAT, 2010.

As shown in Table 5.3, most developing country regions are net importers of animal products. The only exceptions are Eastern Europe and Central Asia, a net exporter of dairy products, and Latin America and the Caribbean, a net exporter of both ruminant and non-ruminant meat. South Asia was also a net exporter of ruminant meat in both years, but by 2007 had become a net importer of poultry meat. Comparison of the data for the two years, and the annual growth rates of the trade balances (last three columns) demonstrate the rapid expansion of both imports and exports, particularly of pig and poultry meat, which grew more than imports and exports of ruminant meat. Generally, regions that were net importers in 1990 increased their import dependency in 2007, by as much as 33 percent a year for non-ruminant meats in South Asia. Mirroring this growing import dependence in many developing countries, the developed countries have consistently sustained large net exports of all major meat and dairy products.

This suggests that developing country producers face competitive disadvantages both at home and abroad. Limited capacity, higher unit costs or both prevent them from capturing the benefits of robust demand growth at home, while many of the same reasons leave them with limited opportunities for penetrating overseas markets. Capacity constraints can be quantitative, arising from insufficient investment, resource constraints or institutional weakness, or qualitative, when domestic producers cannot meet product standards, which tend to rise with urban incomes and competition from more advanced international agrifood competitors. In either case, developing countries are missing the macroeconomic benefit of capturing demand and value added from both domestic and export markets. More important for poverty reduction, smallholder food producers are likely to be left out of this process completely, as domestic industries scale up to compete head-to-head with foreign industrial food interests.

However, the appearance of significant net exports of some livestock products in Latin America and the Caribbean, and South Asia should not be ignored. These positive trade balances suggest that in some developing countries and regions, the capacity to export has been established and could be extended. Exports need not be directed to developed country markets, where product quality and safety standards are very stringent, but can also be directed to South–South trade channels, exploiting market opportunities presented by the trade gaps in other developing regions and countries. Because of the demographic magnitudes and demand growth rates involved, this kind of trade could be an important growth stimulus.

The main conclusions from these trends in regional trade balances are that while the key market objective of net exporting regions, such as Latin America and the Caribbean and possibly South Asia, is to maintain and expand exports, for net importers the goal is more likely to be import substitution. In both cases, success depends on increasing domestic production at a competitive cost, while maintaining adequate food safety and other quality standards. The standards and rules imposed by importing high-income countries, and harmonized and coordinated by the World Trade Organization, impose heavier constraints on countries dependent on exports than on those focusing on import substitution.

SUPPLY AND VALUE CHAIN DIVERSITY

Growth of aggregate demand for livestock products in developing countries does not by itself increase incomes among rural households; in the absence of more inclusive and efficient markets, many smallholder livestock keepers will continue to produce mainly for home consumption. In broad terms, a market can be defined as the locus of exchange for goods and services between producers and consumers, mediated by networks of intermediaries linking sellers and buyers. These supply chain networks can take many forms, from the most advanced agro-industrial systems to individuals trading backyard animals.

Modern supply chains

As the globalized food system expands, there is increasing vertical integration along livestock product supply chains. Pingali, Khwaja and Meijer (2005) argue that agricultural production processes other than purely subsistence farming systems are becoming increasingly consolidated across input markets, agrifood processing, distribution and marketing. Moreover, the growing commercialization of agriculture is transforming traditional food systems. Multinational reach and technology diffusion are harmonizing both production and management practices, while globalized marketing is promoting the worldwide convergence of tastes.

As modern supply systems expand, the technological, institutional and informational inputs supporting agrifood production are becoming increasingly complex, and growing amounts of information and skills (operational, managerial, regulatory, financial, etc.) have to be maintained within and between each link along the supply chain. Continuous investments are needed to comply with changing product, process, quality and safety standards. In addition, as agriculture becomes increasingly commercialized, the need for highly specialized production units necessitates tighter control and supervision along the supply chain. By implication, modern food systems in highly commercialized agricultural markets

have introduced a new set of entry and transaction costs for producers to be competitive (see e.g., Pingali, Khwaja and Meijer, 2005 for more discussion).

To a significant degree, these trends in technological change have been induced by domestic and international competition, particularly in high-value-added agrifood sectors. Economies of scale are exploited where they exist (Narrod, Tiongco and Costales, 2007; Costales, Gerber and Steinfeld, 2006), and larger markets can confer tighter control over product quality and other transaction characteristics at the single enterprise level, while the advent of traceability regulations clearly favours the development of integrated supply chains. Such consolidation also reduces transaction uncertainty and complexity, through asset-specific investments such as "identity-preserved" supply chains that integrate supply via acquisition and contractual branding (Da Silva, 2005; Hobbs and Young, 2001).

These changes are occurring within, and are to a significant extent facilitated by, a globalizing trading environment in which developed and developing country markets are becoming more closely intertwined or are experiencing *de facto* coordination through international dispersion of hard and soft technologies. These developments are transforming domestic and international agrifood systems, leading to indirect convergence and direct commercial integration of production, processing, distribution and marketing activities (Kirsten and Sartorius, 2002; Da Silva, 2005). For developing countries, this means that opportunities for domestic and overseas market expansion are tempered by strong foreign competition and higher product standards both at home and abroad. In external markets, regulatory standards pressurize developing country exporters to improve technical efficiency, ensure product quality and reduce production costs, to overcome entry barriers and establish market share.[22] Meanwhile the prospect of foreign entrants exerts similar pressures on domestic markets, often when domestic firms are at significant disadvantages in terms of technology adoption and average cost/scale.

For distribution, the move towards more industrialized agricultural production systems in the last decade is associated with the robust expansion of modern supermarket and fast food restaurant retailing in developing countries (Reardon and Timmer, 2005). The emergence of these large "one-stop shops" and convenience store chains in developing countries, largely a result of foreign direct investment, has also changed the upstream side of agrifood systems through innovative and efficient ways of procuring agricultural products. These developments are facilitated by advances in information technology that can respond quickly to supply uncertainty and demand conditions in domestic urban and export markets. The modernization of supply chains and their linkages to major urban and export markets induce new relationships between processing and farming enterprises. Perennial competitive pressure increases the need for supply chain functions to be linked by more efficient technology, spanning complex arrays of production, transport and marketing of agrifood goods and services.

Many development economists (see e.g., Kaplinsky and Morris, 2000; Humphrey, 2005; Reardon and Timmer, 2005; Pingali, Khwaja and Meijer, 2005; Barrett, 2008) have stressed that unless smallholder producers are able to improve production processes to meet mod-

[22] The albeit significant costs of complying with international sanitary and phystosanitary (SPS) standards may be dwarfed by the other costs of ensuring that products are competitive in recipient markets (Perry and Dijkman, 2010).

ern market standards, they risk being excluded from expanding domestic food market opportunities. This view seems overly pessimistic, and experience suggests that smallholders may capture significant shares of domestic markets for specific products by adopting appropriate practices and technologies, if complementary policies can help them overcome market imperfections.

Consumer demand and supply chains in developing countries

Agrifood supply chains in many developing countries are still far from the paradigm of high-tech, highly integrated systems emanating from OECD economies. Supermarket diffusion across the globe cannot change the reality in developing countries, where the demand for agricultural and livestock products of all kinds depends mainly on the domestic population's income levels, habits, attitudes and expectations of what different suppliers can provide.

In their representation of the world economic pyramid (Table 5.4), Prahalad and Hart (2002) argue that about 4 billion people, or two-thirds of the world's population, are not considered viable markets for high-end and high-quality products by transnational companies. Although about a billion of these people live in extreme poverty, in aggregate this bottom tier of consumers presents considerable purchasing power, for which food products are particularly important.

For livestock product markets, Aho (2010) presents a similar analysis of the relationships among per capita incomes, consumer preferences, and demand for various types of livestock product based on the extent of processing involved. As with Prahalad and Hart (2002), globally only the top income decile – with annual per capita incomes well above USD 20 000 – is a viable market for high-value processed and convenience cold chain products, while the 60 percent of consumers in the lower three income quintiles normally purchase ASFs in live-animal and wet markets, and only occasionally acquire partially processed cold chain products.

These findings strongly suggest that although a subset of domestic consumers in developing countries demand high-end livestock products, these people are still a minority, rep-

Table 5.4
THE WORLD ECONOMIC PYRAMID

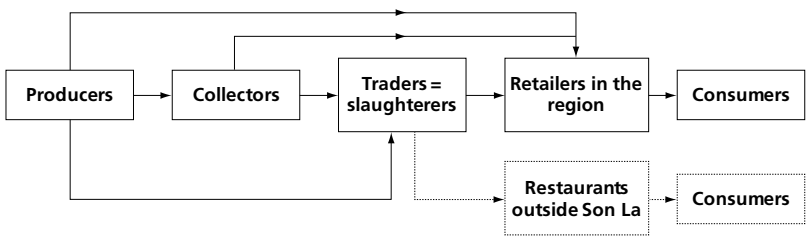
Tier	Description	Per capita income *(USD/year)*	Population *(million)*
1	Affluent consumers of upper- and middle-income households in developed countries, and a few rich consumers in developing countries	> 20 000	70–100
2 and 3	Poor consumers in developed countries; rising middle classes in developing countries	1 500–< 20 000	1 500–1 750
4	Poor consumers in developing countries	< 1 500	4 000*

* More than 1 billion of whom live on < $1/day.
Source: Prahalad and Hart, 2002.

resenting mainly the urban upper-middle class. The needs of these comparatively affluent consumers can be met by high-end commercial – to a large extent corporate – livestock producers with supply chains ending in urban centres, or by imports from developed countries. The far larger proportion of consumers in developing countries have lower purchasing power and more traditional preferences regarding how food is prepared and sold for household consumption. Thus livestock product markets in developing countries exhibit a large degree of diversity, contradicting the common idea of a dominant paradigm for modern, integrated production and marketing systems. In particular, the concept of high-end or high-value supply chains based on industrial animal production, processing and supermarkets, led or accompanied by export market development, will by-pass most households in low-income countries. Instead, small-scale livestock producers in these economies will see a spectrum of market systems, each with its respective supply chain(s), and many alternative paths from farm to fork (Ramsay and Morgan, 2009). In the continuum of market types and supply chains, Ramsay and Morgan (2009) identify the two extremes that producers of livestock products face: the *local market*; and the *industrial inputs market*, where primary livestock products are transformed into processed products for final household consumption.

The supply chains for local markets are mediated mainly by informal and customary networks, which prevail because of their relatively low transaction costs. Product types, forms and production standards are defined by consumers, who demonstrate their acceptance by purchasing the product, and confirm it with repeat purchases. Local markets are usually found in smaller towns, rural areas and urban peripheries. Figure 5.5 gives an example of a local market supply chain, depicting a typical supply chain for indigenous (Ban) pigs in the northwestern province of Son La in Viet Nam (Huong, 2007). The supply chain is short, confined mainly to the province or region (the northwest), where products may either pass through village collectors or slaughterers, or go directly to town retailers who then make the final sale to consumers. Although the product might occasionally reach restaurants or

FIGURE 5.5
Typical supply chain for indigenous (Ban) pigs in Son La province, Viet Nam



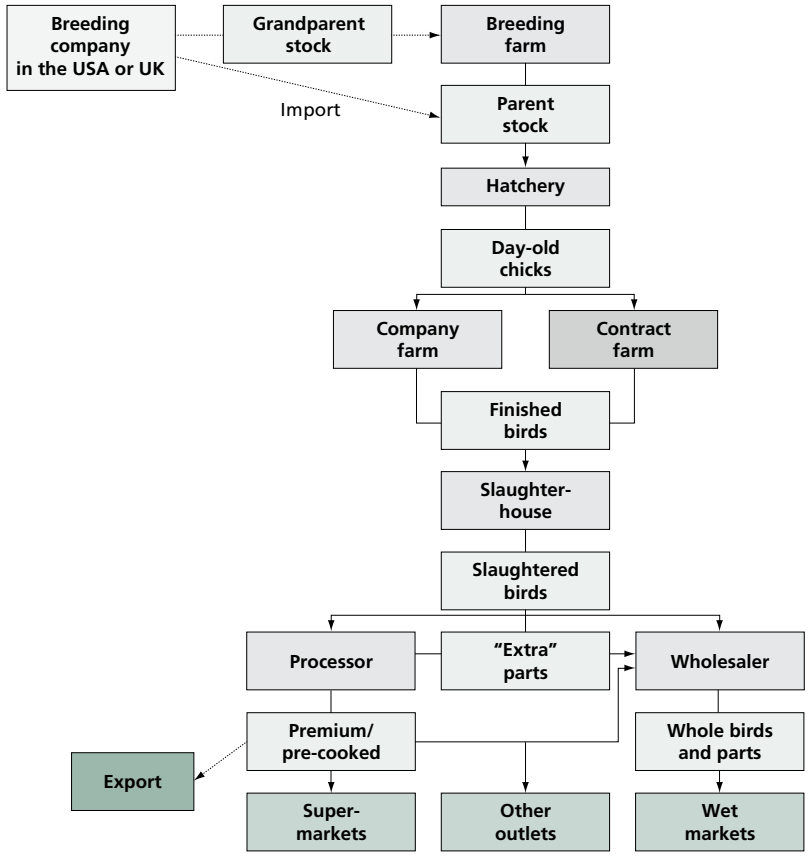
Source: Huong, 2007.

consumers outside the region (e.g., in Ha Noi), where there are premium prices for indigenous pig meat, trade is predominantly within the town or province. In such local market systems, agreements between product suppliers and buyers are generally informal but binding, with violation of an agreement making its renewal unlikely. When buyers have identified reliable suppliers, they provide incentives to obtain assurance that these suppliers' upcoming batches of Ban pigs will be sold to them.

At the other end of the scale, supply chains leading to industrial input markets are mediated by formal exchange norms. As well as by consumer requirements, product standards are defined and enforced by commercial actors along the supply chain (private standards), and/or are codified and enforced by State regulation (public standards). At the point of final demand, industrial input markets are normally linked to large urban centres where mass consumption takes place. An example of a market system dominated by formal contracts between producers and buyers is Thailand's broiler chicken market. Thailand has a well-developed industrial poultry sector, supporting its status as one of the world's largest exporters of these products. Although backyard chicken flocks comprise more than 90 percent of the country's flocks, about 90 percent of broiler chickens are produced in commercial company farms or in contract farms operating large-scale, highly integrated systems, as illustrated in Figure 5.6. In this schematic, a single enterprise could control all the activities in shaded boxes while enjoying substantial market power in its relations with other market participants. Although such a supply chain can make a substantial contribution to national income and food production, smallholders have no place in it. Broiler chickens produced by large company and contract farms are destined for the domestic (two-thirds) and export markets (one-third). Broiler chickens for the domestic market become an industrial input that undergoes the same processing in the integrator company's slaughterhouses as produce for export markets. It should be noted that in spite of this, nearly half of the products from the industrial inputs market do not proceed to high-end consumers in restaurants and supermarkets, but are directed to wholesalers in the general public wet markets (Heft-Neal *et al*., 2008).

However, developing countries have more than these two extreme forms of very informal local markets and highly sophisticated high-end formal industrial inputs market systems. There is also a wide range of intermediate markets, with increasingly formal market transactions as they proceed from the local market to the industrial inputs market system. Figure 5.7 depicts an example of such intermediate markets, using the rural and urban/peri-urban market flows for milk and milk products in India. In this case, rural household producers account for 98 percent of household dairy output, but about 85 percent of their marketed produce ends up in more distant urban markets, with the remainder being sold in local rural markets (Staal, Nin Pratt and Jabbar, 2008b). The rural output sold in urban markets is not necessarily screened and processed as industrial input for distribution in high-end markets such as supermarkets, hotels or restaurants. More than 80 percent of it passes through informal processors or creameries producing creamless milk and traditional dairy products for sale to sweetshops, tea shops, small restaurants and urban households. These informal creameries also have links to formal dairy companies and private processors, supplying cream from their own transformation processes, which then undergoes further refining for higher-end markets (Fairoze *et al*., 2006).

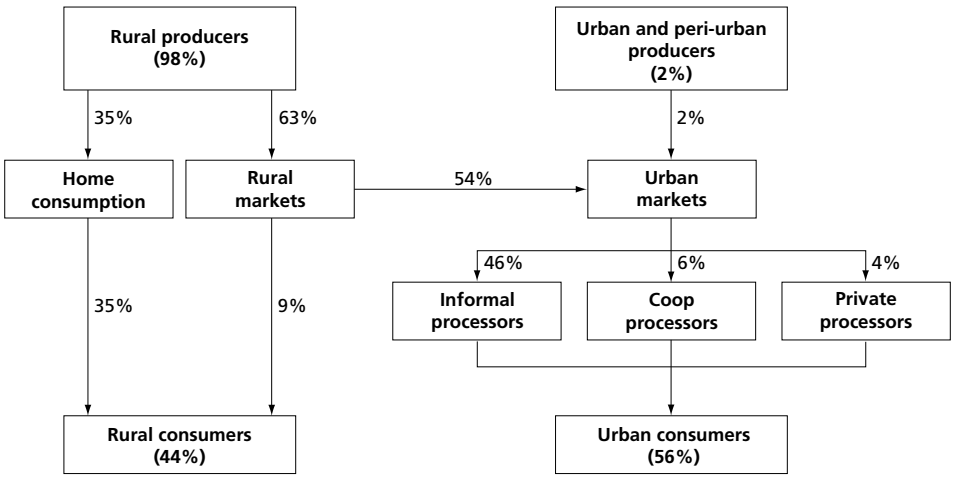
FIGURE 5.6
Modern integrated poultry production in Thailand



Source: Heft-Neal *et al.*, 2009.

In other developing countries, intermediate markets may take a different form from that depicted in Figure 5.7, with different shares held by the informal and formal market segments. The differences depend on the product in question, how advanced the marketing infrastructure is in terms of transport and cold chain facilities, and the tastes, preferences and purchasing power of urban consumers. However, a basic feature is that rural and peri-urban households produce livestock products alongside larger-sized and more commercially oriented producers, and compete for market share in urban centres using informal or formal market chains, or both. A review of formal and informal contracting arrangements

FIGURE 5.7
Rural and urban/peri-urban informal and formal market flows for dairy in India



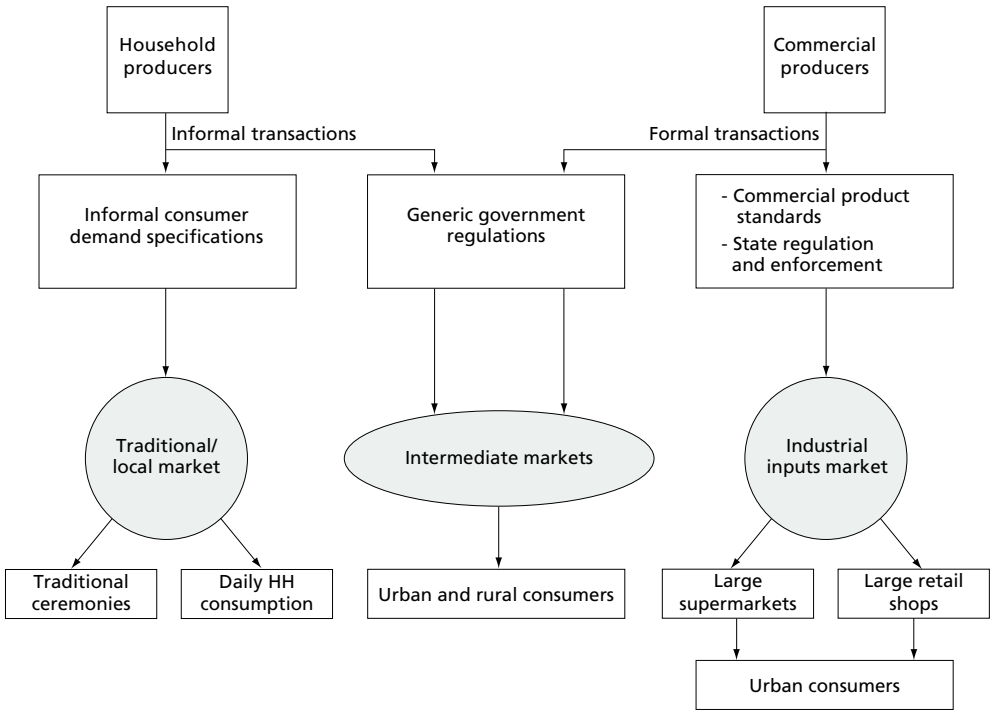
Source: Staal, Nin Pratt and Jabbar, 2008b.

between household producers and processors of livestock products in developing countries shows that in terms of market coverage, intermediate market systems predominate over industrial inputs ones (Catelo and Costales, 2008).

Smallholders are threatened in both rural and urban areas. Because of their greater mobility, larger commercial businesses established in cities can easily develop distribution networks to towns and villages. In this sense, rural households and urban commercial suppliers have opposing captive and target markets. A market actor may be established in the former, but consider the latter for expansion. For market actors, some of the markets where they do not participate intensively are potential markets, which they can try to penetrate when the opportunity arises.

Figure 5.8 presents a schematic of captive and potential markets for the livestock products of household producers and commercial producers. The traditional or local market is a captive market for household producers, but also a potential market for commercial producers, for whom it may represent an attractive diversification and/or expansion strategy. Household producers could already be aiming for a share in intermediate markets, and some households could already be looking at the opportunities presented by the industrial inputs market.

FIGURE 5.8
Captive and potential markets for livestock products of household producers and commercial producers



Source: Adapted from Ramsay and Morgan, 2009.

BARRIERS TO MARKET ACCESS

The observed rapid growth of demand for livestock products accompanied by slower domestic supply growth in developing countries suggests that there are still market opportunities for livestock producers to exploit in most of these countries. This gap represents potential for increased incomes and alleviation of rural poverty for smallholders, both directly and indirectly, through employment and value addition along the relevant supply chains. However, participation in expanding markets for livestock products does not occur automatically. Wherever there are profits to be made in an emerging urban consumption sector, larger commercial suppliers will compete to capture market share for any product. When household producers are unable to participate in the growing markets that attract larger commercial producers, it is generally because of barriers to market access or entry. An entry barrier is deemed to exist when a potential competitor is unable to sell a product at a reasonable price in a market where there is demand for that product. A reasonable price is one that at least covers production and marketing costs (Ramsay and Morgan, 2009). Smallholders in developing countries face a wide array of these barriers.

Because they inhibit otherwise competitive forces, barriers confer some degree of monopolistic power on incumbent firms. In addition to undermining allocative efficiency[23] and transferring wealth, such distortions stimulate further non-competitive behaviour as incumbents seek to sustain or even increase the barriers and the rewards they yield. This creates an adverse cycle in which incumbent firms expend resources on political and other influence and on anti-competitive practices, driving the market towards ever-more wasteful outcomes while denying consumers product variety and higher purchasing power. Other casualties of such processes are the potential competitors who are denied market access. In modern industrial economies, these may be large enterprises that simply have to forego a single product line. For rural smallholder farmers however, the outcome is more serious, as they have only two options for improving their livelihoods: migration or marketing household production.

Market access for smallholders

In agrifood supply at its smallest scale, from the smallholder farm gate, a household sells its product to a trader, initiating a chain of exchange relations across a market system that takes the product through a number of stages to reach final consumers. From the first step, this elemental agrifood supply chain is complicated by many market access barriers and information failures, which individually and collectively undermine the livelihood potential of an activity farmers already pursue. Smallholder livestock supply chains are plagued by the following imperfections:

- *Low input quality*: Although the natural diet of free-range livestock may be an important contributor to taste and other positive product characteristics, it may also be inconsistent with and inadequate for complete physical development and health status. While some feed additives may be seen as artificial, consistent feeding, complete and balanced diets, and medication when needed can improve the quality of smallholder livestock without compromising their favourable product characteristics.
- *Low sanitary standards*: Because farmers may not be rewarded for their investments in protecting the sanitary status of their animals, they are likely to accept higher loss rates and the adverse quality effects of illness, parasites, etc. Downstream, the lower value of the animals leads to lower investment in transit and distribution infrastructure (containers, vehicles, etc.) and lower handling standards.
- *Low bargaining power*: Many smallholders have to sell to monopsonistic traders or assemblers who visit their farms intermittently and often unpredictably. Negotiating with these parties generally entails substantial information asymmetry regarding market values, all of which are favourable to the buyer because farmers have very limited market experience and face high costs for gathering such information.
- *Moral hazard*: Producers and traders have strong incentives to misrepresent the health and other quality characteristics of animals as much as they can. This misrepresentation can be direct, by overstating the quality characteristics of an individual animal, or indirect, by blending stocks to mask the status of inferior animals. This

[23] Allocative efficiency occurs when competitive discipline ensures that resources are recruited into a use at prices that reflect the value of the resources' best alternative use – their opportunity cost. Where there is monopoly power, for example, firms can restrict supply below socially desirable levels, and overcharge society for resource use.

practice is particularly invidious because, for example, it may lead to disease spread within and among flocks, farms and markets.

- *Distrust and low willingness to pay*: Most buyers have at least an instinctive awareness of all the market and information failures already discussed, and of the inevitable adverse selection that results. When they cannot ascertain true quality or producer reliability, individually rational buyers will pay less for livestock products than they would in the absence of such uncertainty.[24]

Each of these uncertainties undermines willingness to pay and contributes to serious adverse selection bias in markets. Ultimately, this problem feeds back to producers, who have little incentive to produce higher-value animals for market.[25] Unless these market imperfections can be overcome, low investments in output and product quality will remain individually rational for smallholder farmers, and the livelihood potential of livestock markets will remain limited for them.

Marketing costs and smallholder market access

Marketing costs represent an important market access barrier, particularly for smaller enterprises. For the rural poor, who are more isolated and have fewer transport choices, logistical and search costs are very high as percentages of income, savings and product value. This limits the rural poor's supply and demand interactions with larger markets. Such costs can be defined as a margin, capturing the *ad valorem* (percentage of value) effect of trade, transport and other transit costs. Trade margins are higher for those who are more distant from markets and for small operators who cannot take advantage of economies of scale. They have two main adverse effects:

- *Reduced comparative advantage*: In a world of heterogeneous resource endowments, skills and other initial conditions, cost differences offer the prospect of gains from trade. Specialization at the international, regional or local level can increase aggregate welfare if it reduces average resource costs and increases real purchasing power. Unfortunately, however, trade margins undermine cost differences, thereby also undermining comparative advantages, and high margins stifle the opportunities for exchange and specialization between diverse economic areas, including rural and urban markets.
- *Reduced agricultural/rural terms of trade*: Rural terms of trade are determined by the ratio of rural prices for rural products (or rural household producer prices), debited for distribution to the domestic market, to rural prices for urban products (or rural household purchaser prices), including shipping costs from domestic urban markets. Thus, rural terms of trade (the purchasing power of farm products) are inversely related to trade margins, higher margins leading to lower rural terms of trade.

Evidence from Viet Nam shows that poverty headcount, agricultural specialization, average market distances and agricultural terms of trade are intimately related, which suggests that overcoming rural poverty will require product diversification, reduced market access costs and higher relative producer prices.

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[24] Extensive consumer surveys in developing countries confirm consumers' willingness to pay a premium for credible livestock product quality (e.g., Chadwick *et al.*, 2007).

[25] The definitive reference for this, based on the example of used car markets, is Akerlof (1970).

OVERCOMING MARKET ACCESS BARRIERS FOR SMALLHOLDER LIVESTOCK PRODUCERS

In the rural sector of most developing countries, household farms are small, diversified enterprises with a large portion of output targeted to actual or contingent subsistence. Diversification is thus a risk management strategy, evolving from self-sufficiency and expectations that the burden of external shocks will be borne individually. For smallholders to emerge from this situation, they need a credible strategy of commercialization, specialization and investments for increasing value added. Unfortunately, their conditions make smallholders unlikely to compete against established commercial agrifood enterprises in urban markets. To be successful, smallholder producers need to emphasize their strengths – traditional product variety and low resource costs – while policies for inclusive development have to be implemented to facilitate their market access.

Choice of product

Economic theories about market entry barriers generally begin with the concept of homogeneous product. When two firms produce the same product, even a small access cost advantage can award the whole market to one firm indefinitely. However, this outcome does not apply in a world with differentiated products, where consumers willingly pay higher prices for products deemed to be more attractive. For example, poultry consumer surveys in four low- and middle-income Southeast Asian economies revealed that a significant majority of urban households in small and medium cities clearly differentiate local genetic varieties of free-range poultry from industrially produced birds, and are willing to pay a substantial premium for the local birds (Chadwick *et al*., 2007).

A detailed poultry market consumer survey in Ha Noi, Viet Nam provides further information on the food preferences of urban households in developing countries and suggests that demand-side policies offer attractive opportunities for promoting smallholder market participation in appropriate product categories (Ifft, Roland-Holst and Zilberman, 2009a; 2009b; 2011). Respondents were very experienced market consumers. Of particular relevance are the findings that despite living in the capital city, more than 30 percent of households purchased live chickens, and more than 40 percent reported buying whole finished birds. The vast majority (87 percent) of households bought local varieties, paying nearly double the price of industrially produced birds. Thus, the preferred product variety in this relatively low-income country is the most expensive one. This result is particularly significant because smallholders are the main producers of these birds.

To identify the reasons for these observed buying and price patterns, consumers were asked directly about their preferences with respect to chickens. As the previous results imply, price was not a high priority. On the contrary, quality characteristics were paramount in consumers' expressed preferences, including taste, health status and the regularity of availability. Scores for quality (taste and safety) were more than double those reflecting the importance of price. Evidently, Ha Noi buyers value local chicken varieties – which they purchase live – because of the superior taste, and are willing to pay nearly double the price for their quality characteristics. Similar situations were found for pigs in Viet Nam and for poultry in Cambodia, Lao People's Democratic Republic (PDR) and Thailand. These premiums for local, traditionally raised livestock species reveal that smallholders need not

compete head-to-head with commercial competitors. Instead, they can benefit more by investing in the quality of their own products and expanding their livestock enterprises along traditional, resource-efficient lines.

Despite these preferences, 75 percent of responding households in Ha Noi said that they believed the quality of chickens could be improved, suggesting the potential for higher value added for smallholder producers supplying this large urban market. Improvements could take two forms: better flavour and greater product safety. These results show that consumers who are aware of food-borne risks take food safety very seriously, and supply chain and institutional uncertainties are an important source of their perceived risk. Disease risk itself is the most important concern, closely followed by the most important private and public determinants of real and perceived food safety. Food origin is uncertain in the markets studied, with birds passing among several intermediaries, who blend and transport stocks. These intermediaries may provide valuable distribution services, but they undermine the flow of information about product origin and quality, contributing to food safety risks via elevated moral hazard and adverse product selection. The complex nature of some of these interactions and the uncertainties they create is common knowledge, and consumers inevitably discount products accordingly, undermining the incentives for farmers to invest in quality. Credible product traceability schemes would make an important contribution to overcoming this adverse quality/value cycle.

Institutional mechanisms

Smallholders' market orientation can be reinforced by complementary policies and institutions for overcoming the market imperfections discussed previously. These can be policies that target the market failures directly, and measures that address larger issues, such as systemic characteristics of the financial and legal systems. In the financial context, it makes sense to provide targeted micro-credit for promoting smallholders' investment in livestock production and marketing. In the legal framework, contract law needs to be refined to facilitate micro-contracts or agreements between two small enterprises on simple (perhaps even single) marketing transactions. Both these measures could significantly expand the capacity and efficacy of smallholder supply chains.

Microfinance for livestock development: Livestock products provide not only essential nutritional, productivity and environmental services, but also direct income and financial services that act as assets for storing wealth and insuring against income shocks. Because most rural households lack access to formal financial institutions, their transaction costs for such services are very high, and livestock provide a substitute. Unfortunately, savings in livestock are themselves prone to adverse shocks, especially from animal disease. Thus, livestock present savings opportunities for the rural poor, but with a relatively high degree of risk. This is compounded by the financial constraints already mentioned, which limit smallholders' capacity to replace animal stocks after losses from disease or natural disaster. The solution is a credit system, such as micro-credit, that acknowledges smallholders' unique ways of managing financial assets, committing to forward sales and revenue, and carrying forward loan agreements.

Previous research on rural financial access demonstrates how limited the formal and semi-formal financial channels are for households, and suggests that there are significant

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unmet needs as well as established patterns of orderly debt retirement (e.g., Binswanger and Khandker, 1995; Boucher, Guirkinger and Trivelli, 2005; Carter, 1989; Feder *et al.*, 1989; Rutherford, 2000). FAO-PPLPI survey work in Lao PDR reinforces these findings and adds to the challenges by identifying capital constraints among actors in the smallholder supply chain (Channgakham *et al.*, 2010). Credit constraints are widespread, and domestic financial resources are limited for small-scale producers in low-income countries, where those that are available are generally inaccessible to the rural poor and small peri-urban farms and related enterprises. Financial markets in Lao PDR, as in other developing countries, are severely limited, and restrict livestock keepers' access to the capital needed to increase flock/herd sizes, restock after disease outbreaks, or invest in improving product quality or market access. As a result, most small-scale livestock producers are trapped in a subsistence system where production can satisfy only household requirements and the marketing of animals is a residual activity.

Understandably, providing capital to rural areas and smallholder farmers presents a huge challenge, not only logistically, but also in terms of resources. This justifies attempts to identify the regions and households that are likely to benefit the most from increased financial services for smallholder livestock keepers, so that those who stand to utilize scarce resources most effectively can be targeted. Using this approach in Lao PDR, Channgakham *et al*. (2010) conclude that the provinces in the central and southern Mekong corridor are the most likely to benefit from microfinance targeting smallholder poultry producers. These areas are home to a large number of lowland farmers who could use the capital to expand production to meet the demand in urban markets of Vientiane, Savannakhet and Pakse.

Micro-contracting for livestock supply chains: As there are many sources of market failure along smallholder livestock supply chains, institutional mechanisms that link farmers more directly to consumers, or at least to retail vendors, would seem to hold promise for overcoming some market failures. The different parties involved in most urban markets know very little about each other, which compromises the integrity of certificates of product origin and the value that these have conferred (at lease since the French wine industry

developed its appellation system). One way of overcoming this would be through a micro-contracting scheme that binds farmers and vendors to terms of delivery.

In industrial poultry supply chains, contracting schemes have proved successful in linking producers directly to vendors, increasing both the quality and the value of products. However, in a smallholder system, conventional contracts are not appropriate because of their complexity and rigid structures and the high commitments they demand. Adapting the contract system to smallholders' needs could help reduce inefficiencies in the poultry supply chain. Micro-contracts, which are informal agreements that allow more flexibility than a formal contract system while linking producers directly to vendors, present a potential solution to the market failures that arise in the smallholder poultry supply chain, and are worth further examination.

Micro-contracts appear to mitigate the problems of asymmetric information by providing direct links between small-scale producers and vendors. However, data from Lao PDR show that small-scale producers are the group that is least likely to use micro-contracts (Behnke, Roland-Holst and Otte, 2010), while intermediary actors are the most likely. Aggregators and vendors make their living from selling goods that they do not produce themselves, and agreements help ensure their profit margins. By using the approach adopted by intermediary agents, who create agreements to establish prices, quantities and times of sale, smallholders could capture some of the profits from the margins that intermediary agents exploit (e.g., Prahalad, 2004).

Farmers' groups/membership organizations/cooperatives: A third class of institutions that could improve smallholders' market access are producer cooperatives and other membership organizations (e.g., Bonin, Jones and Putterman, 1993; Moran, Blunden and Bradly, 1996). These mechanisms offer many advantages to individual household producers, lowering production and transaction costs through economies of scale for logistics, distribution and marketing, while improving profitability through enhanced bargaining power in both upstream and downstream markets. There is ample precedent for such arrangements in higher-income countries. For decades, the development of producer cooperatives has been essential to survival of the family farm enterprise model in OECD agriculture, facilitating modernization while limiting large-scale consolidation in countries with supporting policies. In OECD countries, cooperatives have been valuable instruments for the diffusion of technology and standards, and platforms for more effective information sharing among individual farm operations. Across OECD countries, the diversity of size distributions in agrifood sectors clearly demonstrates the essential role of policy. In the United States of America, for example, large-scale consolidation has advanced strongly, while in France, Japan, the United Kingdom and other countries, smaller farm models have been promoted through legacy certification and other policy initiatives (Bonin, Jones and Putterman, 1993; Fearne, 1995).

Small farm organization in developing countries is strongly influenced by global (and domestic) market forces led by international and urban financial interests pushing for consolidation. Before acceding to this, developing countries should carefully consider policies that smooth sector transition, maintain product diversity, respect traditional consumer values and limit social dislocation among the poor. The history of such efforts has been somewhat mixed, with some developing countries defending gradualism through the pro-

motion of smallholder organization, while others have been openly hostile to this development pathway (Binswanger and Deininger, 1993).

As with contracting, an important advantage of this approach in developing countries would be the stabilization of rural populations, limiting migration to cities by making smallholder producers viable in larger producer networks. This strategy could thereby limit the scope and persistence of poverty in both rural and urban areas.

DISCUSSION AND CONCLUSIONS

This chapter has provided an overview of the role of markets in developing country rural livelihoods, with particular emphasis on the opportunities for households to produce and market livestock products. Steadily rising urban and peri-urban incomes in these countries are rapidly increasing the volume of and revenue from agrifood demand, particularly in higher-value categories such as speciality fruits, vegetables and livestock-based products. Demographic trends of rural-to-urban migration are increasing domestic populations' reliance on marketed food products. These trends present challenges for food security, but also unprecedented opportunities for food suppliers. If the rural poor can be involved in the supply side of this process, the results could be a combination of more inclusive national development, significant poverty alleviation and enhanced food security.

Transition to this virtuous cycle of broad-based domestic food supply is complicated by two factors: a wide array of barriers to effective market participation for smallholder farmers; and competitive conditions that favour livestock supply chain consolidation and international competitors. In many developing countries, domestic agrifood supply chains are plagued by systemic market and information failures that undermine product quality and incentives for smallholders' participation and capacity expansion. At the same time, international and established agro-industrial interests benefit from market entry barriers, including "race-to-the-bottom" cost/price cutting, preferential licensing, regulatory standards and large-scale contracting arrangements that are inaccessible to small enterprises. The result is often marginalization of local and native food varieties and their producers, more limited choice for consumers, and widening rural-urban income disparities.

Willingness-to-pay results across a wide range of countries indicate that consumers put a significant premium on the traditional livestock varieties that have historically been produced by smallholders. As consumers are willing to pay for traditional livestock products, smallholder livestock could continue to contribute to local markets and diets. In addition, smallholder producers are linked to downstream consumers through networks of low-income intermediary enterprises, so their continued viability secures pro-poor multiplier effects across the broader economy. This means that many product development and upgrading initiatives could eventually be self-financed – a welcome substitute for open-ended fiscal commitments to public assistance. Willingness to pay for traditional livestock also suggests that the general public has a distinct preference for these products, countering the pressure from some commercial interests to phase them – and the associated production systems – out.

Unfortunately, the livelihood potential of traditional markets and networks is not being realized. More policy attention should therefore be paid to the design of socially effective and sustainable strategies for smallholders' participation in livestock markets. The livestock

sector transition is set to continue around the world, but its current slow pace means that it is missing an important opportunity to improve the conditions of economically vulnerable rural populations.

Governments have a critical role in enhancing these pro-poor supply networks by supporting grassroots producer cooperatives and extension services and maintaining a general environment that is congenial to small enterprise development. Among other elements, this would include strengthening animal health services, protecting intellectual property rights, supporting the development of private standards and reputation building through labelling or branding programmes, improving existing market infrastructure, and developing small wholesale markets with registered slaughterhouse facilities, in strategic urban locations.

Smallholder farmers' access to information and technology should be improved, particularly for product quality, pricing and other market conditions. On the financial side, micro-credit schemes can accelerate technology adoption and small enterprise modernization, improving product quality/reliability and leading eventually to established brands and reputation that confer higher long-term value added at lower transaction cost. Education on contracting, negotiation and conflict resolution would improve smallholders' market participation. Governments can also reinforce the efforts of farming groups that already apply economically viable production practices, while recruiting farmers interested in emulating these examples. Such efforts can be modelled on Western agricultural producer cooperatives, which are now the primary guarantors of product quality and farm market access in OECD countries.

SUMMARY AND KEY POINTS

- Although poverty is very common in sparsely populated (remote) areas, most of the rural poor live in reasonable proximity to small or large urban centres. This suggests that a strategy for poverty reduction would be to promote market access incrementally, radiating outwards from urban areas.
- Most developing economies are undergoing fundamental and sustained demographic transitions as their populations shift from rural to urban residence. This process is sharply increasing urban demand for livestock products. Most developing country regions are net importers of animal products, and import dependency is generally increasing. Mirroring this, the developed countries have experienced consistently large net exports for all major meat and dairy products.
- As modern supply systems expand, the technological, institutional and information systems supporting agrifood production are becoming increasingly complex. Continuous investments are needed to comply with changing product, process, quality and safety standards. By implication, modern food systems in highly commercialized agricultural markets present a new set of entry and transaction costs for existing and would-be producers to be competitive.
- Agrifood supply chains in many developing countries are still far from the model of high-tech, highly integrated systems that prevails in OECD economies. In lower-income economies, demand for agricultural and livestock products of all kinds depends mainly on the income levels of the domestic population, with only the top income decile being a viable market for high-value processed cold chain products.

Consumers in the lowest three income quintiles normally purchase ASFs in live-animal and wet markets, where the supply chains are mediated mainly by informal and customary networks.

- The current expansion of markets for ASFs in developing countries, and their large degree of diversity represent enormous income potential for the rural poor, many of whom own livestock. However, which benefits of growing urban food demand go to rural smallholders and which to rapidly expanding agrifood industries will depend to a significant extent on policy decisions.
- Unfortunately, livestock's potential for poverty reduction through appropriate sector development remains largely untapped. The reasons for this include market and institutional imperfections; prevailing policy paradigms with systematic bias towards industrialization and concentration, favouring large- over small-scale operators; and the underprovision of public goods and services, the consequences of which affect the poor disproportionately.
- Most agricultural and rural households in developing countries are unlikely to be recruited directly into agrifood industrialization. Even intermediate stages of sector consolidation, such as contract farming, appear to be undertaken at a scale that is well beyond the reach of the average smallholder farmer. Nevertheless, urban demand growth currently represents an important opportunity for all domestic food producers, including smallholders, and should be appreciated for its inclusive development potential.
- Their conditions make smallholders unlikely to compete against established commercial agrifood enterprises in urban markets. For smallholders to engage in growing markets, they need a credible strategy of commercialization, specialization, and investments for increasing value added. To be successful, smallholder producers need to emphasize their strengths – traditional product variety and low resource costs – while policies for inclusive development are needed to facilitate their market access.
- More inclusive national livestock markets will arise only with determined policy commitments to overcoming existing entry barriers, information and agency failures and historic bias in favour of integrated agrifood enterprise development. A variety of policy mechanisms can facilitate smallholder participation and value creation, including product certification, producer cooperatives and contracting. Combined with other enabling policies that facilitate investment and technology transfer, the momentum of emerging ASF demand can be a potent catalyst for more inclusive development and poverty alleviation.