



Managing agricultural commercialization for inclusive growth in South Asia

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Rapid income growth, urbanization, organized retailing and liberalized trade are dictating the way food is produced, and South Asian agriculture is responding by becoming increasingly commercialized. New markets could present an opportunity for smallholder farmers to increase their income, but many barriers still prevent their inclusion.

Women and children sort a huge crop of red chilis in Jodhpur, India. Small and marginal farmers have been economic pillars in rural areas but risk being excluded from commercialized markets.

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Key messages

- Strong economic growth, rapid urbanization, changing demographics, modern technology and the emergence of modern agri-food markets are leading to the commercialization of South Asian agriculture.
- Commercialization has seen a significant shift in patterns of consumption, away from staple cereals towards high-value agricultural products such as fresh fruits and vegetables, milk and dairy products, meat and poultry products, processed food and beverages.
- Small and marginal farmers have been economic pillars in rural areas but face the risk of exclusion due to profound changes in the structure and governance of regional and global food chains.
- Smallholder producers struggle to participate in the commercialization process. Bottlenecks include inappropriate policies, lack of access to technology, institutional barriers, poor infrastructure and, crucially, poor links to markets.
- To strengthen market linkages and encourage smallholder participation, farmers need vertical integration into agri-food value chains, coordination and collective action, stronger market information systems, and better access to institutional credit.
- Investment in research and development, extension services, rural infrastructure and post-harvest management is needed to ensure smallholder producers' participation in emerging markets.

This briefing paper is one of the 10-part Global Development Network (GDN) Agriculture Policy Series for its project, 'Supporting Policy Research to Inform Agricultural Policy in Sub-Saharan Africa and South Asia'. It is based on a longer synthesis paper, *Managing agricultural commercialization for inclusive growth in South Asia*, which draws on extensive published and unpublished research. The full paper can be downloaded at: www.agripolicyoutreach.org

It will be of value to policymakers, experts and civil society working to improve agriculture in South Asia.

This project is supported by the Bill & Melinda Gates Foundation.


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A farmer in Jalandhar in India watches as his vegetables are weighed at a Reliance Fresh collection center. Called 'formal retail' the stores are a break from small corner stores and open markets. One of the chain's greatest challenges has been sourcing produce from local farmers, preparing it and transporting it to stores.

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In the past two decades, developing countries have witnessed a rapid increase in the commercialization of agriculture. Rising incomes, changing tastes and lifestyles, demographic patterns and the spread of modern supply chains have led to this situation. In many countries in Asia, new markets have emerged for high-value commodities such as fruits, vegetables, flowers, livestock products and fisheries. The retail revolution is not only transforming the way South Asian consumers buy their food, it is also dictating how food is produced, graded, stored and displayed. It offers a potentially exciting window into the future of emerging agri-food markets. The world market for high-value food products is expanding fast, especially in developing countries. This is an opportunity for South Asian countries to enhance their global share of exports of high-value agriculture.

Agriculture in South Asia is dominated by smallholder farms, ranging from less than one hectare in Bangladesh (0.6 hectare), Sri Lanka (0.69 hectare) and Nepal (0.79 hectare), to just above one hectare in India (1.23 hectares), while farms in Pakistan are comparatively large at 3.1 hectares. Evidence shows these farm sizes are shrinking and fragmenting. The majority of the population live in rural areas and depend on agricultural activities as the major source of income. Agriculture is also the main source of employment for the large workforce in the region. But because there are only a few corporations, there is no effective competition in agri-input industries, food processing, manufacturing, trading and retailing. This leads to skewed bargaining power between smallholders and agri-business chains. While it may seem like there is potential for smallholder farmers to increase their income and businesses, many barriers exist.

Background to the research

This paper is based on a systematic review of the literature on commercialization of agriculture, analysis of secondary data from published government sources in the selected South Asian countries, and from individual case studies in India. The review *Managing agricultural commercialization for inclusive growth in South Asia* focused on four countries in South Asia: Bangladesh, India, Pakistan and Sri Lanka.

The term 'inclusive growth' can incorporate a range of concerns including poverty reduction, environmental sustainability, food security, nutrition and governance. Researchers conducting the review took the term to imply a form of agricultural commercialization that involves smallholder participation in commercial markets as well as any benefits to smallholder farmers. It puts the farmers' income and welfare at the center of any evaluation of agriculture.

The review chose to put the smallholder farmer centre stage. Researchers used case studies to look at smallholder farmers' participation in agri-business, the researchers and how they may have benefited. It is therefore impossible to identify general characteristics and trends from these examples.

Small and marginal farmers who have been economic pillars in rural areas face the risk of exclusion due to profound changes in the structure and governance of regional and global food chains. The challenges they face are many and not just because the world of commercial agriculture is unfamiliar to them.

From the perspective of a smallholder farmer, commercial agriculture involves high costs of modern inputs such as better seeds, fertilizers, irrigation and agrochemicals. In the absence of input and credit markets, farmers find it difficult to purchase what they need. Access to institutional credit for farmers and smallholders is weak in South Asian countries and they mostly rely on high-cost informal sources of credit.

In addition, growing high-value crops for the markets requires getting timely information on market prices and well-developed markets. However, smallholder farmers often do not have access to that information. Added problems are that high-value commodities are often perishable. Output markets are under-developed and fragmented and have acute shortages of post-harvest infrastructure, leading to high volatility in their prices and large losses.

Moreover, new procurement systems often demand larger supply volumes and a uniform product, favoring larger farmers. It is difficult for small farmers to participate in commercial agriculture unless they find ways to improve their bargaining power and reduce transaction costs.

Increasing evidence from both research and practice shows that one way for smallholders to overcome the problem of market failure is through organizing into farmer groups or producers' organizations. Acting collectively, smallholders are better positioned to: reduce transaction costs for their market exchanges; obtain necessary market information; have better bargaining power to secure access to new technologies and tap into high-value markets.

Agricultural policies in the region are therefore faced with several competing areas resulting in a policy quagmire. How do we enable smallholder farmers to emerge out of traditional production systems and embrace a more responsive approach to emerging food markets? How do the goals of commercial agriculture align with 'inclusive growth' for poor farmers? The review examined the challenges and barriers that smallholder farmers confront if they are to participate in commercialized agricultural systems. What specific conditions are required to support smallholder participation and increase farmer income and welfare? What policy options would support these conditions? What is the agenda for future research?



The growing demand for high-value agriculture and the rising importance of commercialized supply chains poses many questions and challenges for developing country smallholder agriculture. Traditionally, agriculture was expected to feed the teeming industrial workforce, while providing markets for industrial outputs. Today, agricultural development is seen not just as a vehicle for supporting industrialization, but also as a mode of inclusive growth, pro-poor economic development, food security and environmental sustainability.

McCain India: making direct links with farmers

When McDonald's restaurants entered the Indian fast-food market, they discovered that potatoes traditionally grown by Indian farmers are shorter in length than the standard size required for the typical french fries served at the chain's restaurants. Importing potatoes for every pack of fries sold was not an option and using shorter potatoes for producing fries was also rejected. McCain Foods India (a 100 per cent subsidiary of McCain Foods Canada), suppliers to McDonald's, decided that a home-grown alternative was the way forward.

McCain invested in research and development to identify the best varieties of potatoes suitable for French fries and other high-end products. The company developed strong vertical links with smallholder potato farmers in north Gujarat.

They worked through contract farming arrangements to provide the farmers with seed supply, extension services, quality control, storage and processing facilities. The company trained farmers in better planting methods, irrigation systems, fertilizer application programs and seed treatments. This led to increased crop productivity (from about 18 tonnes per hectare to over 40 tonnes per hectare) and higher profits for farmers. McCain's contract farming initiative has brought a new way of farming to India and its potato growers.

Hitesh Patel, a contract farmer, used to grow cotton on his six-hectare farm. Four years ago, he planted one hectare of potatoes under the guidance of McCain agronomists. Now he plants potatoes on all of the 6 hectares he owns and another 1.6 hectares he has leased. McCain Foods offers him an assured price, and improved productivity and farm income.

Farmers told researchers that as a result they had bought new vehicles, land and cattle as well as investing in larger homes. It took McDonald's roughly six years and US\$100 million to set up a reliable supply chain, with companies like McCain facilitating the process. But this case study shows that the private sector can play an important role in providing technology, extension services and the required market linkages to smallholder farmers.

In developing countries a significant number of the working population reside in rural areas and depend on agriculture for their livelihood. While smallholder farmers, who might own less than two hectares of land, have been and continue to be responsible for a large share of agricultural production, their impact on market supplies has been limited.

But increasingly, agricultural commercialization is discussed as a potential pathway out of poverty for these smallholder cultivators.

This includes: the trend towards non-staple western dietary habits among growing urban populations; rising household incomes; foreign investment in food markets, the emergence of supermarkets; and vertical integration of production and retail in agriculture.

The drivers of agricultural commercialization in South Asia include rising incomes, changing dietary consumption patterns, urbanization, female labor force participation, changing demographics and the growth in export opportunities.

The majority of agriculture in South Asia is by smallholder farmers, who struggle to participate in large-scale commercial activities. This includes producing outputs that adhere to the quality and safety specifications of the quality-conscious consumer.

Poor market linkages with smallholder farmers are a major stumbling block for the commercialization of agriculture in South Asia. Ways to improve these linkages include improving rural infrastructure, vertical coordination of agri-food chains, strengthening market information systems and collective action by smallholders. Improving farmer access to finance and credit service is also important.

It is crucial to note that growth in agricultural productivity does not necessarily lead to poverty reduction. It results from the deliberate and planned use of modern technology, investment in research and development, infrastructure, especially rural roads, better access to inputs and services and market linkages.



Poor market linkages

Poor market linkages are a critical factor in the success or otherwise of smallholder farmers participating in commercial agriculture. The following factors influence how smallholder farmers link to markets:

Rural infrastructure

Rural roads, power, water and storage facilities, processing and post-harvest infrastructure are critical factors in commercial agriculture. This is particularly the case for high-value perishable fruit, vegetables or livestock products. If infrastructure is poor, as it often is, farmers experience higher losses and increased marketing costs. However, neither national governments nor international aid agencies seem to prioritize investment in the construction of new rural infrastructure or maintenance of existing infrastructure.

For example, farmers mainly depend on rain-fed agriculture, yet we see very little is being done towards expanding the area under irrigated cultivation. This raises crop yields, which in turn increases labor and land productivity. It encourages diversification from traditional low-value staples to high-value crops such as fruit, vegetables, flowers and spices for the domestic and export market. Strategies should also focus on developing allied sectors such as dairy, meat, poultry, fish, non-farm sector, agro-industry and agri-business.

Vertical coordination in agri-food chains

Vertical integration of business between the farmer and the retailer is increasingly common in agri-business. Contract farming is a form of vertical integration where the buyer and farmer agree conditions for producing and marketing farm products. Typically the farmer agrees to produce a certain quantity of output, meet quality standards and a delivery schedule. The contract also sets a price or price range to be met. Sometimes the buyer insists on particular inputs and production techniques. Critics of contract farming argue that smaller farmers are often unable to negotiate fair terms of trade themselves and that it is not a transformative approach. Others argue that the relationship is not exploitative if managed properly. Sometimes contract farming can be tapped as a vehicle for smallholder-led agricultural commercialization as it enables large buyers of farm produce to pool the outputs of several small farmers and harness economies of small-scale. Benefits to the farmer depend on the number of intermediaries between producer and final buyer and the buyer's contribution to the cost of inputs.



Vegetables are laid out for sale at an open air market in Dhaka, Bangladesh

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Collective action for smallholder market access

If smallholder producers organize themselves and act collectively, they are more likely to overcome some of the significant challenges they face. This includes lack of access to market information, technology and credit, high transaction costs and uneven bargaining power. Collective action can help to aggregate production volumes to establish links with large buyers, reduce transaction costs on both sides of the supply chain, and improve bargaining power. Ultimately it allows farmers to compete more effectively.

Market information systems

The importance of market information systems in developing countries increases with the move from subsistence farming to commercial agriculture. As farmers engage more with commercialization, they interact with traders and others in both input and output markets. Information becomes vital to facilitate these interactions. Access to information increases the efficiency of agricultural markets.

Access to finance

Smallholder farmers need access to institutional finance. High-value agriculture is capital intensive and restricts participation of smallholders in the process as they lack access to capital.

Amul cooperative: a success story of collective action

In the mid-1940s in Anand, a small town in the state of Gujarat, Western India, milk became a symbol of protest against a local trade cartel. Angered by unfair and manipulative trading practices, farmers approached the eminent statesman, Sardar Vallabhbhai Patel, who advised them to get rid of the middlemen and form their own cooperative. The farmers then refused to sell their milk to the trade cartel and formed the Kaira District Cooperative Milk Producers Union Limited. They started pasteurizing milk in June 1948 for the Bombay Milk Scheme with just a handful of farmers in two village cooperative societies, producing 250 liters a day. It was an assured market and by the end of 1948, 432 farmers had joined and milk quantities increased to 5000 liters per day. Today in Gujarat, about three million rural producers in 15,712 dairy cooperatives farm milk under the Amul brand. In 2010–2011 they produced 9.2 million liters.

The Amul model is a three-tier structure with dairy cooperative societies at the village level federated under a milk union at the district level and a federation of member unions at the state level. The model works by establishing direct linkages between milk producers and consumers. Milk farmers control the procurement, processing and marketing, and the cooperative also hires professional managers. Amul assures guaranteed purchase of all milk at pre-determined prices and assures high-quality products sold at competitive prices to consumers. This happens through vertical coordination from production to market through a vast cooperative network. This is a unique model for rural development, especially for women and small and marginal farmers.

The features of this successful model are:

- Great leadership and freedom from external political and bureaucratic controls.
- Farmers participating at all levels from production to marketing.
- Autonomous, committed professional managers.
- Sustainable growth through assured prices, cash payments for milk supply, provision of quality feed, breeding and animal health care services, and support for infrastructure (bulk milk coolers, testing facilities) at village level.
- Development of a consumer base by making dairy products affordable.
- Focus on core activities of production, processing and marketing and managing other services such as logistics for milk collection, distribution, etc. through third party/outsourcing.
- Market-driven production system marked by transparency and accountability.

See diagram on the next page for an overview of the Amul model.



■ Support infrastructure

Governments should pay attention to maintaining and building rural infrastructure that will support smallholder farmers and increase their ability to participate in commercial agriculture.

■ Enable private investment but protect smallholders

Agricultural policy in South Asia should encourage contract farming by offering an enabling environment for organized private investment as well as protecting the interests of smallholder producers.

■ Invest in research and extension

Reorient public expenditure away from large non-targeted subsidies in agriculture towards research and extension services to enable smallholder farmers to cope with the challenges of cultivating high-value crops.

■ Target subsidies toward smallholders

Ensure subsidy programs for credit, fertilizers and irrigation are aimed at smallholder farmers. Subsidy programs should be carefully targeted to free up budgetary resources for productive agricultural investments.

■ Promote ICT

Strengthen access to market information systems and Information and Communication Technology (ICT).

■ Encourage farmer organization

Provide support to farmers' efforts to take collective action through groups, organizations and networks.

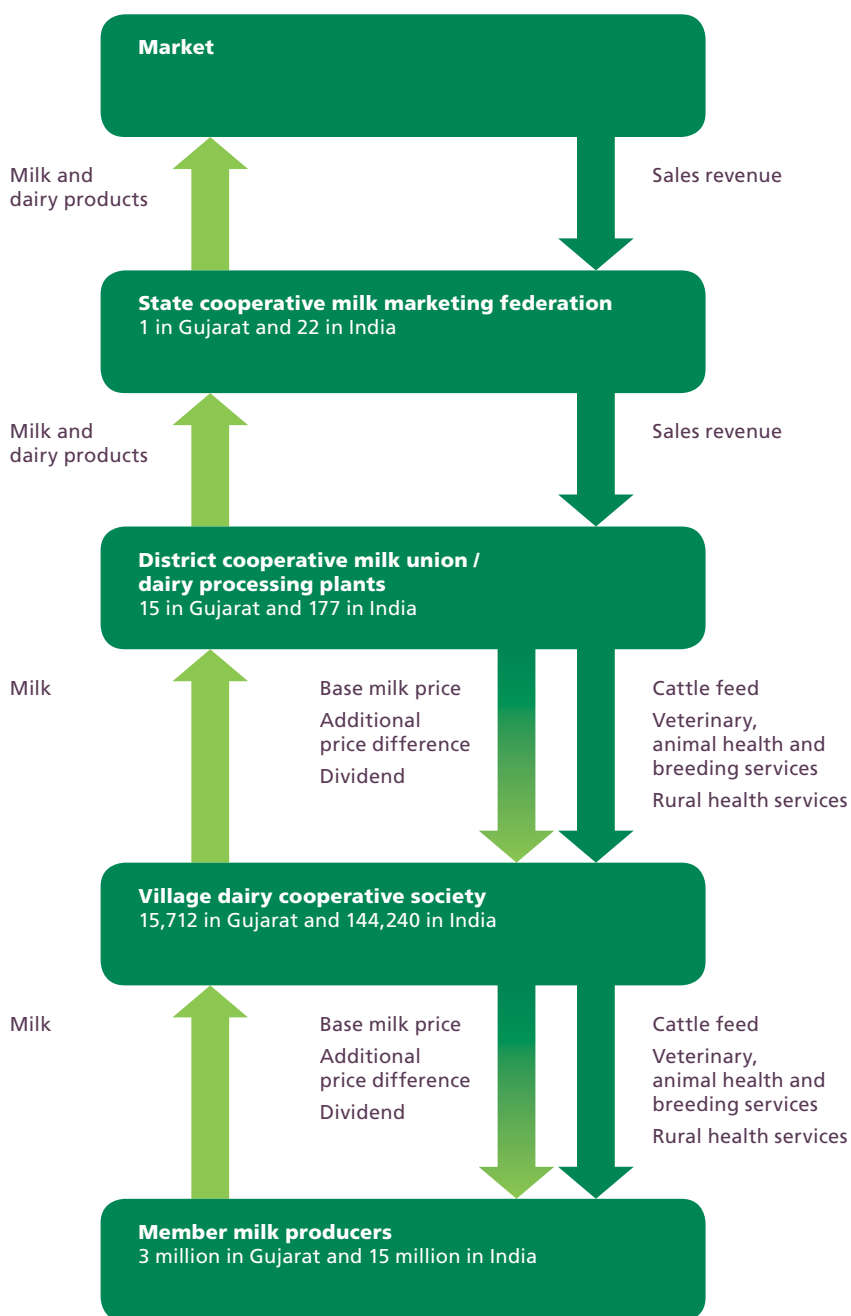
■ Improve smallholders' access to finance

Efforts are needed to improve smallholders' access to institutional finance. The active participation of different organizations such as public and private banks, cooperatives, non-governmental organizations, micro-finance institutions, self-help groups etc. can all help improve access to finance.

■ Research smallholder participation

Further documentation and research is needed to examine the level of smallholder participation in the supermarket revolution in South Asia, in order to formulate evidence-based policies.

Three-tier 'Anand Pattern' of dairy development in India



Source: Amul (2012)



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vol 67, no 1, January–March, pp46–78.

The full paper *Managing agricultural commercialization for inclusive growth in South Asia* is available for download at www.agripolicyoutreach.org

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