6 Smallholder producer organisations

6.1 Introduction

The primary focus of ACIAR project ADP/2010/091 was on developing policy options for improving the livelihoods of smallholders in the dairy, citrus and mango sectors in Punjab and Sindh. This chapter considers how small farmer organisations can help to improve their livelihoods; how other developing countries have helped the growth and development of such organisations; and how governments in Pakistan can do the same to improve smallholders' livelihoods. Following the introductory remarks in this section, key challenges faced by smallholder agriculture operating in modern supply chains are discussed in Section 6.2. Section 6.3 provides a background to the current situation of smallholders in Pakistan's dairy, citrus and mango subsectors, and the role of farmer cooperatives. How farmer organisations have performed in several developed and developing countries is discussed Section 6.4. Section 6.5 provides a summary of key points emerging from the discussion, before recommendations are made in Section 6.6 on how federal and provincial governments should support the development of smallholder cooperatives/producer organisations in Pakistan.

Smallholders in Pakistan account for 90% of citrus cultivators, more than 66% of mango growers and more than 84% of dairy farmers. The yields of small farmers in all three sectors are low, and real incomes for most of them have increased only marginally in Punjab, and have fallen in Sindh in the past 15 years. Major challenges facing these farmers are the lack of access to markets, extension services, affordable credit and insurance, and organisations for helping them to integrate with modern supply chains on favourable terms. The Working Group on Agriculture and Food Security noted in its report to the Planning Commission that Pakistan's agriculture sector had developed a dualistic structure, in which 86% of farm households own less than 50% of farmland, and that the need to improve the viability of smallholders was urgent: 'Agricultural growth in Pakistan has not benefited the rural poor to the extent it was expected' (WGAFS 2010). Given this background, the policy challenge is to revitalise smallholder agriculture by channelling resources and supporting small farmers who have little effective voice in policymaking and implementation. For this to happen, special institutions including small farmer organisations need to be promoted.

By smallholder organisations, we mean a variety of organisations (cooperatives, producer companies, self-help groups, rural support programs, and even contract farming—if it is open to small farmers) that are able to combine the interests and efforts of smallholders into one voice, and by doing so increase their bargaining power in the markets, their access to formal credit and insurance, and their access to agricultural inputs, including extension services.

Because small farmers individually cannot engage with modern agricultural supply chains, they need the support of organisations. The structure and operation of agricultural supply chains have been evolving during the past three decades under the influence of globalisation of production and trade, liberalisation of markets, and vertical integration of supply chains. The buyers in modern markets prefer to purchase in bulk from larger producers, who are able to sell in large volumes and meet strict requirements of quality and timeliness. Engagement with large numbers of small farmers who are typically dispersed across large areas, often with rudimentary transport links to towns and cities, increases transaction costs for the buyers. Unable to connect with these markets on their own, most small farmers continue to depend on, and be exploited by, the traditional middlemen—contractors, commission agents and money lenders. Over time, small farmers have become pessimistic about their future and are risk averse in their choices, with the result that small farmers have developed a strong reluctance to adopt new technologies and farm practices. They are trapped in this vicious cycle of low productivity, static incomes and exploitative markets.

Smallholder cooperatives can enhance their members' competitiveness by: (a) adding to their bargaining power; (b) facilitating access to higher quality and more reliable inputs and services; and (c) creating new opportunities for improving their management skills. There are many examples in Asian countries, including China, India and Vietnam, where smallholder cooperatives have improved the livelihoods of their members.

The potential benefits of small farmer organisation have been recognised in Pakistan for a long time. For example, the Pakistan Planning Commission's Working Group on Agricultural Marketing Infrastructure and Post-Harvest Management (2009) recommended that: 'despite the unfavourable experience with farmer cooperatives in Pakistan in the past, the idea of producer organizations still holds its validity in many countries having almost similar socio-economic and cultural traits as of Pakistan, and that farmers' cooperatives should be reorganized/established in Pakistan avoiding past mistakes'. Similarly, the Food and Agriculture Organization of the United Nations has pointed out that the lack of organised production and marketing leaves small farmers in Pakistan with little bargaining power (FAO 2012). More recently, the Punjab Livestock and Dairy Development Department (PLDDD 2015) argued strongly that smallholder organisations (such as rural support groups, milk producer groups or associations or cooperatives) can benefit milk producers in many ways and improve their technical knowledge and skills.

A European Commission report by Bijman et al. (2012) stresses that the key functions of marketing cooperatives are improving the bargaining power of their members and letting members benefit from economies of scale. In addition, cooperatives reduce market risks and transaction costs, and strengthen the competitive position of their members by providing access to credit, extension services, technical knowledge, product innovation, and by guaranteeing compliance with market standards for food safety.

6.1.1 Contract farming: compatibility with smallholder producer organisations

The Punjab Government's Agricultural Department introduced contract farming in 2017 to help integrate farmers into modern value chains. Food processing businesses can make contractual agreements with selected farmers to purchase their produce at agreed prices. The contracting company can also arrange to provide extension services, credit and crop insurance to participating farmers. Thus, market imperfections such as lack of access to affordable credit and insurance, exploitation by middlemen, the consequential lack of bargaining power of small farmers, and the diseconomies of small scale can be overcome through contract farming.

As discussed in Section 6.3 below, contract farming has become an important pathway for modernising the dairy sectors in India and China. Most dairy firms either directly contract with large producers or contract with intermediaries that organise milk collection from small farmers and facilitate delivery of inputs and services to farmers. Nestlé follows this model of contract farming in India and China, and provides technical assistance in respect of animal breeding, animal health, nutrition, and food safety requirements. More than 100,000 dairy farmers in India and 60,000 in China supply milk to Nestlé.

Not all farmers can participate in contract farming, however. According to research published in *World Development* (Fischer and Qaim 2012), the likelihood of participation of small farmers in contract farming depends upon their location, crop types, availability of irrigation facilities and reliable access to electricity and transport facilities, especially for perishable commodities such as milk and fresh fruit. Because perishable goods must be processed within a few hours of harvesting, most contracting firms prefer to work with suppliers within a 60–100 km radius of the processing plant.

Membership of small farmers in a farmer organisation such as a producer company or cooperative (or rural support program in Pakistan) can also be attractive to contracting firms, because such membership reduces transaction costs by providing extension services, technical advice and other prerequisites of contractual compliance and enforcement. In other words, a small farmer may be more likely to succeed in participating in contract farming if she or he is already a member of a producer organisation. Such a smallholder may also feel that their risk has been reduced and they may be prepared to expand or change operations to maximise gains from contract farming by growing new varieties of fruit, using better seeds, or spraying crops in more timely manner.

Participation in contract farming is also highly variable, however, as sometimes contracting firms drop small farmer members, and sometimes small farmers decide to leave contract farming for various reasons. In Ghana, for example, it was found that 56% of surveyed pineapple growers had dropped out of contract farming, either due to a lack of buyers or problems with exporters. Similar experience has been reported in southern India.

Thus contract farming can, but does not always, help small farmers to engage with modern supply chains. Indeed, as noted above, if small farmers have already organised themselves into a producer group or cooperative, their chances of joining contract farming are also improved, because transaction costs for the contracting firm would now be lower. Therefore farmer organisations would still be beneficial for smallholders even in the presence of contract farming.

6.2 Smallholder agriculture: key challenges

6.2.1 The future of smallholders in modern markets

Three main views emerge from the ongoing debate about the future of small farmers in modern agricultural markets. One view is that smallholders cannot compete in modern agricultural markets and that strategies for their future need to be oriented towards facilitating their exit from agriculture (Ellis 2005). The perceived inability of smallholders to compete in modern markets relates to the lack of economies of scale, low level of technologies typically used by small farmers, the lack of access to credit and capital, and the low productivity of animals and fruit trees in smallholder agriculture.

The second, and contrary, view is that smallholder agriculture has higher land productivity and is more efficient in labour-intensive subsectors like dairy and horticulture, because the use of family labour minimises the cost of supervision (Hazell et al. 2007).

The third view about the future of smallholders in modern supply chains is that they can compete in modern supply chains if they can develop small farmer organisations, such as cooperatives, contract farming and producer organisations, which reduce transaction costs of the buyers (Trebbin and Hassler 2012). Indeed, the experience of India, China and several other developing countries suggests that these organisations have successfully transformed subsistence agriculture into commercially viable agriculture (Ahuja et al. 2012). This group of experts acknowledges, however, that such a transformation of small farmers cannot happen in the absence of explicit policy support for connecting small farmers with modern supply chains.

Those who favour migration of (supposedly unviable) smallholders out of agriculture into industry or services are also guided by the traditional pattern of structural transformation in which economic development is accompanied by the movement of surplus labour from agriculture (which has typically low labour productivity) into industry and services (which have high labour productivity). As discussed at length in Chapter 1 of this monograph, this pattern of structural transformation did indeed occur during the phase of economic development of those countries that are now developed countries. The developing countries of today, however, are finding it challenging to replicate the same pattern of structural transformation, especially after the rapid and extensive development of the manufacturing sector in China from 1978 to 2008. The manufacturing industry in most developing countries of today has been unable to generate sufficiently high employment growth to absorb surplus labour from agriculture. Employment growth in the manufacturing sector in today's developing countries (including India, Indonesia, Malaysia, Brazil, Vietnam, Pakistan and Bangladesh) typically peaked long before surplus labour from agriculture was absorbed. The services sector in these countries has also been unable to generate sufficient new employment to absorb surplus labour coming from agriculture. Therefore, agricultural policies in the developing countries of today need to be designed in the light of these facts, not in the context of a model of economic growth that existed in the past but no longer exists today. These agricultural policies must support subsistence farmers to diversify their livelihoods within the rural economy (based on agricultural and non-agricultural employment), rather than forcing them to leave the agricultural sector altogether—because there is simply nowhere for them to go.

6.2.2 Importance of modern supply chains

Smallholders in Pakistan are severely disadvantaged in increasing productivity of animals and fruit trees due to the lack of: (a) access to markets; (b) modern inputs and technical knowledge; (c) access to affordable credit and insurance; and (d) small farmer organisations that can help in gainfully connecting with modern markets.

Demand for horticultural and dairy products has been increasing strongly in recent years in both domestic and export markets. This is largely in response to the growing incomes of the middle classes and the growth of urbanisation. The fresh food markets are expanding rapidly and provide valuable opportunities for farmers to increase their incomes, provided they can meet the requirements of the new markets.

Farmer cooperatives have played an important role in helping farmers to capture a higher share of the value added in the food supply chain. Marketing cooperatives improve the bargaining power of their members and let members benefit from economies of scale. In addition, cooperatives reduce market risks and transaction costs, and strengthen their competitive position by providing access to credit, extension services, technical knowledge and product innovation, and guaranteeing food quality and safety (Bijman et al. 2012).

6.2.3 How smallholder organisations can help

Competitiveness of smallholders can be enhanced by organising small farmers into groups, which can not only aggregate their supply of marketable surplus, but can also empower their members by facilitating access to credit, extension services, quality inputs, new farming technologies and practices, and improving their management skills. Birthal et al. (2015) cite many examples of smallholder cooperatives in Asian countries that have achieved such benefits for their members. Cooperatives also provide opportunities for poor farmers to become involved in democratic processes, thereby promoting the cause of inclusive economic development.

In a recent study of dairy farming in the Punjab (Pakistan), S. Godfrey (pers. comm. 2018) reported that farmer cooperatives are able to obtain higher prices for their members by negotiating directly with urban milk sellers.

The field studies conducted in Punjab and Sindh as a part of ACIAR project ADP/2010/091 also provide support for smallholder organisations in Punjab and Sindh. While the field studies revealed a dearth of farmer associations, the focus group discussions revealed heavy reliance on informal lending at zero interest rate, demonstrating that local community spirit and solidarity is high within the villages. Farmer cooperatives are more likely to succeed in these conditions, if initial governmental support and leadership can be provided.

6.3 Farmer organisations in Pakistan

6.3.1 Farmer cooperatives

Promoting farmer cooperatives is a provincial subject in Pakistan and all provincial governments facilitate the formation of cooperatives and supervise their operations. In Punjab the Cooperatives Department, and in Sindh the Cooperation Department, play this role. Both departments are established under the *Cooperative Societies Act, 1925* and *Cooperative Societies Rules, 1927* (see website of Cooperatives Department, Government of Punjab: **https://cooperatives.punjab.gov.pk/**).

The cooperative movement flourished in Pakistan in the 1950s and 1960s when small farmers, suffering from the after-effects of migration from India in 1947, welcomed the services of cooperatives. By the mid-1980s, however, the cooperative movement in Pakistan had run into deep problems. The movement had been captured by elite farmers and corrupt operators, and the National Commission on Agriculture (Government of Pakistan 1988) found that only 5% of cooperatives were genuine and financially viable. The government policy of providing interest-free loans for agriculture from 1978 onwards, and the official focus on increasing the number of cooperative societies, quickly created perverse incentives for recklessness in recruitment of members and utilisation of credit. According to Mustafa and Gill (1998), those who were already in positions of privilege took advantage of the cooperative services, while those in disadvantaged positions did not benefit from cooperatives. The government had neither the capacity nor the readiness to monitor and fix the situation. The cooperative movement had bypassed smallholders almost entirely, with only about 1% of small farmer households being members of cooperatives in 1985 (Rural Credit Survey 1985, cited in Mustafa and Gill 1998).

But there were some positive examples of the cooperative movement in Pakistan during this period. A dairy development project, originally started in 1983 in the Okara District in Punjab in collaboration with the German Technical Cooperation program (GTZ), promoted improved breeds through artificial insemination. In 1992, the project formally became a farmer cooperative under the *Societies Act 1980* and was named *Idara-e-Kissan* (IK). It started milk collections from other regions of Punjab, based on a similar pattern of farmer organisations. In 2004, IK had more than 20,000 members from 519 villages. Access to IK services is available to all households that supply a minimum of 300 litres of milk during a six-month period (FAO 2013).

The Punjab and Sindh governments are now facilitating the formation of cooperative societies for the development of agriculture and horticulture by providing training to the members and employees of the cooperative organisations; providing credit to the members; encouraging saving amongst women; and supervising and monitoring the working of cooperative organisations through regular audits, inquiries, inspections, recoveries of outstanding loans and arbitration of disputes.

In Punjab, for example, the provincial government has helped the formation of cooperative milk societies in collaboration with Plan International Pakistan (an NGO). Small farmers, including women, are the target beneficiaries of this project. Cooperative credit societies, representing the largest subsector of cooperative movement in the Punjab, provide credit facilities to their members.

In recognition of the fact that women's participation in cooperative societies was low, dedicated women's cooperative societies have been formed to help women increase their income and gain respect and status in local communities. These cooperative societies offer training for women in tailoring, embroidery, fabric painting, beauty parlours and other industrial trades.

The Punjab Provincial Cooperative Bank Ltd was established in 1924 as an apex bank to meet the funding requirements of cooperative societies, and gained the status of a scheduled bank in 1955. It plays an important role for the development of the cooperative sector in the province. The Punjab Cooperative Supply and Marketing Federation is another apex society, providing quality agricultural inputs to members of cooperative societies, including tractors at reserve price. Other non-government agricultural networks in Punjab include the KASHF Foundation (100% female members), the AKHUWAT Foundation (40% female members), the TAMEER Bank (34% female members), the FMFB (First Micro-Finance Bank with 34% female members), the KHUSHALI Bank (27% female members), the NRSP Bank (14% female members) and the FINCA (5% female members). All these organisations are providing loans for agricultural and non-agricultural sector development, and all have service charges (mark-up) except the AKHUWAT Foundation, which lends without a mark-up.

As noted above in the chapter on formal credit, a group-based lending approach has been introduced in Pakistan. Under this scheme, loans are made to individual farmers through small farmer groups, where all the members guarantee the repayment of each other's loans and social pressure is used as the intangible collateral. The size of the small farmer group could be around five to 15 members, either organised by the bank itself or through an NGO. The financial institution provides the loan on the joint guarantee of all member farmers. Only small farmers can become members of these groups.

Similarly, the provincial government of Sindh has recently implemented a program to assist the formation of village organisations (VOs) and farmer cooperatives, with the objectives of increasing agricultural productivity in rural food-insecure areas of the province, enhancing food security through provision of sustainable livelihood programs, and reducing rural poverty through expanded farm and related non-farm employment. The main government interventions under this program include social mobilisation of targeted farming communities, formation of VOs under the Cooperatives Act, creation of a revolving fund for providing inputs as in-kind credit, training of VO members to run cooperative societies, and enhancement of farm productivity through intensive technology guidance under farmer field schools. More than 80 cooperative societies were registered in the province between 2011 and 2013.

These are encouraging indications indeed. However, given the context of the smallholder population in Punjab and Sindh, it is obvious that more needs to be done. As stressed by the Punjab Livestock and Dairy Development Department, the establishment of producer organisations is 'the basic necessity' for the smallholder dairy development, because such organisations can bring many advantages to the producers (PLDDD 2015): 'Empirical evidence suggests that strong producer organizations, particularly based in the dairy sector, also empower communities by enriching their social capital.'

6.3.2 Rural support programs

In addition to cooperatives, Pakistan also has more than 11 rural support programs (RSPs) covering all provinces and regions of the country. Rural support programs are established under provincial legislation as not-for-profit organisations under the patronage of NGOs and with support from international organisations. For example, the National Rural Support Program (NRSP) was established in 1992 as a not-for-profit organisation under Section 42 of *Companies Ordinance 1984*, to alleviate poverty by social mobilisation. The Aga Khan Rural Support Program (AKRSP) is the pioneer RSP in Pakistan and its success is based on active participation in the rural community. Primarily working in the northern areas of Pakistan, the AKRSP has played a major role in organising rural populations for projects in training of farmers in production technologies, value addition (household agricultural products) and marketing. The community participation model of AKRSP was later adopted nationwide through RSPs.

The process of social mobilisation starts with the preparation of a poverty profile of the community that seeks social guidance. The community is then introduced to the philosophy of the RSP, based on which the community can organise itself into a socially viable group called the community organisation. An attempt is made to encourage poor households to join the community organisation. During the initial interactions with the community, genuine activists are identified who commit to support their communities in poverty reduction. A micro-plan is developed for the community organisation based on individual, group and village-level needs. The required resources are arranged to address the priority needs. These resources are pooled by the community, provided by the support organisation or managed through other stakeholders, such as the private sector or public sector service delivery departments, NGOs or donor organisations. The basic principles of all RSPs are the same: broad-based and homogeneous membership and the unanimous decision-making rule.

With support from donors (including the Pakistan Poverty Alleviation Program, the World Bank, DFID and USAID), NRSP's social mobilisation efforts have contributed to helping people to raise their standard of living, initiate village-wide socioeconomic development, and realise new opportunities for themselves and their children. A study (Khan 2004) found that the NRSP had contributed to a 7.5% additional increase in income of member households in comparison with non-member households.

In 1998, the Government of Punjab established the Punjab Rural Support Program (PRSP). The Sindh Government commenced a Union Council Based Poverty Reduction Program (UCBPRP) in the rural areas of the two districts of Shikarpur and Kashmore. Building on the success of UCBPRP, in 2014 the Sindh Government and the EU established a scaled-up program covering the entire province: the Sindh Union Council and Community Economic Strengthening Support (SUCCESS). The mission of SUCCESS is to develop a policy and budget framework for community-driven development in Sindh from 2015 to 2021. The aim is to increase incomes of 770,000 poor households by 30% and to provide vocational and technical training to an estimated 108,000 community members.

Typically, a community organisation consists of about 15–25 member households. The community organisations are federated into village organisations, each of which must have at least 10% of members from the poorest households (according to the poverty score cards). The village organisations are then federated at the union council level into local support organisations. The latest coverage of RSPs in Pakistan shows that rural support programs cover 3,705 union councils, covering 123 districts, 1,186 local support organisations, and 368,561 community organisations consisting of 6,113,295 member households (RSPN 2015).

Although RSPs are not a substitute for farmer cooperatives or producer companies, membership of an RSP is likely to be conducive to the formation of cooperatives, because it initiates individual farmers in working as members of a larger group for a common purpose.

6.4 Overseas experience

6.4.1 Developed countries

According to the International Cooperative Alliance, more than one billion adults are members of cooperatives worldwide, which provide nearly 100 million jobs around the world. The largest 300 cooperatives in the world are worth $1.6 trillion—equivalent to the GDP of Spain, the ninth largest economy in the world (ICA 2018).

In Europe, farmer cooperatives have been operating for more than a hundred years in dairy, fruit and vegetables, sugar, olives, wine, cereals, pig meat and sheep meat. In Germany, every adult is a member of at least one cooperative and many people are members of several cooperatives. In 2010, cooperatives were responsible for 57% share of the EU dairy market on average (measured by milk collection at first handling and processing stages). In Sweden, 100% of the dairy market was run through cooperatives; in Ireland, dairy cooperatives had 99% of market share; and the corresponding figures were 97% in Finland, 96% in Denmark, 95% in Austria and 90% in the Netherlands. In all EU countries, market share of cooperatives increased between 2000 and 2010. Cooperatives also have a significant market share in fruit and vegetables. In the Netherlands, fruit and vegetable cooperatives had 95% of EU market share, followed by Belgium at 83%, Sweden 70%, and Austria and Denmark more than 50% each.

In Australia, the first agricultural cooperative (the South Coast and West Camden Cooperative Company) was established in the dairy sector in the 1880s, with the aim of improving returns for dairy farmers and removing middlemen from the supply chain. The passage of the *NSW Small Loans Facility Act 1941* paved the way for the establishment of cooperative credit societies, which later became an important component of Australia's financial sector.

Cooperatives in Australia were regulated by the state and territory governments until 2013, when the *Cooperatives National Law* replaced the state-based regulatory system. The *Cooperatives National Law* delivers a modern legislative environment that removes competitive barriers but continues to assure the unique nature of the cooperative structure. The new uniform law is supported by two types of regulations: commonwealth regulations which cover most of the regulatory issues; and state regulations which cover those areas that necessarily are different across the states, such as courts, tribunals and fees. All cooperatives are now free to trade anywhere in Australia.

Despite being a much smaller country than Australia (4.4 million population versus 23 million), New Zealand has surged ahead with respect to farmer cooperatives. An estimated 40% of adult New Zealanders are members of one or more cooperatives and 22% of the country's GDP is generated by cooperative enterprises. Cooperative enterprises in New Zealand are responsible for 99% of the dairy market, 60% of the meat market, 50% of the farm supply market, 80% of the fertiliser market, 75% of the wholesale pharmaceuticals market, and 62% of the grocery market (Bijman et al. 2012). Six of the Global 300 cooperatives are in New Zealand: Fonterra (ranked 31), Foodstuffs (Auckland, ranked 135), Foodstuffs (Wellington, ranked 178), Foodstuffs (South Island ranked 191), PPCC (ranked 182), and Alliance Group (ranked 280). Economic reforms in the mid-1980s led to large-scale amalgamations among cooperatives, reducing the number of dairy cooperatives to only 12 by 1996. The two largest dairy cooperatives, the Waikato-based NZ Dairy Group and the Taranaki-based Kiwi Cooperative Dairies, merged in 2001 and formed Fonterra, the world's largest dairy exporter (Bijman et al. 2012).

6.4.2 Developing countries

6.4.2.1 India

Like Pakistan, India's milk production is also dominated by smallholders: about 78% of India's milk producers are marginal and small farmers (having two to five animals), and together they account for around 68% of India's milk production. These small farmers traditionally do not have access to organised markets due to the lack of an effective system of milk procurement in rural areas. The development of dairy farmer cooperatives is one of several policy initiatives aimed at developing formal milk marketing and processing institutions in the country.

Amul is the largest dairy cooperative in India, based in Anand in the state of Gujarat. Amul started in 1946 with two village societies and 247 litres of milk collected per day. Since then, this model has evolved into a three-tier structure with dairy cooperatives at the village level, federated into a milk union at the district level, and a federation of milk unions at the state level. Now, the Amul model has been replicated throughout the country. In 2012–13, India had 155,000 village dairy cooperatives that procured 12 million tons of milk (9% of the total milk produced in the country) from over 15 million farmer-members (**www.nddb.org**).

Other examples outside the dairy sector include: a cotton growers' cooperative society called Koutla-B Multi-purpose Cooperative Society (Koutla-B MACS) in Andhra Pradesh; Kesla Poultry Cooperative Society in the tribal-dominated areas of Madhya Pradesh; Mahagrapes as one of the Grape Growers' Cooperative Societies in Maharashtra; and Mother Dairy Fruits and Vegetables Limited (MDFVL), a subsidiary of the National Dairy Development Board (NDDB) that started promoting farmer associations in 1988 in rural areas surrounding Delhi.

The MDFVL has been promoting farmer associations of fruit and vegetable growers, called SAFAL (meaning successful), which are managed and controlled by members themselves. There are now more than 225 such associations with about 50,000 members in 16 states. Technical guidance on production and postharvest practices is provided by the MDFVL, which also owns more than 400 retail outlets in Delhi.

For cotton farmers, the Koutla-B Multi-purpose Cooperative Society (Koutla-B MACS) was formed in 1996 to avoid exploitation of cotton farmers. In 2011, Koutla-B MACS had 83 member societies, a turnover of Rs40 million and a profit of Rs3.6 million. According to Birthal et al. (2015), this cooperative has now been scaled up as a producer company (see below) with strong backward and forward business linkages.

The Kesla Poultry Cooperative Society was developed by the NGO PRADAN for converting backyard poultry into a viable commercial activity by providing farmers improved breeds, feed, veterinary services support and a market. The state governments have since replicated the model into other parts of the state and into the neighbouring states.

Mahagrapes in Maharashtra provides its partner cooperatives quality inputs and packing material of international standards, information and knowledge on safety standards of importing countries, and facilitates their compliance with these standards. Mahagrapes is now regarded as one of the leading exporters of grapes. Similar value chains have also been developed for mangoes and bananas (Birthal et al. 2015).

In Tamil Nadu, the state government entered into a partnership with a private floriculture firm to establish an export processing zone for cut flowers called Tanflora Infrastructure Park Limited. The state government created basic infrastructure, including roads, electricity, packing houses etc., and the private firm provided technical support, rainwater harvesting and drip irrigation facilities to growers. A large part of the produce is exported to Europe, Middle and Far East, Australia and Japan (Birthal et al. 2015).

Support from governments and international donor organisations has been crucial to the growth and success of farmer cooperatives in India. The government agencies include state government departments of agriculture, the National Bank for Agricultural and Rural Development (NABARD), the Small Farmers Agribusiness Consortium (SFAC), the Rural Livelihood Mission (RLM) of the Ministry of Rural Development, while external donors or facilitators include the sponsoring NGOs and international institutions such as UNDP, DFID and the World Bank.

Despite their success in India, farmer cooperatives have been commonly afflicted by problems including:

- opportunism and free-riding by members who do not contribute to the functioning of their cooperatives
- capture by a powerful minority of members
- capture by commercial interests who promote their own sales/profits
- lack of member commitment
- lack of leadership
- lack of managerial capacity among members and in local rural communities.

Against this experience, a new form of cooperatives—the so-called second-generation cooperatives (Singh 2008)—has emerged in the form of producer companies (PCs) since 2003, after the Government of India amended Section 19A of the *Indian Companies Act 1956* in 2002. The number of PCs in India has increased rapidly since 2003, and by 2011 India had 156 PCs (Singh and Singh 2014), most of which were in Tamil Nadu, Madhya Pradesh, Maharashtra, Gujarat, Mizoram, Punjab, Rajasthan and Andhra Pradesh. In 2014, the number of PCs had increased to 258 (Nayak 2014). The size and scope of PCs varies a great deal. For example, VAPCOL PC has a membership of more than 50,000 spread across six states, whereas Devnadi Valley PC has only 856 members. Some PCs concentrate on only one product (e.g. milk or vanilla), whereas others, like Nava Jyoti PC, deal with multiple products and activities.

6.4.2.2 China

In China, where the household responsibility system was introduced in 1976, cooperative farming has evolved through three distinct phases: the first marked by the growth of bottom-up self-organising cooperatives (early 1980s to late 1990s); the second phase of government-promoted cooperatives (1996–2007); and the third phase the growth of farmers' professional cooperatives (2007–11) (Sultan and Wolz 2012).

In the wake of the Asian financial crisis of 1997–98, the Chinese Government adopted the model of vertical integration to modernise China's agriculture. Agribusiness firms called 'dragon head enterprises' ('dragon head' leads the procession) were established as leaders for the planned transformation of agriculture. This model was intended to replace small-scale farming of the past with modern agribusinesses, local markets with contract farming and dispersed production with vertical coordination through contracts and cooperation (Zhang and Donaldson 2008). Local governments at provincial, county and municipal levels facilitated commodity-specific cooperatives in line with this model. More than one-fifth of Chinese villages now have at least one farmer cooperative (Jia and Huang 2011). Local governments played a key role in providing the enabling environment for farmer cooperatives by investing in public infrastructure on which new investment in agricultural supply chains could be based.

Contract farming has become an important pathway for modernising China's dairy sector. Most dairy firms either directly contract with large producers or contract with intermediaries that organise milk collection from small producers and facilitate delivery of inputs and services to farmers. Nestlé follows this model of contract farming in China, as well as in India, and provides technical assistance in respect of animal breeding, animal health, nutrition, and food safety requirements. More than 100,000 dairy farmers in India and 60,000 in China supply milk to Nestlé.

6.4.2.3 Vietnam

In Vietnam, the *Cooperative Law* was passed in 1997, about a decade after the *doi moi* reforms. The next 10 years witnessed rapid growth in the number of cooperatives and nearly 20% of farmers joined cooperatives. The functions of cooperatives also expanded during this period to include marketing activities.

The collectivisation of farms in Vietnam had been abandoned in favour of private farming in 1986, but bitter memories of collectivisation lingered on among the farmers who remained suspicious of the cooperatives model for quite some time. Despite this initial suspicion, however, cooperative farming has taken roots in Vietnam in recent years and the growth of farm cooperatives has been helped by the initiatives of some stakeholders other than the farmers themselves. In particular, administrative and business entrepreneurs have provided not only organisational resources, but also business capital and skills for new cooperatives. In other words, ordinary farmers were not always the prime movers in Vietnam for establishing agricultural service cooperatives, and the leadership was provided by other stakeholder groups, including non-farmer business entrepreneurs and government administrators.

6.5 Summary

The above discussion provides strong support for the establishment of small farmer organisations, such as cooperatives, that can transform the livelihoods of Pakistan's smallholders in dairy, citrus and mango farming. These organisations can benefit their members by providing better prices for producers, cheaper and higher quality inputs, better access to technical information, improved credit facilities, better access to improved breeding services, and improved extension and advisory services. The development of local social capital also takes place through political empowerment of smallholders, including women, with stronger advocacy for their welfare needs. Exchange of experience with other farmers also provides opportunities for learning and gaining in confidence.

Small farmer cooperatives generally find it difficult to survive without the assistance of external facilitators. This is due to weaknesses in capacity of members and communities for internal management of cooperatives. Often, cooperatives that are formed to improve smallholder access to markets remain focused on marketing only and do not extend their operations to providing credit, extension services and farm inputs. Thus, governments need to broaden their strategies to aim for a holistic improvement in smallholder livelihoods. Capacity building and community empowerment must be the key elements of these strategies.

Contract farming has also been successful in several countries in providing small farmers the benefits of scaling up by aggregation.

In addition, the public sector also needs to attract private sector investment for rural enterprises based on value addition in livestock and dairy farming and horticulture. Accordingly, it is essential that the development of small farmer organisations be viewed as an integral part of a broader strategy for improving livelihoods of smallholder households in Pakistan. As noted above, the Vision 2025 has embraced the goal of inclusive economic development and should provide a natural context for all initiatives aimed at improving the livelihoods of smallholders, including the development of farmer cooperatives. The provincial governments should provide the basic infrastructure for linking smallholders with agricultural markets. In particular, they must provide the legal and regulatory frameworks in which farmer cooperatives can function without being captured by elites or corrupt operators.

The following points, emerging from the international experiences, are also worth noting.

- First, rising demand for dairy products and fruits (including citrus and mangoes) in domestic and international markets provides valuable opportunities for raising incomes of farmers in these subsectors of agriculture.
- Second, most developing countries recognise that modern supply chains prefer to source supply in bulk to minimise transaction costs, and they insist on strict food safety standards. Smallholders can engage with these supply chains only if they form their own self-help groups, community organisations, cooperatives or producer companies. By doing that smallholders can reduce transaction costs, equip themselves with the requisite knowledge and capabilities to meet the quality standards, and increase their bargaining power by supplying in bulk.
- Finally, the required transformation in smallholder organisations has occurred in all countries with active government support across a wide range of services. Although farmer cooperatives in the developed countries emerged primarily as bottom-up organisations of farmers, in many developing countries their growth has been led by government policies for modernising subsistence agriculture, reducing rural poverty, and bringing about inclusive economic development.

6.6 Recommendations

RECOMMENDATION 6.1

Strengthen provincial governments' efforts to develop small farmer organisations for making Pakistan's economic development more inclusive, as envisioned by the Pakistan Vision 2025.

Motivation

Development of smallholder farmer organisations should be viewed as an integral part of broader strategies for achieving inclusive economic development in Pakistan. The Pakistan Vision 2025 provides a natural platform for policy support to smallholders.

RECOMMENDATION 6.2

Strengthen regulatory frameworks for small farmer organisations.

Learning from past experiences in Pakistan and abroad, provincial governments of Punjab and Sindh must strengthen legal and regulatory frameworks within which small farmer organisations can function without being captured and exploited by elites or corrupt operators. This may be done, for example, by limiting the membership of smallholder cooperatives to smallholders only. The governance of these organisations must be based on transparency and accountability combined with independent external auditing of their financial accounts.

Motivation

The motivation of this recommendation is to increase trust in farmers' associations and cooperatives, by demonstrating that exploitation of members or corruption will not occur.

RECOMMENDATION 6.3

Develop rural enterprise policy and strengthen capacity building of members of farmer organisations to promote rural transformation.

Provincial governments should develop rural enterprise policy for setting up rural mini-enterprises and provide incentives to small farmer organisations for capacity building and training of their members for diversification of household livelihoods.

Motivation

The motivation of this recommendation is to enhance the skills and the confidence of members of smallholder cooperatives or producer organisations to promote rural transformation by establishing rural non-farm enterprises.

RECOMMENDATION 6.4

Channel government services through farmer organisations.

Support for small farmers should be provided by provincial governments by supplying services such as superior germplasm, artificial insemination, feed and fodder supplies and credit through smallholder community organisations and cooperatives.

Motivation

The motivation of this recommendation is to provide an incentive for smallholders to become members of producer companies or cooperatives.

RECOMMENDATION 6.5

Use extension agents to promote formation of farmer organisations.

Extension workers should be encouraged to promote the formation of small farmers' common interest groups for enabling smallholders to integrate with modern supply chains. Extension agents should be given training in this regard with the support of donor institutions, such as the World Bank, ACIAR, ADB and NGOs.

Motivation

The motivation of this recommendation is to avail of the services of extension staff in dispelling any doubts and suspicions about the benefits of cooperation. Because extension workers come into close contact with smallholders, their influence can be harnessed for bringing about an important transformation in smallholder farming.

RECOMMENDATION 6.6

Build networks of milk marketing centres.

Motivation

The motivation is to use milk collection centres to encourage formation of milk producer groups. As milk can be collected at one site in sufficient quantity, milk collection centres can serve as hubs for the supply of other inputs, such as fodder, seed, fertiliser and small equipment. According to the Punjab Livestock and Dairy Development Department (PLDDD 2015), the formation of milk producer organisations could be started around milk collection centres because members will receive immediate benefits of cooperation.

The middlemen in the dairy supply chains should be also encouraged to integrate their operations with milk producer organisations. For example, in milk deficit areas middlemen may be given exclusive contracts with milk producer organisations.

If these centres are managed by the communities and financial returns from the centres are channelled back to the producers, this can create a win–win situation for all involved. For this reason, management training should be provided by the government to milk producer organisations in respect of milk production, marketing, value addition, and financial and business management techniques.

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