The Food Retail Sector Development and its Implication to the Small Scale Producers in Asia: Focus on the Lives Stock Sector with Reference to India.

Ram Babu Pentyala
Associate Vice President-HR and Operations, Process Weaver INC
Hyderabad, India rambabupentyala@gmail.com

Introduction

Dynamic is the word that best describes the Asian food market, as it is fast changing face and structure. This market dynamism in the region is mirrored through the advent of borderless trade, mobility of factors of production highly aided by breakthroughs in information, communication and technology (ICT), new and better equipped market players (entry of modern retailers) who are seen coexisting with the still popular traditional retailers and the increasingly discriminating consumers who are becoming more and more health, safety and price conscious. The market dynamism is attributed firstly to expanding income that brings about diversity in food demanded, from staples to high value food products such as fresh fruit and vegetables (FFV), meat and fish, among others and secondly to enhanced development in food sourcing and distribution through efficient driven supply chains and the growth and expansion of modern retail system. In the Asian region, Vietnam is one of the fastest growing markets. In year 2000, it has been cited as the economy to watch in Asia and less than a decade after, the fastest growing economy in the region, given its average steady annual growth rate of 7 percent. It currently ranks as the world's fourth most attractive market (next only to India, Russia and China). The development of Asia's agricultural sector is best viewed within the market which consisted of two successive reforms: the allocation of the means of production (especially land) to individual households, followed by economic liberalization and the opening to external markets. This resulted to inflow of foreign direct investments (FDI), among others.

The Food Market Trends And Status In Asia:

The development in the agricultural sector is a contributory factor to the growth of the retail sector in Asia. In addition, the consistently strong economic growth and improved per capita income have contributed to the robust expansion of Asia's retail trade according to the USDA GAIN Report of 2007. Nationwide retail sales of goods and services, estimated at $23 billion per year with a high growth rate of over 10% per year for the last five years has been posted by the sector.

A. The Agri-food Sector

The high-value food subsector has become the engine of growth in Asia's agriculture sector (World Bank, 2006) with its main agricultural products exported such as rice (20percent), fisheries (20percent), coffee (95 percent), cashew nuts (90percent) pepper (98 percent) and tea (75 percent). Agricultural exports on the average grew 14.6 percent annually accounting to 27 percent of the total export as of 2005. Short subsector performances of selected commodities are described in the succeeding boxes. Fruit and vegetables represent the largest imported and export foods with an estimated value of about US$103bn per year, with China as the major destination (after the collapse of Russia). While the performance of emerging high value commodities are exceptional, the same cannot be said with traditional crop as rice, together with coffee with each commodity sector posting a decline of an estimated US 10B per year. Other agricultural products like tea, cashew nuts and pepper have even been the worst hit of declining export performance, currently worth about US$3 billion per annum. Fishery is another potential sector of Asia but potentials remain untapped due to the sector's inability to meet quality standard requirement of the export market.

The livestock sector is likewise another bright spot for Asia having contributed 20 percent to the GDP and this is expected to reach a 30 percent level by 2010. An average annual growth rate of 6 percent has been posted by the sector during the last five years and this is expected to accelerate to 8% in the next five years. Pork is the biggest contributor as it accounted for nearly two-thirds of total livestock production. India is the second largest producer of pork in the region after China, with output of 2.3 MT in 2005. Poultry (including eggs) is the second largest in terms of contribution to total livestock production, although it is the largest in terms of size of population. Smallholder poultry production is predominant in rural areas; some 80% of rural households raise poultry.

Recent bouts of avian influenza have dissipated poultry stocks in the country, resulting in lower than average levels of outputs and exhibiting negative growth in 2000-2005, although it is slowly recovering. Beef cattle and buffalo have remained at low levels of growth, while goats have increased in numbers during the recent years, albeit starting at a low base. In terms of the packaged food category, the dairy subsector is one of the fastest growing, with estimated 2006 sales (in current value terms) of VND 5375.1 billion (•267 million) with Milk accounting for the majority share (Euromonitor). The dairy market is forecast to reach VND9560.7 billion in 2010. Distribution improvements and economic growth will also contribute to growth in dairy consumption. However, milk production is still very low and Asia imports about 80% of its requirements.

B. The Retail Sector :

Retail sales of goods and services were valued at VND726 trillion ($45 billion) in 2007, or 63% of the gross domestic product (GDP). As per the country's Ministry of Industry and Trade (MIT) projection, this is expected to grow 20.5% this year to 875 trillion (US$54.3 billion), after a 23.3% rise last year. For year 2010, a retail sales target of VND1, 024 trillion ($63.9 billion) has been set by the government. The retail sub sector where the highest growth opportunities are, has been identified as that of the food and groceries, though demand for durable and semi durable goods have likewise been reportedly increasing.

Though growing, India's retail sector as a percentage of GDP is still one of the lowest in Asia (63 percent). It belongs to the 3rd wave of supermarket revolution where the take off started in late 1990's or early 2000 and where the food retail percentage is 1-15 percent of total (Reardon and Timmer, 2007). The country's Food and beverage (F&B) retail sale is about 11-12 percent of total retail sales and of which 18-20 percent are imported.

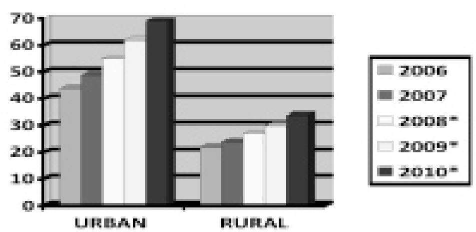
The retail food market in Southeast India, Asia included is of dual face characterized by modern retail markets existing side by side with wet markets. It is still dominated by traditional wet markets and small household-owned "mom and pop" shops, with modern retailers still only a small share of the market, though their numbers are growing USDA 2007. Recent estimates in

India of traditional retailers, on one hand reflect about 9,000 wet markets and hundreds of thousands of food shops. Latest count of modern retailers, on the other hand, yielded about 115 on the supermarket, hypermarket and wholesale center grouping, 100 mini marts and 25 shopping centers.

As to consumer preference modern retailers tend to pull wet market frequenters in terms of its health and food safety promotion. Convenience shopping and the increasing household ownership of refrigerators are factors that gradually pull the daily wet market in Asia's shoppers to the modern retailers. In general, changes in the global food market are greatly attributed to economic growth, increasing urbanization, growing middle class with accompanying income enhancement as well as information, communication and technological (ICT) related improvements. Trade liberalization and government initiatives in enhancing business climates are likewise known drivers of restructuring in the retail food sector.

In India, it is the increasing disposable income which has been identified as the core driver for consumer spending, aided by increasing population, rising middle class and overseas remittances. This enhanced consumer spending is a recent development in India, the trend is expected to continue with the retail sector growing at a moderate rate in the near future. In the 2005 study, it was cited that while income, particularly of the middle class, increased, it had not yet translated into a corresponding level of consumer spending. Recent statistics, however, prove that this no longer holds as consumer spending per capita have been increasing and is projected to continue to grow at an average rate of 6.25 and 3 percent at India's urban and rural sector, respectively (Figure 1). In fact, India now has the highest consumer spending as a percentage of GDP (70) compared to neighboring Thailand (68), Malaysia (58) and Singapore (56). It is even projected that retail goods as a percentage of consumer spending will be 80 percent by 2010.

Fig 1. Consumer Spending in Asia
Ave. Consumer Spending Per Capita



Source: MOF (projected)

In the same manner, overseas remittance then, is still new and not a widely reported phenomenon in the country. Barely half a century later, India has already posted a US$ 4 billion dollar remittance level, already a third of that of the Philippines which for years had posted one of the highest overseas remittance in the sub region. Increasing tourism subsector is another emerging driver of the retail sector's growth with an average rate of 10 percent annually or around 4.2 million tourists in year 2007 alone. Five years ago, India was just positioning itself as the safe tourist haven in the region; now its volume of tourist is almost half of that of Thailand, the long reining tourist destination in the region. With the India's accession to the World trade agreement and the opening up of the distribution service sector to foreign companies at a 100 percent ownership level (as against shared ownership only before) the retail sector growth is even expected to increase at a faster rate with the anticipated FDI inflow.

Given a remarkable and expectedly continuing economic growth, what are its implications to India in general, and to the various sectors particularly the domestic retailers and the smallholder producers? Specifically how have this changed the structure of agriculture, the food system, in particular and how has this restructuring created opportunities for the smallholder producers which comprised the greater majority of India's rural poor?

A. The livestock sector

The phenomenal growth in livestock products in the developing world in recent decades has been characterized as the "Livestock Revolution." The demand-led expansion of supply of livestock products is driven by more affluent urban consumers that are shifting their diets towards more animal protein and less of grain-based diets. Demand for livestock products has been increasing nearly 8% during the last five years in India (see Table 1) and this is driven by rising income and increasing urbanization in the country as earlier cited.

Table 1. Per capita meat consumption in India.

Livestock product	Growth per year (%)		
	1980-1990	1990-2000	2000-2005
Meat, total	7.9	6.0	7.8
Pigs	9.3	6.5	12.3
Poultry	5.9	8.0	-3.4
Beef/buffalo	4.8	1.2	1.0
Eggs, total	5.4	7.6	6.6
Milk, total	**2.6**	**4.1**	**29.4**

The nature of demand for livestock products is likewise changing in India. There is that increasing consumption pattern of processed meat and dairy products, the emerging importance of food safety concerns (disease free, antibiotic/chemical free, etc) and the growing awareness about health issues (lean meat vs. fat meat consumption. Despite these changes however, some culture related dimensions prevail such as the traditional penchant and preferences for fatty pork in some regions and more importantly, the still strong preference for fresh warm meat relative to chilled or frozen ones.

IMPLICATIONS OF THE FOOD RETAIL SECTOR'S GROWTH

Any development process usually brings with it opportunities and challenges and the growth of the Asia food retail sector is no different. The accompanying challenges when not appropriately addressed may erode the opportunities it brings to the country and varying sub sectors as well.

A. To India

In general terms, the growth of the retail sector brings with it new opportunities for India in terms of expanded markets both at the international and domestic levels. It likewise provides accompanying demand for higher volume and value added which spells more productive economic activity and consequent employment generation. However, these opportunities will only be maximized (if ever they materialize at all) if the country's domestic companies undergo competency enhancing changes, as most are currently ill equipped to compete head on with foreign counterparts in terms of quality, quantity, cost efficiencies and supply reliability, among others.

In the absence of matching investment in almost all relevant fronts, such as infrastructure, skills, technology and enabling policy environment, these opportunities will go to naught. In terms of providing an enabling environment to help small producers get a fair share of the benefits associated with the retail sector's growth, there is a need for government initiated credit programs. This will enable small farmers to produce quality fresh products like vegetables, fruits, and fresh meat products at the form, quality and volume required by the supermarkets.

B. On the Different Sectors

1. Domestic Retailers

Domestic retailers are already confronted with stiff competition given the highly and better equipped multi-national giant retailers operating in India. Even stiffer competition is expected with the eventual entry of more foreign players by January 2010 (already making preparations this early) given the relaxation of foreign investment policy as part of the country's commitment to WTO. This implies that to survive competition a number of measures need to be adopted.

Invest in appropriate technologies and structures and skills: To prepare for greater competition, domestic retailers have to invest in appropriate technologies and facilities not only to meet food safety requirements but to enhance efficiency and lower costs as well. Professional Logistics System like cold storage, equipment, and transportation system should be in place to ensure that good quality products will reach the consumers. The use of IT based Point of sales technology (POS) are product information enhancing systems that afford transaction accuracy and efficiency as well, for example, hardware system like barcode scanners, receipt printers, cash registers – information about the products and at the same time making the transaction accurate and efficient. It is also useful in tracking sales and inventory for decision making of managers. A trained human resource team particularly merchandisers, managers, and customer relations staff is essential in quality service provision, as customer service is crucial features of the retail business.

Capitalize on core competencies: Familiarity of local situation and the feel of what the local consumers prefer are advantages domestic retailers have over foreign competitors. Taking advantage of these core competencies (keeping close to their customers) and sustaining advantage will help them stay in competition.

2. The Smallholder producers

The small producers have to brace themselves with enhanced competition brought about by the global free trade, where they have to compete with imported farm products at their own domestic markets. For them to survive, they need to be made competitive and be linked to different markets.

Increased production and more varietal options: Since the reforms, national food consumption has more than doubled from US $ 61 billion in 1998 to US$ in 2004. While the typical Indian diet is still basically rice and vegetables, as income increases, so does the consumption of fresh fruit and vegetables (FFV) and animal based products. This together with a lot of growth drivers have led to increased production and more product options (high value crops, fresh fruit and vegetables (FFV) and nuts, etc) to smallholder producers. However, most of them are unable to tap these potentials given their inability to meet quality and safety requirements.

Focus on market requirements: More than production and quantity enhancements, smallholder producers need to focus on market requirements foremost of which are quality, consistency and reliability. Farmers are unable to sell their produce to supermarkets because of quality and supply issues (Asia News, 2006). Supermarkets have strict food sanitation, quality standards, and tight delivery schedules. Farmer groups or clusters working together to meet volume and quality requirement are emerging producer responses on this regard.

Linking up with domestic retailers and farmer organizations: There is no formal distribution network for Indian farmers (ADB, 2006). Farmers stand to get higher prices by selling directly to supermarkets but are, instead, forced to sell their produce to intermediaries. Supermarkets also offer farmers the advantage of stability in prices and volumes. But due to the lack of formal distribution network, farmers are unable to capitalize on the growing trend of supermarket. Tie-ups with farmer organizations like cooperative to set up their own distribution channels do processing; create farm trademarks so that they can directly deal with supermarkets.

3. The livestock retail markets and smallholder producer access

As previously discussed, the ongoing restructuring of the agri-food retail markets resulting to a bimodal structure presents various opportunities as well as challenges to small producers.

Opportunities in traditional market: Small producers have the stronghold in supplying traditional retail markets like wet markets. Empirical evidence from India's neighboring countries in Southeast Asia confirm that traditional fresh markets will remain the main market outlet preferred by consumers for their fresh food purchases such as meats, fresh fruits and vegetables, despite increasing importance of supermarkets and accompanying demand for safe, uniform products. Smallholders will need to continue to capitalize on this comparative advantage in supplying meats with the preferred attributes by Indian consumers, e.g, fresh, warm meat as opposed to chilled or frozen meats that are usually sold by modern retail outlets. Personal relationships with retailers in traditional markets also count in sustaining this preferred market outlet, as opposed to the impersonal nature of service in modern retail outlets. Trust is built over time with regular retailers in traditional markets and this can supplant any formal certification and labeling that may be applied or used by modern retail outlets like supermarkets. In urban settings with more mobile urban population, this personal relationship may be difficult to sustain however, so that some formal form of certification or truth in labeling may be more appreciated by consumers.

Challenges posed by modern food retail markets: Food safety and traceability standards demanded by modern food retail outlets are difficult to meet given smallholder resources and capacities. Food safety is not just a matter of medical suitability for human consumption; in the market place it is a demanded attribute that has a much to do with the safety certification the product possesses as it does with its actual safety. Smallholder produced livestock products that are not certified as having been produced and handled through safe processes cannot compete in these markets, even if they are perfectly safe. Food safety certification has a cost to deliver and requires a price premium to elicit supply for the marketplace. Food safety may not be scale-neutral to produce, and hence may continually be a barrier to smallholder inclusion in modern food retail markets.

Other smallholder conditions and circumstances that limit their ability to meet food safety standards include their location and corresponding lack of access to post-harvest facilities such as a cold chain. For example, smallholders are usually distantly located from urban markets and lack access to refrigerated cold chains needed to deliver perishable food products across long distances. Smallholder outputs are also often too small and unreliable to appeal to industrial food processors who find it easier and cheaper to negotiate with a few large producers than many small ones.

Production related constraints that hinder smallholders' ability to realize high-quality;

consistent supplies are also significant concerns. These include financial constraints, as well as difficulties in input markets, lack of technical and managerial capacities, etc. Specifically for high-standards products, smallholders might lack the expertise and have no access to crucial inputs such as improved stock and/or feeds, etc. These constraints are further exacerbated by the lack of efficient institutions and infrastructure to assure consistent, reliable, quality, and timely supply through spot market arrangements.

Policy and institutional framework favor large scale farms, e.g., tariff and fiscal incentives such as preferential access to breeding animals and imported feed grain, easier access to subsidized credit, lower cost of mitigation per unit of waste produced, among others. Indian authorities strongly encourage the development of modern distribution outlets in the cities in order to solve perceived problems of food health and safety in the production and marketing system; accordingly traditional markets are being closed or replaced with modern ones. There are also production related biases towards large scale farms, e.g., economies of scale in investment for housing, feeding, breeding, animal health technology, concentration in input and processing sectors, among others. Likewise, vertical integration and formal contract farming arrangements tend to promote increasing farm size given the integrator's propensity to choose medium to large scale farms as participants in contract growing schemes.

Sustaining and enhancing competitiveness in the fresh meat market, be it in traditional or modern, still remains a challenge among smallholder producers. Relative competitiveness can be defined as being able to produce at a lower unit cost of production than one's competitors. This boils down to remaining efficient as a production unit and will largely depend on access to improved technology and linkages with input and output markets. If large farms, on the other hand, can produce at lower unit cost of production than small farms, they will clearly drive small farms out of the market over time.

The market price that applies to both large and small, by this reasoning, will fall as large producers expand and small ones get squeezed out. The only future for smallholders will be to stay in a few higher-priced niche markets not served by large farms, if these markets exist, and to cut costs by remunerating their family labor less than what a large farm pays to hired labor. It is unlikely that smallholders will be able to sustain production under this condition. However, if small farms can produce at lower per unit cost than large farms in the same markets, then they have a chance to remain competitive in that market. This will be feasible when small farms are more efficient users of farm resources, perhaps because they put more care per unit of input into what they do (i.e., highly motivated to do well in their own farms), then they have a market advantage over large farms that will be difficult to overcome.

IV. Emerging Responses

The growth of the food retail system has elicited a number of responses from economies and their different sub sectors either to gain a fair share of the accompanying benefits or lessen the onslaught and negative impact to their varying sectors.

A. Government of India

The Indian government's initiative has been seen as a rallying force in the growth of retailers in terms of modern retailer expansion and traditional market upgrading, planning of food distribution centralization and eradication of informal markets and street vending (and relaxation of FDI regulation. Food safety initiatives on safe vegetables, for instance was launched by the government in the 1990s and have similarly complemented supermarkets requirements for control, labeling and safety.

Efforts to boost the retail sector likewise expanded to other sub sectors. The Indian government has earmarked the tourism industry as a provider of further growth with the expected increase in the number of tourist to boost retailing in India as detailed in the country's foreign affairs plan. Also with the local populace growing in sophistication and disposable incomes, industry experts view the forecast period as a good time to set up international-standard retailing outlets, especially in leading cities according to the same plan source. It was further reported that this continued development of the economic and social fabric of Indian society has spurred developers' interest in India. It has also accelerated the expansion of new retailing formats such as supermarkets, department stores and specialist retailers such as perfumeries and food specialists, which will further spearhead retailing development in the near future.

B. Responses by Sector

1. Domestic retailers

The domestic retailers' responses to the growth of the retail sector and the accompanying competition, it poses converge on upgrading facilities and on expanding operation as well as forging strategic alliances between and among them. Currently, there are three major retailer types in India, as cited by the secretary general of the Indian retailers association, namely: 1) foreign retailers (usually world leaders) not yet present in India yet already building their presence and linking up with local retailers, 2) those foreign retailers already operating in India (including new entrants) and 3) the domestic retailers.

Market entry and establishing foothold even prior to entry is a foremost strategy of type one retailers. This they carry out through forging alliances with firms already in operation in India and who have established records in the business. Type 2 major retailers, like the first one may forge alliances with local distributors or build their own team depending upon desired reach and scale of operation.

2. Smallholder Producers

While a number of smallholder responses have been observed in terms of forming groups (cooperatives, farmer organizations, etc) and seeking assistance from government and private sectors, still in general, smallholder producers are perceived to have been responding slowly to the fast evolving dynamic markets. Are they really slow in responding or are they just being rationale in their decisions? When small producers are asked why they do not produce more, the usual answer is that there are no markets to absorb their produce, or there are no distribution systems to bring their products to appropriate markets. As to why they don't enhance their product quality, typical response indicates that there is no incentive to improve on quality as more often than not at farm level, sorting and grading are not undertaken. These common answers are actually not reflective of slowness in response but actually logical decisions given the situations they are in. Maybe the focus of future assistance should be on developing an enabling environment that provides not only access but incentives as well for small producers to undertake volume and quality enhancements as called for by dynamic markets.

The growth of the retail sector is expected to continue and various sectors have roles to play to ensure that India as a country and its people by sector will benefit from the sector's growth.

A. Government Sector

The development of wholesale and traditional markets is initiatives already on ground as far as

India is concerned. However, continuous assessment on how market development policies (relocation, upgrading) have enhanced (or not) abilities of smallholder farmers to find market and command better prices are needed to ensure pro farmer and pro market objectives are equally met. In the same manner, government support in providing financial assistance is needed so that farmers can set-up systems to ensure quality that will allow them to sell to supermarkets.

As to affording smallholders access to modern retailers, a call for corporate social responsibility by local government units or farmer groups in terms of a gradually increasing percentage purchase from small producers with potentials may be resorted to. Promoting a "handholding " or big to small brother mode in helping certain groups of organized farmers and improve quality standards under a CSR program will benefit small producers a lot. Shouldering the bigger bulk of the risk, while quality enhancement initiatives are in progress, will be an added benefit provided to the small producers again in the name of CSR.

B. Domestic Retailers

Sticking to comparative advantage and core competencies are the observable strategies that domestic retailers are adopting to ward off competition, and to protect and sustain share of the retail market. Familiarity and knowledge of doing business in their home country context is the comparative advantage they have over the bigger and generally better equipped foreign competitors. To do business in partnership with foreign competitors (as offered to them) is to let go of the said advantage and head for potential takeovers.

Sticking to core competencies, on the other hand, is reflected in the domestic retailers; strategies of maintaining networks of small stores, where they are more adept at rather than operating big ones, which they may not have the appropriate financial and managerial requirements. Developing networks of small scale, neighborhood supermarkets appear to be a better strategy given the financial conditions and managerial abilities of domestic companies. Similarly we need to keep close to their neighborhood customers to retain business patronage and loyalty and be able to compete with foreign distributors. This strategy likewise caters to the buying habits of most Indians that of frequenting the market/retailer on a daily basis for purposes of freshness of food.

C. The Smallholder Producers

Given all the restructuring in the agricultural and retail sector and sub sectors respectively, how may smallholder producers are assured of integration and inclusive businesses in the process? Firstly mapping and sub sector analysis of each commodity provides a comprehensive view of the potentials that abound and the challenges that beset each commodity sector, thus industry assessment on a per commodity basis will prove handy to guide farmers and organizations assisting them in formulating strategies that will enhance integration to sustainable markets.

Secondly, country evidences have shown that the household based production expansion on a per farming household basis (land reform of 1988) provided production options from staple to high value crops (fruit, vegetables and nuts) and expand production in the process. However, potential gains are not maximized given the inability to meet the grade in terms of quality and safety of both global and domestic (modern retailers) markets. Initiatives on standard enhancement at the national level on re gap are continuously pursued and efforts to enhance farmers' awareness and education on standards and quality be made a regular concern/activity by both extension units of local governments and farmer groups.

That not all farmers can supply modern retailers is an overused phrase, and yet efforts along this line are still expecting as, however, alternative options that will facilitate linking are not always available. The India's domestic retailers' resolve to have a unified stance to brace them against foreign competition shows how collective action can work for less endowed groups. Though small in operation and scale (compared with modern retailers), they can provide the smallholder producers regular markets for their produce and together can innovate in ways by which quality standards can be addressed, initially on a pilot scale (given flexibility of size and volume).

D. The Livestock Sector

In order for the livestock sector to be competitive in the emerging political and economic environment, and rise up to the challenges while taking advantage of opportunities, there has to be an effort to improve productivity through modernization, and enhance product value and quality through regulations and a comprehensive investment strategy. This vision will need to be translated into clear policy statements and backed up by tangible programs. An enabling policy environment is essential for the development of the sector, and could pave the way for increased participation by smallholder livestock producers in the development process. This is where the government and everybody involved in the policymaking arena have an important role to play.

Specifically, it is envisioned that the government could play a regulatory role in ensuring that standards are and regulations to produce high quality, safe meat and meat products will be enforced and sustainable. Research into the development of alternative production models that are suitable to smallholder producers and at the same time capable of generating high quality and safe meat and meat products would be important in engendering more smallholder participation in emerging markets for livestock. Policies and institutions to enable the creation of an environment where this research could flourish and bear useful, tangible results will be very critical. Collective action to take advantage of economies of scale in input procurement as well as output marketing could potentially be developed and tested for replication on a wider scale. Government support for these initiatives would certainly be preferred. A detailed discussion of some key areas that need policy support follows.

Pro-poor, pro-market policymaking: This will target policy interventions that will enhance market inclusion of smallholder livestock producers and may involve defining a new set of incentives to engender smallholder participation in livestock markets, or enabling smallholders to effectively respond to those incentives. Some examples here would include supportive policies to develop efficient livestock services delivery such as extension, veterinary services, good quality genetic material for improved breeding practices tailored to smallholder conditions including information on breed performance, market information, feed quality labeling or certification, and efficient access to affordable credit. Empirical evidence from ILRI research in South Asia indicates that constraints in accessing credit, limits ability of smallholder livestock farmers to adopt productivity enhancing technologies (and supportive investments in inputs, assets, etc. to maximize potential from the technology), resulting in low levels of marketable surplus. Credit constraints arise from inability to provide collateral that is acceptable to financial institutions.

Collective action: Strategies for collective action may lower transaction costs of input procurement and output marketing through collective negotiation by its members. These strategies also build capacity for entrepreneurship and effective management of agribusiness; with institutional and technical support, these producer groups can achieve economies of scale and meet the standards for food safety and quality that will allow them to match the market clout of large industrial operations.

The issue of economies of scale does not primarily emerge in production, but arises mostly in processing, marketing, and distribution. When several standards have to be adopted at the farm level, the necessary changes in production and post-production activities required for a modern agri-food system are more difficult to implement and monitor when a large number of farmers are involved. The complications arise from the coordination of a large number of people. Farmer organizations such as groups, cooperatives, and associations could take the lead in reducing the coordination problems faced by enterprises in dealing with farmers. It will also facilitate building a collective reputation that can generate price premia in the market or at the very least reduce the transaction cost from moral hazard due to lack of credible (and affordable) certification mechanisms that are suited to smallholder conditions. Despite some successes, however, supportive policies to foster an enabling environment to propagate this organizational response to market opportunities are not yet effectively in place in India. There is a need to revisit the existing Cooperative Law for some adjustments tailored to the realities of markets in India and provide the appropriate incentives to engender the desired behavioral response by target farmers.

Private-public partnership: Harness private sector as effective partner in development through appropriate incentives via regulatory framework for doing business. Private sector partners can facilitate technology transfer, thus enhancing prospects for productivity enhancement by its farmer-collaborators. Private sector partnerships can also enhance capacity building in the soft skills of management as well as in the technical aspects of production that are supportive of the adoption of new technology. In addition, private sector partners can open up markets for farmers that otherwise would not be accessible to them from lack of market information and/or market clout. Examples of this can be found in selected contract growing schemes offered by private feed companies (called integrators) to their contract grower (pig producers), although empirical evidence points to the limitations of this scheme to bring in those who are at the lower end of the scale spectrum of smallholder producers. However, contract growing schemes with producer organizations or cooperatives may be an alternative option to overcome the scale barrier arising from requirements for participation imposed by integrators.

Conclusion

India is at the cusp of transition from a mono-crop economy, to one that is more diversified, and the livestock sector is becoming one of the key players in this transition process. In laying out the priorities for the development of the sector, an important point to consider is the extent to which smallholder producers are being carried into the development process instead of gradually being marginalized through inappropriate institutions and policies. In addition, it is important to note that a huge impetus of this development process should be anchored on the rapidly growing domestic market and the changing nature of its demand. The export market has huge potentials but in the near term it is the domestic market that will be driving the growth of the sector. This is also where opportunities for inclusion of smallholders may provide realizable returns alongside the ongoing transformation of the food retail market. Targeting the export market will have to be a long-term objective, after the conditions of the domestic market will have improved and set the stage for a more broad-based growth of the sector.

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