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## **The Role of Collective Action in Overcoming Barriers to Market Access by Smallholder Producers: Some empirical Evidence from Northern Vietnam**

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*In Vietnam, many smallholder pig producers face many barriers to effective participation in the markets for pigs and pigmeat. Many smallholder pig producers still practice traditional or low levels of production technology (in terms of breed raised, breeding technique, and disease prevention methods used). They cannot adopt new production technologies that demand higher investment and higher production cost, given their limited financial resources and skills. The quality of service for preventing and treating epidemic diseases provided by both public and private sectors leaves much to be desired, thereby restricting the application of new production technologies. Since there is a high variability in production systems in terms of breed, feed, and breeding methods used, a wide variation of pork meat quality is also produced, and generally perceived as of low quality with corresponding low market prices. The linkage between producers and market actors is also weak, thereby raising risks in production and marketing. Lack of access to markets has also resulted to high input costs, high transaction costs, and low price of output. The latter is largely exacerbated by the limited bargaining power that smallholder pig producers have. A case study in Hai Duong province in Northern Vietnam illustrates how institutional arrangements that build on collective action principles have enabled smallholder farmers to make a turnaround to overcome barriers to market participation.*

*Keywords: market access, collective action, transaction costs, smallholder livestock producers, cooperatives*

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### **1. INTRODUCTION**

Livestock production is one of the most popular agricultural activities in Vietnam. About 80% of poor households in Vietnam raise animals, and about 30% of total agricultural income of households comes from livestock production. With its important role, the Vietnam Government gives special attention to the livestock sector. One of the most important policies put in place to develop the livestock industry was to encourage pig breeding in localities.

With the increasing liberalization, globalization, and expanding agribusiness, however, there is a danger that smallholder producers may find it difficult to fully participate in the growing market economy of Vietnam, and subsequently become marginalized. Smallholder pig producers need to improve their price and quality competitiveness in order to survive. However, many constraints stand in the way, largely due to inferior technology in the supply chain, insufficient information, weak institutional arrangements, and high transport and handling costs that are the result of weak public infrastructure. Moreover, emerging consumer preferences are such that economies of scale are significant.

Specifically, as income and urbanization have increased, the demand for food has also changed from one that is mainly based on grains to a more diversified diet including meat and dairy products, fruits, and vegetables. The change in demand has implied not only a change in the diet composition (away from staples towards non-staples) but also a change in the preferences for food characteristics, including an increasing demand for features such as safety, quality, convenience, organic, and processed foods (Goletti 2004).

Different types of organization of the agri-food system are, thus, required to accommodate the changing demand for food. Rather than a food distribution based mainly on the production, storage, processing, and distribution of durable grains, of largely undifferentiated quality, the challenge for the agricultural system is increasingly related to perishable products, differentiated products, safety issues, post-harvest problems, and the emergence of a more sophisticated retail system. In the presence of a long marketing chain which includes multiple intermediaries, repeated handling, and smallholder farmers lacking organized structures (e.g. marketing cooperatives or producer associations), the marketing margins are indeed high and, in the absence of policy regulations, the margins will be captured by marketing agents, who hardly make a contribution to value addition of the product (Goletti 2004).

## **BARRIERS TO MARKET ACCESS BY SMALLHOLDER PIG PRODUCERS**

In Vietnam, many smallholder pig producers face barriers to effective participation in markets for pigs. Many smallholder producers still practice traditional or low levels of production technology (in terms of breed raised, breeding technique, and disease prevention methods used) (Vu Trong Binh et al. 2004). They cannot adopt new production technologies that demand higher investment and higher production cost, given their limited financial resources and skills. The quality of service for preventing and treating epidemic diseases provided by both public and private sectors leaves much to be desired, thereby restricting the application of new production technologies. Since there is a high variability in production systems in terms of breed, feed, and breeding methods used, a wide variation of pork meat quality is also produced, and generally perceived as of low quality with corresponding low market prices.

The linkage between producers and market actors is also weak, thereby raising risks in production and marketing. Lack of access to markets has also resulted to high input costs, high transaction costs, and low price of output. The latter is largely exacerbated by the limited bargaining power that smallholder pig producers have.

This paper discusses the Northern Vietnam case to illustrate how collective action has enabled smallholder pig producers to overcome barriers to their effective participation in the market for pig meat.

## **2. MOTIVATIONS FOR COLLECTIVE ACTION FOR MARKET ACCESS**

The risk of unstable marketing margins, market thinness, uncertainty concerning government policies, theft and storage spoilage, and unenforceability of contracts, along with high transportation and storage costs, result in large and unstable transaction costs. The magnitude of transactions costs is found to be negatively related to smallholders' decision to participate in the market (Goetz 1992; de Janvry et al.

1991; Key et al. 2000). In this regard, the principal tools for reducing transactions costs are institutional innovations such as contract farming, out-grower schemes, cooperatives, and vertical integration.

Farmer organizations including farmer groups, cooperatives and farmer clubs are different ways to gain bargaining power in the value chain and a mechanism to improve access to information, capital and relevant contacts. Many farmers in Asian developing countries are small farmers with less than one hectare of cultivated land. One of the main difficulties for small farmers is how to gain power in a value chain vis à vis those actors perceived as more powerful such as traders, agro-enterprises and exporters. Many farmers are women. One of the main difficulties for women in agriculture is how to gain power in a value chain vis à vis those actors perceived as more powerful; such as the traditionally male dominated roles of traders, agro-enterprise managers and exporters. Other forms of organizations relate either to producers associations or trade associations involving marketers and enterprises. Each of these organizations has its internal rules of conduct. The test of the effectiveness of an organization is to understand to what extent the rules of conduct and the activities of the organization are perceived as benefiting the business of its members.

According to Swallow (2000) collective members will have stronger incentives to organize if they are unable to bear the costs of bargaining transactions and they perceive that collective action can effectively reduce the costs of commodity transactions. The ability to reduce the costs of organizing a collective has been attributed to a variety of factors: (1) homogeneity of values and beliefs (Baland and Platteau 1996); (2) homogeneity of access to the resource (wealth) (Baland and Platteau 1996); (3) multiplexity of member relationships (Mearns 1995, Singleton and Taylor 1992); (4) appropriate nesting with outside organizations (both vertically and horizontally) (Ostrom 1990); and (5) a general state of stability of expectations (Mearns 1995, Mitchell 1973).

## TRANSACTION COSTS

Transaction costs are the costs that arise when individuals exchange ownership rights for economic assets and enforce their exclusive rights (Eggertson 1990). They originate typically from the following activities:

- 1) the search for information about potential contracting parties and the price and quality of the resources on which they have property rights (this includes personal time, travel expenses, and communication costs),
- 2) the bargaining that is needed to find the true position of contracting parties, especially when prices (including wages, interest rates, etc.) are not determined exogenously,
- 3) the making of (formal or informal) contracts, that is, defining the obligations of the contracting parties,
- 4) the monitoring of contractual partners to see whether they abide by the terms of the contract, and
- 5) the enforcement of the contract and the collection of damages when partners fail to observe the contractual obligations.

Two further dimensions of transaction costs in the context of marketing agricultural producer are identified by Jaffee and Morton (1995) as follows:

- 1) screening costs, referring to the uncertainty about the reliability of potential suppliers or buyers and the uncertainty about the actual quantity of the goods,
- 2) transfer costs, referring to the legal, extra legal, or physical constraints on the movement and transfer of goods, and commonly includes handling storage costs, transport costs, etc.

Transaction costs can also be classified into information, negotiation, and monitoring and enforcement costs (Haddad and Zeller 1997, Hobbs 1997). Information costs arise ex ante of an exchange and include the costs of obtaining price and product information and the cost of identifying a suitable partner. Negotiation costs are the costs of physically carrying out the transaction and may include commission costs, the costs of physically negotiating the terms of an exchange, and the costs of formally drawing up contracts. Monitoring or enforcement costs occur ex post a transaction and are the costs of ensuring that the terms of the transaction (quality standards and payment arrangements) are adhered to by the other parties involved in the transaction.

It is hypothesized that collective action reduces transaction costs faced by smallholder producers in ways that enable them to effectively participate in markets.

## MARKET INFORMATION

The availability of market information is very limited in developing countries. There are several problems that are associated with the provision of market information. First, the acquisition and processing of market information can be a very costly activity beyond the reach of small farmers and producers in developing countries. As a result, it is argued that market information can be regarded as a public good in a situation where small farmers and producers cannot afford to pay for information (Shepherd 1997). Second, the possession of different levels and qualities of exchange-relevant information creates opportunities for some economic agents to behave in a strategic manner, increasing the transaction costs of exchange.

There are several reasons for the existence of asymmetric market information (Chowdhury et al. 2005). First, the reliability of information may vary over time; information that was once correct may become dated and therefore inaccurate. Second, collecting information may involve costs; it does not pay for consumers to collect information beyond a point where the marginal benefit equals the marginal cost of collecting it. Third, consumers can remember and readily recall only a limited amount of information. Fourth, there is a “reasonable” limit to the amount of information processed, a “bounded” rationality: consumers process information up to the point where the marginal benefit of obtaining information equals the marginal cost of processing it. Fifth, consumers do not have sufficient knowledge to process the available information on all goods correctly. The lack or differential access to market information can create direct barriers to mutually beneficial exchange and greatly increase the costs associated with trade. The consequences of asymmetric information are that equilibrium may not exist, or if equilibrium exists, resources are used less efficiently than they would be if there were perfect, symmetric information. Moreover, it is the smallholders who are most likely to be disadvantaged with pervasive asymmetries in the supply chain, given their limited resources to access market information.

## STRUCTURAL TRANSFORMATION OF FOOD MARKETS

As urbanization and the industrialization of the food system proceeds, the way food is produced and marketed in developing countries changes in response to a changing demand. Small-scale, undercapitalized and often under-educated farmers in developing countries find it particularly difficult to

meet the quantity, quality, timeliness and traceability requirements of the new supply chains – and have yet to find widely replicable institutional solutions, for example through cooperatives.

The changes in food retailing bring major challenges related to the sustainability of small retail shops and vendors, small enterprises, and small farmers. At the same time, the developments in the retail sector offer potentially great opportunities for including the poor into value chains.

The major effects of supermarkets on the agri-food system are through the procurement system of large volumes of products from suppliers. Stiff competition from both small retail shops and other supermarkets results in cutting costs and raising quality and diversity. Cutting costs in turn requires the improvement of all aspects of procurement, including product and transaction costs. This is done by improving coordination and logistic systems such as distribution centers, logistics platforms, contracts with wholesalers and producers, and private standards specifying quality, safety, volume, and packaging of products (Reardon and Berdegué 2002).

Distribution centers imply an increase in the scale and volume of procurement, which tends to lead distribution centers to procure products from large areas, in higher volumes, and to serve a number of stores, and work with suppliers whose scale, capital, and managerial capacity are sufficient to meet the requirements of the new procurement system. Suppliers are in turn required to make larger investments deemed to be worthwhile if they can get on a supermarket procurement list. The scale of larger supermarket chains gives them the capacity to pursue the above objectives, since they have the bargaining power, the finance to make investments in logistics, and the geographical presence required.

The major challenge for smallholder farmers is how to become part of supermarket chains. Supermarkets decide the products that farmer have to grow according to standards that are often too high for small farmers to comply with. Meeting the demand of procurement officers requires technical and management skills that small farmers often do not have. Those farmers that can access a procurement account with supermarkets are the winners. But to win implies also to make investments in equipment and logistics support often not available to small farmers.

For small farmers, getting into a supermarket's procurement system may mean investing in irrigation, greenhouses, trucks, cooling sheds, and packing technologies, among other things. Farmers need to be able to sort and grade their produce, meet timing and delivery requirements, and document their farming practices. In many cases farmers simply do not have the knowledge or the money to meet these requirements on their own.

Smallholder farmers could be highly productive, and in fact are often more productive than large-size farms (Costales et al. 2006). The issue of economies of scale however does not primarily emerge in production. The issue 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. Contracts between farmers and agribusinesses, and vertical integration are alternative options.

Governance issues are of increasing importance in the agri-food system, given the greater emphasis on product differentiation, food safety and product standards required in a competitive market environment. Such issues place a premium on strong linkages within the value chain between agents in the chain. While individual and isolated smallholder farmers may be unable to capture value added vis à vis traders or processors, associations of producers may be in a better position to access technology, credit and market opportunities.

## SOCIO-CULTURAL FACTORS

Many groups in society are subject to economic, political, or cultural exclusion through different mechanisms and institutions. This phenomenon substantially decreases their access to various markets and further adds to transfer costs (Chowdhury et al. 2005). Social exclusion from different markets—labor, credit, access to education—is a crucial issue in multiracial and multilingual countries, and it can inhibit rural development and market integration. Discrimination and exclusion related to ethnicity, culture, physical appearance and religion take place in ways both obvious and subtle. For instance, indigenous or ethnic minorities are more likely to be poor than other groups, and historically, they, as well as associations of rural farmers, have been excluded from decision processes of local government organizations. These marginalized groups are characterized by their organizational weaknesses such as lack of capacity and poverty. From an economic perspective their exclusion from certain markets affects their economic outcomes and can restrict their potential to migrate or to access goods and services in nearby markets. The exclusion from public and private assets such as education, and physical, financial, or organizational capital can restrict their current and future economic opportunities and confine them to a rural poverty trap. Exclusion may also affect the rate of return on the assets they do possess: for instance, when occupational segregation exists—i.e., certain groups do not have access to better paid-jobs—then there may be differences in the economic returns to education for similarly educated people. It is hypothesized that collective action that promotes empowerment of these groups of people will allow them to overcome specific barriers to becoming part of the market economy.

## 3. HOW COLLECTIVE ACTION CAN REDUCE TRANSACTION COSTS

There are several ways collective action through cooperatives can reduce transaction costs and support commodity market development and coordination (Jaffee 1995; Staatz 1987). First, cooperatives counter the problem of needed “lumpy” investments in marketing infrastructure and services since the fixed costs of such investments can be shared among group members. In this way cooperatives can overcome smallholders’ barriers of access to assets, information, and services. Second, cooperatives allow for the provision of certain public goods like product promotion that may be neither possible nor profitable on an individual basis. Third, cooperatives reduce or pool member risks by guaranteeing commodity purchases and sales on behalf of members and provide insurance, credit, or both to members. Fourth, cooperatives lower transaction costs for both members and for nonmembers trading with members by settling disputes and obtaining, interpreting and disseminating information about production, markets, and farmer and trader competence and creditworthiness. Fifth, cooperatives provide for the exercise of market power by their members through collective negotiations with suppliers or buyers, by controlling or withholding member supply into the market, and by informing members about prevailing terms of trade. And lastly, cooperatives can establish a collective reputation for quality that will engender better output prices that may not be easily feasible under individual farmer conditions.

Producers' organizations open opportunities for their members to participate in the market economy. To individuals these markets are closed. But as members of a producer organization, even small and medium sized farmers can get access to markets. A producer group can accumulate produce, negotiate better prices paid by wholesalers and better terms for the purchase of inputs by their members. Producers are linked to markets by improving their efficiency and competitiveness. Women organized in producer groups often increase their status and are more independent because of their proper income. Well-organized groups, who ensure the participation of all members, practice democratic rules. Through their political weight, regional and countrywide unions of producer organizations can influence national politics in their sector. Government institutions are therefore encouraged to create a political environment that allows producer organizations to win their part in the market for their agricultural products.

What types of organizational forms among producers could be employed to coordinate activities with other parties in the value-chain through contracts? Cooperatives, producer associations, and producer groups could potentially be used in this capacity, though the legal issues behind such forms need to be clarified. How do these organizational forms vary by product? And, most importantly, can organizations be developed that are in the interests of those participating in them?

#### **4. THE CASE OF PIG PRODUCERS IN NORTHERN VIETNAM**

A case study in Hai Duong province in Northern Vietnam illustrates how institutional arrangements that build on collective action principles have enabled smallholder farmers to make a turnaround to overcome barriers to market participation. Surveys of selected respondents who are members of pig producer cooperatives indicated the viability of collective action in ensuring adequate and more efficient technical and institutional support for adoption of new technologies (e.g., crossbreeds and exotics), and for reducing transaction costs for accessing markets for inputs and services (e.g., collective buying of inputs and services via contracts with suppliers that ensure access to higher quality feeds at cheaper prices and sustainable supply), and for output markets (e.g., collective marketing of fattened pigs and piglets to regular buyers and some through contracts with feed companies and processors). More importantly for the latter, market prices of their outputs have also increased because of the guaranteed quality of inputs from input suppliers and the access to technical support services thereby creating a reputation for quality pigs from those producer cooperatives. Since collective action is practiced to provide bulking and bargaining services to producer members, market power by the members is enhanced as well as their access to more and higher priced outlets. In addition, cooperative members adhere to a standardized collective production process that ensures uniform quality of pigmeat produced and reduces production risks by synchronizing production plans among members. This is made possible through an intensive training component to build the technical and managerial skills of producer members so that they can efficiently deal with the technical and management requirements of the new technology. Linkages with input and service suppliers and output markets are also facilitated via a collective approach that reduces transaction costs to individual members.

Specifically, as a result of the collective action approaches adopted, production cost of farmers declined by 25-30% since diseases were effectively controlled and feed prices were cheaper being bought in bulk, selling price of pigs increased by 15-20% due to the better quality pigmeat (i.e., uniform and stable

quality). On the part of the pig buyers or collectors, their cost of collecting and grading pigs decreased by about 20%.

## FACILITATING FACTORS FOR EFFECTIVENESS

An assessment of the experience in Hai Duong point to a number of factors that facilitated the success of the cooperative arrangement established among pig producers. These are briefly discussed in the following sections.

### *Collective interest over individual interest*

The specialized cooperative model does not rely a lot on administrative structure; it aims to increase the competitiveness of products and households in the market. It is not considered as an economic unit but rather an organization to coordinate collective activities among farmers about production, inputs, output, and credit. The members of the cooperative are households, not individuals; hence, the interests of the cooperative are not important, but the interests of the members are the indicators for measuring the success of the cooperative. Cooperative members get benefits from the cooperative by their degree of participation in collective activities. For example, trading by the cooperative results in additional service fees divided among the members after subtracting the associated costs. The cooperative operates based on high-quality products resulting from a collective production process. The cooperative has a trademark that distinguishes it from other groups or entities.

### *Investing in capacity building through training to promote technology adoption*

Past experiences in many regions in Vietnam have shown the difficulty of promoting the adoption of new technology in the form of exotic breeds by smallholder households. Adoption of exotics breeds by larger households has instead been shown to be more successful during the past 10 years. However, given the appropriate technical inputs and capacity building, it was shown through the cooperative model in Hai Duong that transferring exotic pigs to medium and small households is feasible. This success comes from farmer linkage and a more proactive manner of building farmer skills in not just production but also in other areas of farm management. Farmers learn to become entrepreneurs, not just producers, hence building their ability to make strategic decisions about their production and marketing activities.

### *Facilitating linkage with input and service providers*

The cooperative and farmer groups signed contracts for buying processed animal feed and/or ingredients for processing their own animal feed, veterinary medicine, veterinary services, loans with input partners such as domestic companies, joint-venture companies, agencies, businessmen, etc. Some 90% of the input services of farmers are implemented by collective coordination, thus enabling them to reap benefits from price discounts due to bulk purchases, as well as the quality assurance that inputs purchased are what they are purported to be.

### *Coordination in standardized production and quality assurance*

Farmers cooperate to produce collectively and transfer advanced scientific and technological innovations to production. This is a solution to overcome some weak points when farmers supply a

large, sustainable quantity of products to markets. Effective coordination in production following collective production processes was key to achieving this.

*Facilitating linkage with output markets*

The cooperatives and farmer groups actively study markets, identify markets, and develop a stable relationship with slaughterhouses in Hanoi and Hai Phong. For example, cooperation with a Hanoi-based agricultural feed company to produce clean meat for the Hanoi market has been established.

*Promotes democracy in the locality*

Within the cooperative arrangement, farmers solved by themselves their problems within a framework of cooperation. Farmers really became owners of their own initiative and had democracy in their production activities. They developed an important voice in localities; local authorities could understand clearly their real demand through the representatives of cooperatives and production groups. Hence, they have developed a partnership with local authorities for the development and application of appropriate socioeconomic policies.

*Building a professional farmers' network*

With 200 members, a network of professional farmers has been established in the locality. The development of this network will motivate the accumulation of knowledge and experience in the production process of households, facilitating the development of their social capital. This network helped farmers improve their social position in the locality.

*Improving competitiveness of pig meat commodity chain*

The cooperative model has engendered ways to increase the competitiveness of the pig meat commodity chain in Hai Duong. Farmers' cooperation has decreased production costs, increased product quality, and created a stable source of high-quality products for markets. This model not only helped make farmers' production more stable but also helped output buyers such as processors have a stable source of products in both quantity and quality, thus increasing their competitiveness in markets. Bringing farmers together in a specialized cooperative model thus helped to promote contract agriculture in the pig meat commodity chain because both farmers and output buyers have a need to cooperate firmly to decrease costs and increase product quality.

*Facilitating investments by low and middle income households*

The cooperative model was established based on households having medium living standards and small investments. This model has good practical sense because the majority of the farmers in the Red River Delta and other regions in the country have the same levels of income, hence has potential for replicability in similar conditions elsewhere in the country. This model can help small-scale farmers integrate into markets and participate in economic integration.

*Promoting sustainable structural change in local economy*

By seeing the effectiveness of the cooperative model, farmers were encouraged to invest in pig breeding. The number of households that developed specialized husbandry collectively increased from 11 in 2000 to 250 in 2003, thereby accelerating the adoption of exotic pig breeding in the province. Moreover, through collective activities, households have improved their pig production such that income from pig husbandry increased on average from 20% to 30% as a part of total income of households. As such, pig husbandry became the main preoccupation and source of income of a lot of farmers in the area.

## ECONOMIC BENEFITS FROM PARTICIPATION IN COLLECTIVE ACTION

Economic benefits from participation in the collective action were identified by survey respondents and summarized in the following sections.

*Improved access to credit*

Members of cooperatives were able to benefit from collective negotiation of better terms i.e., higher loan sizes, no collateral (see Table 1).

Table 1 - Comparison of access to credit from banks between cooperative members and non-members.

	Farmers outside the cooperative	Farmers participating in the cooperative
Type of status in negotiation	Individual	Representative (committee of cooperative management)
Cost of obtaining credit	Opportunity cost of negotiation	Lower cost (in terms of time spent for negotiation)
Amount of capital and conditions for getting loans	< 10 million VND > 10 million VND but must provide collateral	20–30 million VND and do not have to provide collateral

Source of data: Survey of pig producers in Hai Duong, 2003.

*Scaling up of production*

Membership in cooperative also enabled the farmers to obtain higher returns from their pig breeding activities. This is due to larger scale of production, lower cost per unit of output (kg liveweight), resulting in higher profit per unit of output. As such, farmer-members were able to re-invest more of their earnings thereby facilitating the scaling up of their production (see Table 2).

Table 2 - Comparison of economic benefits between traditional pig breeding and cooperative pig breeding (for the same farmer before and after one year of participation in a cooperative)

Criteria	Traditional pig breeding	Pig breeding in a cooperative
Scale of breeding (head per household per year)	4–5	178
Production cost per 1 kg of liveweight meat (VND)	10,500	9,500
Price per 1 kg of liveweight meat (VND)	11,000	12,000
Profit per 1 kg of liveweight meat (VND)	500	2,500
Investment per household per year (VND)	3,675,000	135,280,000
Profit from pig breeding per household (million VND)	0.175	35.6

Note: prices as of June 2003. Exchange rate: 1US\$ = 14000 Vietnamese Dong.

Source of data: Survey of pig producers in Hai Duong, 2003.

#### *Higher economic gains from pig raising*

Farmers obtained higher economic gains from pig raising. These include gains from collective purchase of processed feed and other feed ingredients, reduction in disease risk, collective marketing, and share of cooperative income (see Table 3).

Table 3 - Summary of income from cooperative activities of Nam Sach livestock cooperative after 9 months of operation.

	Cooperative (VND)
Gains from collective action in buying industry-processed feed	76,000,000
Gains from collective action in buying maize and rice bran	38,000,000
Gains from collective action in buying piglets	3,500,000
Gains from collective action in buying veterinary medicine	9,000,000
Gains from collective action in vaccination	6,700,000
Gains from reducing the risk of epidemic disease (loss of cooperators' pig: 17,000 VND, loss of non-cooperator's pig: 36,000 VND)	55,000,000
Gains from collective selling	52,000,000
Total income from collective action managed by cooperative	<b>240,200,000</b>
Total income from collective action managed directly by farmers (benefits from cheap purchases, low disease rate, high prices, higher productivity, etc.)	<b>300,000,000</b>
Total benefit from cooperative activities	<b>540,200,000</b>

Exchange rate: 1 US\$ = 14000 Vietnamese Dong

Source of data: Survey of pig producers in Hai Duong, 2003.

#### *Increased contribution of pig breeding to household income*

As a result of cooperative membership that facilitated collective action, the contribution of pig breeding to total household income increased (see Table 4).

Table 4 - Cost accounting of households in cooperative

1. Land area for crop production (ha)	0.25
2. Income structure (%):	100.0
From animal production	70.0
From crop production and other activities	30.0
3. Income from pig breeding (million VND)	35.6
4. Total income/ household (million VND)	50,857

Source of data: Survey of pig producers in Hai Duong, 2004.

### SOME GENERIC LESSONS

Some key generic lessons from the experience in North Vietnam are worthwhile summarizing here. Specifically, the collective action strategy has enabled the achievement of outcomes that contributed to overcoming barriers to market participation by smallholder pig producers. These outcomes include the following:

#### *Building up and coordinating the collective production process*

For a specialized agricultural cooperative, the collective production process is a vital factor because it allows the members to produce products with the same quality according to market demand (the same kind of products with the same quality). The collective process also facilitates the collective buying of inputs and leads to collective product selling (in the same market).

#### *Collective input activities lowered transaction costs of input procurement*

Input activities play a decisive role in reducing production expenses because collective action can take advantage of economies of scale and ensure a stable supply for cooperative members. In addition, linkage among members helps them access banks (for loans) more easily at a low cost.

#### *Collective output activities improved output prices*

By adhering to a common production process, cooperative members were able to obtain products having a similar quality. This helps the members easily create a linkage with output buyers and facilitate more remunerative supplier contracts. Households, through their cooperative, can create a reputation and brand their product, build a marketing strategy, register the geographic origin, and sign commercial contracts with local and exporting companies. Moreover, cooperatives can contract with processing firms.

#### *Increasing the role of farmers by developing a voluntary agricultural extension network*

Specialized cooperatives with specialized members have created a specialized farmer community according to the industry. This helps to develop skills and knowledge in the community. On the other hand, these cooperatives are entrusted with agricultural extension activities that will foster rapid technology transfer.

## COLLECTIVE ACTION AND CONTRACT FARMING

Preliminary results from analysis of survey data of an ongoing study on contract farming of pigs in four provinces of Northern Vietnam show that collective action arrangements like cooperatives for production and marketing figure more frequently among smallholder farmers engaged in informal contractual arrangements than in formal contracts nor among independent farmers. Of total respondents with informal contracts, about two-thirds are members of a cooperative, while only one-third of those with either formal contracts or no contracts are members of a cooperative. Formal contracts are here defined as written contracts with specific provisions for compliance by both contractor and contractees and the attendant penalties in case of non-compliance. Informal contracts on the other hand are usually unwritten and generally has more flexible terms without any predefined penalties for non-compliance. This observation suggests that smallholders would engage in a combination of institutional arrangements involving some form of vertical integration and collective action (horizontal integration). Collective action is more likely to occur among farmers who have not committed themselves to become fully vertically integrated. It is still an open question as to why among those farmers who have not engaged in any contractual arrangement, that collective action engagement has neither been widely observed. This is subject to more detailed investigation.

## 5. CONCLUSIONS

The case presented on the experience of pig producers in N. Vietnam illustrates that institutional solutions to address barriers to market access by smallholders exist. Collective action approaches incorporated in these institutional arrangements such as cooperatives or farmer groups can facilitate the reduction of transaction costs in production and marketing.

As long as smallholder farmers remain isolated or organized in small groups, they will have limited capacity for investment, marketing or adoption of new technology. Limited access to credit and information and their vulnerability to risk will effectively condemn them to remain marginal and poor farmers. Linkages within farmer communities and between farmer groups and other stakeholders are what provide more extensive and dynamic opportunities for adding value. Specifically, effective institutional arrangements can reduce information asymmetries, minimize transaction costs, reduce transport and communication costs, coordinate policies, and address non-economic barriers. Collective action approaches to help farmers overcome the transaction costs and other barriers to market participation will need to be supported via enabling policies by the government for them to flourish and be widely practiced for the benefit of those who need them most.

It is unlikely that countervailing power can be achieved in one grand move to get large numbers of producers to bargain collectively for inputs and for the sale of commodities. Rather, greater market power is likely to be achieved, by bargaining groups of relatively modest size and comprised of producers committed to collective marketing and committed to producing commodities at a quality level desired by processors and on a schedule consistent with the purchaser's capacity. To facilitate the formation and operation of such collective marketing (and input supply) groups, enabling legislation at the national level is needed to assure that the regulatory framework is in place to make this happen.

## REFERENCES

- Balland , J. M., and Plateau, J. P. 1996. Halting the degradation of natural resources: is there a role for rural communities? FAO, Rome.
- Chowdhury, S., Negassa, A., and Torero, M. 2005. Market institutions: enhancing the value of rural-urban links. FNCD Discussion Paper 195, MTD Discussion Paper 89. IFPRI, Washington, D. C.
- Costales, A., Delgado, C., Catelo, M. A. Lapar, M. L., Tiongco, M., Ehui, S., and Bautista, Z. 2006. Scale and access issues affecting hog producers in an expanding peri-urban market: Southern Luzon, Philippines. IFPRI Research Report, IFPRI, Washington D. C. Forthcoming.
- De Janvry, A., Fafchamps, M., and Sadoulet, E. 1991. Peasant household behavior with missing markets: some paradoxes explained. *The Economic Journal*, vol. 101, November: 1400-1417.
- Eggertson, T. 1990. *Economic behavior and institutions*. Cambridge Survey of Economic Literature. Cambridge: Cambridge University Press.
- Goetz, S. J. 1992. A selectivity model of household food marketing behavior in sub-Saharan Africa. *American Journal of Agricultural Economics*, vol. 74, May: 444-452.
- Goletti, F. 2005. Agricultural commercialization, value chains, and poverty reduction. Making Markets Work Better for the Poor, ADB/DfID. Agrifood Consulting International. 109 pp.
- Haddad, L. and Zeller, M. 1997. Can social security programs do more with less? General issues for Southern Africa. In Haddad, L. (ed.): *Achieving Food Security in Southern Africa: New Challenges, New Opportunities*. Washington, D. C: IFPRI.
- Hobbs, J. E. 1997. Adjustment policies, peasant household resources allocation and deforestation in Northern Zambia: an overview and some policy conclusions. Forum for Development Studies No. 1.
- Jaffee, S. and Morton, J. 1995. Private sector high-value food processing and marketing: a synthesis of African experience. In Jaffee, S. and Morton, J. (eds.). *Marketing Africa's High-Value Foods: Comparative Experiences of an Emergent Private Sector*. Dubuque: Kendall/Hunt Publishing Company.
- Key, N., Sadoulet, E., and de Janvry, A. 2000. Transaction costs and agricultural household supply response. *American Journal of Agricultural Economics*, vol. 82, May: 245-259.
- Mearns, R. 1995. Community, collective action, and common grazing. Paper presented at the Fifth Common Property Conference: Reinventing the Commons, 24-28 May, Bodo.
- Mitchell, J. C. 1973. Networks, norms, and institutions. In: Boissevain, J. and Mitchell, J. C. (eds.). *Network Analysis Studies in Human Interactions*. The Hague: Mouton and Co., pp. 15-35.

Ostrom, E. 1990. *Governing the commons: the evolution of institutions for collective action*. Cambridge: Cambridge University Press.

Reardon, T. and Berdegue, J. 2002. The rapid rise of supermarkets in Latin America: challenges and opportunities for development. *Development Policy Review*, vol. 22, no. 5: 525-556

Shepherd, A. 1997. *Market information services: theory and practice*. Rome: FAO.

Singleton, S. and Taylor, M. 1992. Common property, collective action, and community. *Journal of Theoretical Politics*, vol. 4, no. 3: 309-324.

Staatz, J. 1987. Farmers' incentives to take collective action via cooperatives: a transaction cost approach. In: Royer, J. (ed.). *Cooperative Theory: New Approaches*. Washington, D. C.: U. S. Department of Agriculture Cooperative Service.

Swallow, K. 2000. Collective action and the intensification of cattle feeding techniques: a case study in Kenya's Coast Province. CAPRI Working Paper No. 10. IFPRI, Washington, D. C.

Vu Trong Binh, Trin Van Tuan, and Le Viet Ly. 2004. Institutional innovations for improving small households' participation in livestock production: the case of pig producer cooperatives in Hai Duong Province, N. Vietnam. ILRI, Los Baños, Laguna, Philippines. 48 pp.

Williamson, O. E. 1979. The transaction costs economics: the governance of contractual relations. *Journal of Law and Economics*, vol. 22, October: 233-261.

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