The pork value chain in Vietnam: emerging trends and implications for smallholder competitiveness and chain efficiency

Key points

- Production response to increasing demand for pork in Vietnam has led to the emergence of more complex pork value chains that involve new and different types of actors. Recent developments in agri-food restructuring also bring modern retail outlets to prominence.

- Smallholders remain the dominant suppliers of pork in traditional market outlets that are currently the most preferred outlets for fresh meat. However, this dominance may be weakened by current government policies that support the development of intensive industrial farms.\(^1\)

- Emerging trends also suggest increasing demand for food safety, particularly in urban centres and among high-income consumers that favour modern retail outlets.\(^2\)

- Vietnamese consumers have a strong preference for fresh, unchilled pork. Their personal relationships with traditional meat retailers built through repeated transactions over time also provide informal guarantees of quality and safety of pork.

- Upgrading of the pork supply chain will likely benefit smallholder producers in the future. Upgrading of slaughter facilities and capacities as well as traditional market facilities will ensure hygienic practices and the delivery of good quality, safe pork. This will ensure that pork from smallholder producers meets evolving consumer demand.

- Supporting services such as extension, veterinary and credit are available but do not effectively reach household pig producers\(^3\), i.e. at least three-fourths do not receive extension services, one-third veterinary services, and four-fifths credit. Where these services are difficult to access, alternative private providers such as feed and veterinary drug distributors, community animal health workers, non-government organizations and farmer cooperatives can be accessed by a limited number of smallholder producers.

- Smallholder pig producers capture about half of the value added of pork that passes through pork value chains where they are participating. This represents a significant source of livelihood for them, and an important contribution to the achievement of broader development objectives of poverty alleviation and rural development. Hence, it is imperative to sustain the viable inclusion of smallholders in the emerging pork value chains.

Introduction

Demand per capita for pork is increasing and will continue to rise with higher incomes, and with the proportion of pork in total meat consumption rising but at declining rate (i.e. about 3% annually, on average\(^4\)). This suggests some change in the nature of demand, from just quantity to demand for quality attributes. Strong preference by consumers for fresh, unchilled meat supplied by traditional market outlets presents market opportunities for smallholder pig producers\(^5\); strong preference for fresh pork also provides natural trade protection from imports.\(^6\) On the other hand, food safety issues, such as zoonotic food-borne and water-borne diseases that emanate from pork supply chains, need to be better understood for appropriate action in the context of smallholder participation in these chains.

The emergence and growth of various market actors have also induced changes in pork value chains, providing smallholders with opportunities to participate in higher-value chains linked with urban markets and modern...
outlets. On the other hand, smallholders face challenges in their ability to compete with larger producers who have emerged recently to take advantage of such opportunities, and to meet the more stringent requirements of the emerging pork value chains.

Results

**Mapping the pork value chain**

Pork supply chains in lowland areas of rural regions as well as those in urban and peri-urban regions are generally longer and more complex and include a range of actors, although larger ones are more dominant. In these chains, trade of live pigs occurs within provinces and across provinces or regions to supply large urban markets. Pigs from smallholder producers linked in this chain all go through small pig traders/butchers to supply traditional meat markets, e.g. 80–90% of pigs go to permanent open markets and 10–20% to temporary markets. Slaughter facilities operated by the government or private operators may be available and accessible in urban centres; the conditions of facilities and services provided are variable. Government policy requires that all pigs be slaughtered in these facilities but the incidence of backyard slaughtering is still relatively high among small pig traders/butchers. At least half of all meat supplied by pig traders/butchers does not go through the formal slaughter facilities but moves directly from farms to retail market outlets, with pig traders/butchers coordinating this product flow.

In contrast, pork supply chains in upland areas are generally shorter and simpler and include more small-scale actors. Pig trade is usually localized, with live pigs being sold where they are produced. A distinct characteristic of this chain is the gap between supply and demand for pig stock that is filled by importing piglets from lowland areas. No large producers are linked to this chain. Small producers sell most of their pigs to small butchers (70% of total live pigs) and some (30%) to small traders supplying live pigs mostly to district centres. Unlike in lowland areas, there are no slaughter facilities in upland areas so most slaughtering is done at the backyard of pig traders/butchers.

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**Box 1: Background on the pork value chain in Vietnam**

Pig production has increased in response to the rise in demand, at the rate of about 8% annually, on average, during the last decade. Along with rise in production, the number and types of actors in the pork supply chain have also increased. The number of industrial feed producers has grown in response to increasing demand for pig food; there are currently 225 industrial feed producers in Vietnam and 65–70% of feed volume is from foreign-owned enterprises. The number of pig traders, butchers and retailers has also risen in line with demand growth. With increasing demand, especially in urban areas, pig supply has evolved from intra-village or intra-province chains to longer and more complex linkages involving actors such as modern pig producers and retailing outlets. Recent estimates of modern retailers indicate there are about 115 supermarkets, hypermarkets and wholesale centres; 100 minimarts; and 25 shopping centres in Vietnam.

At the production end, at least 80% of annual production is still contributed by household-based pig producers (i.e. those with less than 10 heads of pigs). Pig farms with more than 100 heads of pigs at any given time are officially registered and collectively account for the remaining share, i.e. about 20% of total annual production.

**Box 2: Data sources and methods**

A participatory rural appraisal was conducted to obtain an overview of pig value chains in Vietnam. Market actor surveys were then implemented in three representative sites in three provinces located in three regions: Ha Tay in the North, Dak Lak in the Central, and Dong Nai in the South. In each province, a stakeholder consultation workshop was organized with participation of various market actors in the pork supply chain, namely, feed suppliers (wholesalers and retailers), piglet traders, live pig traders, butchers/slaughterhouse operators, carcass traders, pork retailers and meat processors. These workshops aimed to map the pig value chains; identify flows of information on product, price and quality; estimate the market shares of each actor (input and output); and assess the importance and relative power of each actor in the chains. Semi-structured interviews of 47 different types of market actors from these three provinces were then carried out to collect more detailed information including data on input and output volumes, sources and outlets of products and information, preferred attributes of inputs and outputs, costs and constraints faced. Information collected on the pork value chain in Nghe An Province, one of the survey sites in the project, was also used to complement the findings from the market actor surveys.
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requirements by the customers at the retail end of the market, or the carcass wholesalers that distribute carcasses to various retail outlets in large permanent open markets. This enables the pig and carcass traders to perform grading/sorting functions and direct supply to the appropriate market outlets based on quality information received from the markets. Pig producers usually receive quality information only at the time of sale negotiation with traders hence have limited use of such information except in determining an acceptable price offer in combination with other considerations.

Figure 1: Pork value chain in lowland areas

It is not uncommon in many parts of Vietnam, particularly in rural and some peri-urban areas, that one market actor performs multiple functions. For example, the same pig trader may buy live pigs, trade some of them with other pig traders, slaughter one or two pigs and then sell part of the carcass to meat retailers and the rest directly to consumers on retail basis. This reduces transaction cost by reducing the number of intermediaries from farm to market in smallholder pig value chains thereby allowing quick delivery of fresh pork to markets.

Governance and power relations in the smallholder pig value chain

Chain actors in the output market or the dominant actors that move the product from the farm to the output market (e.g. large-scale pig and carcass traders) are important sources and likely influencers of price information along the smallholder pig value chain (Figure 3). These actors influence prices that filter down to the pig producers, particularly the small producers who are generally price takers in the market for live pigs. Large-scale pig and carcass traders have better access to information on pig prices (both live and carcass) and the supply requirements from key product markets such as urban cities, regional trading hubs for live pigs, and export markets. Thus, they also play a coordinating role in moving supply from the farm to the end markets, a function that gives them relative power over other actors in the chain.

Quality information (e.g. carcass weight and liveweight:lean meat ratio) also filters down to the farm via the same pathway, with the same actors playing the key roles in coordinating product movement according to quality information received. Pig and carcass traders generally have better access to quality

Distribution of benefits

The estimated value added generated in pork value chains that household-based pig producers participate in is 11,700 VND per kilogram liveweight (or approximately US$ 0.62), based on a typical chain involving feed suppliers, pig producers, butchers, meat retailers and consumers (Figure 4). Pig producers capture the largest share of value added (53%) followed by feed suppliers (20%), meat retailers (11%) and butchers (15%).

Pig producers across different scales of household-based pig production also receive about half to two-thirds of the pork retail price (based on the average retail price in 2007, see Figure 5). Thus, it appears that pig producers are being compensated at about the same level as their value added contribution to the chain; this relative share increases with scale.

Figure 1: Pork value chain in lowland areas

Figure 2: Flow of Pigs in Upland Areas

Figure 3: Flow of Pigs in Upland Areas

Figure 4: Distribution of value added in smallholder pork value chain in Vietnam (based on the exchange rate of US$1=19000VND).
Conclusions

- Smallholder pig producers have the potential to capitalize on their comparative advantage to supply pork with the preferred attributes of being fresh or warm as opposed to chilled or frozen meats sold in supermarkets.

- Pig traders are dominant players in the pork value chain in terms of their strong influence on prices and the coordination role that they perform to direct supply of pigs and carcasses in accordance with market demand. They are also service providers to smallholder producers.

- Quality control is based on trust. Personal relationships with meat retailers in traditional markets as opposed to the impersonal nature of service in modern retail outlets build trust over time and can supplant any formal certification and labelling that may be found in modern retail outlets.

- The upgrading of slaughterhouse facilities and capacities to improve the level of hygiene in slaughter practices together with upgrading of traditional market facilities in traditional retail outlets for meat will help allay consumer fears and remove their preconceived prejudice about the level of safety and risk associated with pork sold in traditional market outlets.

- Smallholder producers capture a significant share of value added in the pork value chains in which they participate, highlighting the importance of their inclusion in these chains to sustaining their livelihoods from pig production. This contribution is also significant in the context of pro-poor pig sector development in particular and broader rural development in general.

Implications for smallholder competitiveness and improved chain performance

- Policy interventions to enhance smallholder participation in the emerging pork value chains, given their relative importance in supply as well as in employment generation, will need to be explored. These may include policies to develop effective livestock services delivery such as extension; veterinary services; good quality genetic material for improved breeding practices and strategies tailored to smallholder conditions; reliable and timely market information; feed quality labelling or certification; and efficient access to affordable credit.

- Strategies for collective action and other forms of organization that will reduce transaction costs of input procurement and output marketing will need to form part of the set of strategies for smallholder competitiveness and development of efficient and safe pork supply chains. Farmer organizations such as groups, cooperatives and associations could potentially reduce the coordination problems in dealing with individual producers. They could also facilitate building a collective reputation that will potentially generate price premia in the market, or reduce the transaction cost due to lack of credible (and affordable) certification mechanisms that are suited to smallholder conditions. Supportive policies to foster an enabling environment to propagate these organizational forms are needed.

- The private sector will be an important partner in enhancing smallholder potential for sustained inclusion in the pork value chain, by facilitating technology transfer that engenders productivity enhancement by smallholders, and through capacity-building to support technology adoption. Private-sector partners can also open up markets for smallholders that otherwise would not be accessible to them from lack of market information and/or market clout. An enabling environment that engenders the right incentives for private-sector engagement will be necessary in this regard.

This research brief was written by Lucy Lapar, Nguyen Ngoc Toan and Steve Staal and is based on work conducted by the project, Improving the competitiveness of pig producers in an adjusting Vietnam market which was funded by the Australian Centre for International Agricultural Research (ACIAR). The project was led by the International Livestock Research Institute (ILRI), with the collaboration of the following partners: Centre for Agricultural Policy – Institute of Policy and Strategy for Agricultural and Rural Development (CAP-IPSARD), the International Food Policy Research Institute (IFPRI), Oxfam and the University of Queensland. For more information contact Lucy Lapar, (l.lapar@cgiar.org) or visit the project website (http://www.vietpigs.com.vn). ©2010: ILRI encourages re-use of the content of this brief, with appropriate acknowledgement.

7 Farrow-to-finish system is full-cycle slaughter hog production; grow-to-finish system is pig fattening operation.