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Project Brief

Project on Improving the Competitiveness of Pig Producers in Vietnam

Demand for pork by Vietnamese consumers: Implications for pro-poor livestock policy and development agenda in Vietnam

Key points

- Pork is the most widely consumed meat product in Vietnam and consumer preference for fresh pork provides a degree of natural protection against imports. Future increases in consumer incomes are expected to lead to increased demand for pork and other meat products and diversification of consumption of meat towards meat and poultry.
- Open wet markets are the preferred channels for daily meat shopping. These outlets are closely linked to pork supply chains involving smallholders, thus their preference by consumers favours continued smallholder participation.
- Pork consumers are increasingly concerned about pig diseases, chemical residues and unhygienic conditions at the point of sale. In response to outbreaks of pig diseases, consumers often reduce or stop pork consumption and shift to alternative meat products or to outlets perceived to be safer.
- In the absence of effective food safety surveillance systems in Vietnam, modern outlets of pork purchase are not necessarily safer than open wet markets. The adoption of risk-mitigating practices in food preparation by Vietnamese consumers lowers the risks from hazards in pork supply chains.
- Despite increased demand for pork, there is still a shortfall in the supply of appropriate breeding pigs such as crosses from indigenous and Western gilts and boar semen, especially at small and medium farms. Thus, a niche market exists for smallholder producers supplying indigenous and crossbred pigs.
- Market opportunities associated with growing demand and consumer preferences can be exploited by smallholder pig raisers to increase incomes from pig raising. An important contribution to inform the policy debate would be empirical research on viable technological, institutional and policy options for enhancing competitiveness to facilitate inclusion of smallholders in the supply chain for fresh meat.

Introduction

Along with rapid economic growth and increasing affluence, Vietnamese dietary patterns are shifting from predominantly starch-based diets to those with relatively high proportions of meat, fruits and vegetables. Pork is the most widely consumed meat product in Vietnamese cuisine and has consistently accounted for a significantly high proportion of meat consumption. The growing demand for pork and other meat products undoubtedly provides an opportunity for domestic livestock production, which has experienced steady growth in the last decade. Challenges arise as to how current production systems, most of which are household-based, evolve to meet this increasing and more differentiated demand.

In this context, smallholder pig farmers might encounter constraints in meeting the requirements of supply chains that link them to modern outlets and serve more affluent and demanding consumers. Smallholders may also face difficulties in competing with larger domestic and foreign rivals and in the transition to large and more commercialized farms. Understanding the patterns of change in consumer income and demand and their future implications would be important in guiding Vietnam's pro-poor livestock policy and development agenda.

Box 1: Background on demand for pork in Vietnam

With higher income and thus higher food expenditure, demand for pork has been increasing substantially in the past several years. Results from Vietnam Household Living Standard Surveys show that the volume of meat consumed rose by about 2.7% between 2002 and 2008, with the period up to 2006 registering a growth rate of over 7%. The proportion of total food expenditure spent on meat rose from 20% to 22% during the same period.

The increase in pork demand has translated into rapid growth of pig population and sale (Table 1). From 2001 to 2008, pig population increased by 4% annually and the volume of pigs sold increased by about 9% annually. The increase in demand is perhaps even higher since there is a growing trend towards import of pork. According to Mr Nguyen Dang Vang, the deputy head of the Science, Technology and Environment Committee of the Congress and former head of the Department of Livestock production (Ministry of Agriculture and Rural Development), meat imports in 2008 accounted for 5% of total meat consumption.

Despite such rapid growth, pork consumption per capita in Vietnam remains low. Tung et al. (2005) report that per capita consumption of pork in Vietnam in 2003 was around 20 kg/year. Recent estimates based on consumer survey data in six provinces and two urban centres show that pork consumption was about 26 kg/person in 2008, a 30% increase from the level in 2003 (ILRI 2009). Thus, there is a huge scope for future increases in supply as long as economic growth can sustain higher pork demand.

Box 2: Data sources and methods

To investigate the pattern of demand for pork and other animal source foods, a consumer survey of 1650 households was carried out in urban centres of Hanoi and Ho Chi Minh city, and in six provinces, namely, Ha Tay in the Red River Delta; Phu Tho in the Northern Uplands; Nghe An in the Northern Central; Daklak in the Central Highlands; Dong Nai in the South East; and Tien Giang in the Mekong River Delta. The survey sites represent the geographical diversity in Vietnam. The survey was carried out in November-December 2007 (for Hanoi and Ho Chi Minh City) and March-May 2008 (for the six provinces).

Seven types of animal source foods were considered:

- fresh pork;
- other pork (frozen and processed);
- poultry (chicken and duck);
- eggs (chicken and duck);
- beef and carabeef;
- fish; and
- seafood.

Pig genotypes, and demand and supply of breeding pigs were assessed by participatory rapid appraisal and key informant interviews.

Descriptive and econometric analyses were used to characterize meat consumption and shopping patterns, estimate expenditure elasticity of selected meat products, and assess the market conditions for breeding pigs.

Table 1: *Pig production and sale in Vietnam (2001 to 2008)*

	2001	2002	2003	2004	2005	2006	2007	2008	Average
Pig population (1000 heads)	21,800	23,170	24,885	26,144	27,435	26,855	26,561	26,702	25,444
Growth rate (%)	8.0	6.3	7.4	5.1	4.9	-2.1	-1.1	0.5	4.0
Pig sale (1000 tons)	1515	1654	1795	2012	2288	2505	2663	2771	2150
Growth rate (%)	6.9	9.1	8.6	12.1	13.7	9.5	6.3	4.1	8.8

Source: General Statistics Office website

Results

Meat consumption patterns

Meat consumption has been steadily increasing in the last 10 years, mainly due to growth in consumer incomes. Almost all surveyed households purchased pork, which accounted for around 40% of their expenditure on meat, followed by fish, poultry and beef. The proportion of pork consumed was fairly invariant across expenditure quintiles in urban areas. In rural areas, the share of household expenditure on pork was slightly higher among higher-income than low-income consumers. Form (fat content), colour, consistency and smell were the product attributes that consumers considered as most important when purchasing pork and other types of meat.

Consumer preference for different attributes of pork

Pork is the most popular type of meat and is consumed widely by Vietnamese households (Figure 1). Future increases in consumer incomes are expected to lead to a significant rise in consumer demand for pork and diversification of meat consumption to include seafood and poultry (Figures 1 and 2).

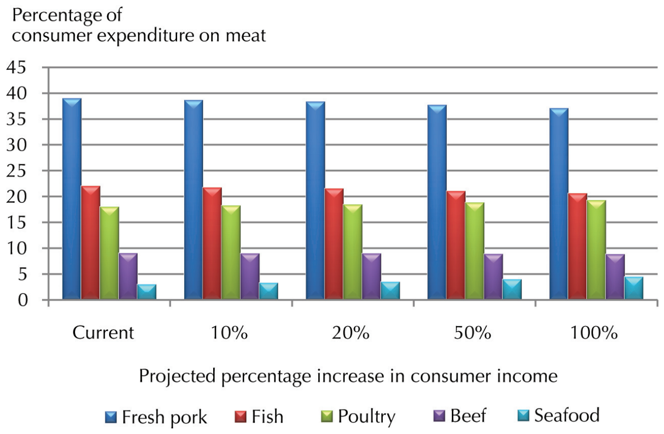

Figure 1: *Projected expenditure on meat products based on scenarios of percentage increases in consumer income.*

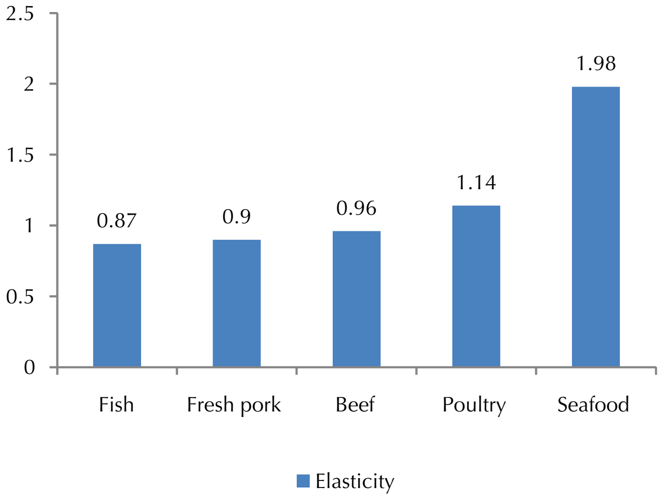

Figure 2: *Expenditure elasticity of selected meat products.*

Freshness was the most preferred attribute of pork and fresh pork was most commonly purchased. There was also a strong preference towards lean pork (Figure 3). Pork from black indigenous pigs was often perceived to be of better taste and quality, especially in the North, though many consumers cannot distinguish between pork of different breeds.

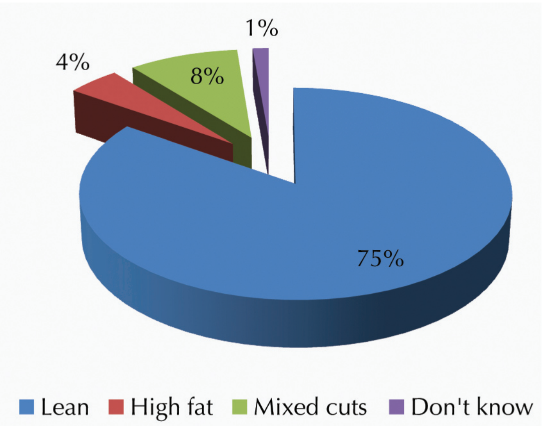

Figure 3: *Percentage of consumers preferring pork of different fat contents.*

Choice of market outlet

The choice of market outlets was conditioned by factors related to consumers' mobility and level of affluence, time budgets, concerns about food safety and hygiene, proximity to market outlets, and geographical location. This captures the effects of income differences, traditional marketing practices, and prevailing market infrastructure.

Despite the expansion of modern retail outlets in big cities, traditional outlets ranging from temporary neighbourhood stalls to permanent open structures remain the preferred shopping channels for fresh pork for most urban consumers (Figure 4). On the other hand, there is an apparent trend towards use of modern retail outlets younger, more affluent consumers and those who opted to live farther away from the city centres.

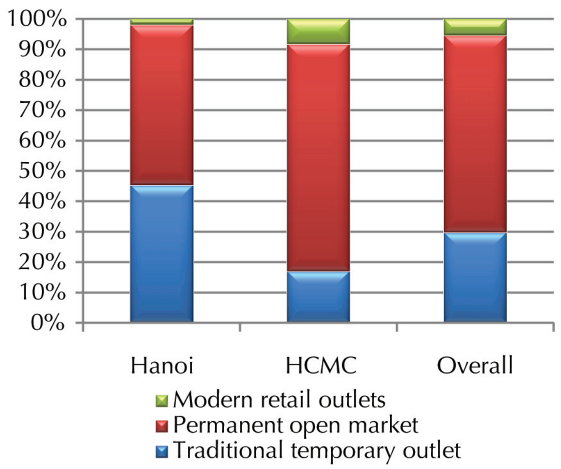

Figure 4: *Percentage of urban consumer households preferring different market outlets.*

Food safety

Consumers are increasingly concerned about food safety; the main issues of concern are pig diseases, chemical residues, and unhygienic conditions at the point of sale. In response to outbreaks of pig diseases, most consumers stopped or reduced their consumption of pork, substituted pork with other alternatives, or shifted to pork outlets they perceived to be safer. Only a fraction of pork buyers did not change their behaviour.

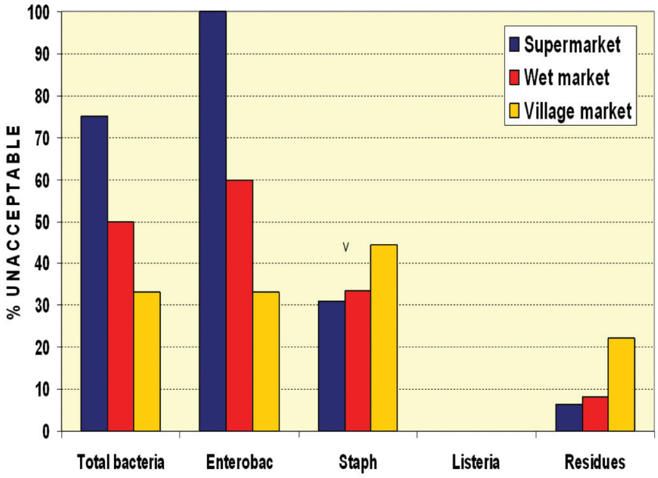

Figure 5: *Percentage of pork samples with unacceptable levels of harmful bacteria. Enterobac = Enterobacteria; Staph = Staphylococcus.*

However, in the context of developing countries with poor food safety surveillance like Vietnam, the perceived faith in supermarkets as safer food outlets might be misguided. Risk assessment of pork supply chains revealed that levels of bio-hazards (measured as counts of harmful bacteria) in pork sold in supermarkets were significantly higher than those in pork from traditional wet markets in peri-urban Hanoi (Figure 5). However, public health risks were found to be low due to consumers' adoption of risk-mitigating practices such as minimizing the interval between purchasing and cooking meat.

Supply of indigenous breeding pigs

The rise in pork consumption has resulted in growing demand for piglets and, consequently, for replacement gilts and boar semen. The Government of Vietnam has attempted to disseminate high-yielding improved breeds through development programs but the rate of adoption and productivity gains have not been as expected.

There are still shortfalls in the distribution of particular types of gilts and boar semen in different areas. For example, there is insufficient supply of indigenous gilts and Western boar semen in northern and central remote regions and of Western gilts in other areas.

Unhygienic and uncontrolled breeding practices have resulted in low quality of breeding pigs. The prevailing lack of indigenous gilts and documented consumer preference for pork from indigenous pigs provide a niche market for smallholders who can supply indigenous breeding pigs.

Conclusions

- There is increasing demand for pork and other meat products, which smallholder pig keepers can exploit to their advantage through participation in supply chains linked with temporary and permanent open markets, given consumer preference for fresh meats and traditional outlets.
- The quality and safety of pork and other meats are emerging as important concerns among Vietnamese consumers, particularly those in urban areas. Modern market outlets are perceived as safer than traditional wet markets, even though the latter remain the predominantly preferred outlet for fresh meats in general. However, due to the lack of an effective food safety surveillance system, public health risks associated with modern market channels may not necessarily be lower.
- The shortage of breeding pigs, indigenous and Western gilts, and boar semen presents a niche market which can be exploited by smallholder pig raisers by supplying indigenous and possibly cross-bred gilts.

Implications for pro-poor policy and development interventions

- Growing demand for pork and other meat provides opportunities for smallholder pig farmers to earn income and expand their scale of production. The question is: Which viable options are accessible to smallholder pig raisers in order to enhance their competitiveness and take advantage of these opportunities? Technological, institutional and policy interventions that are appropriate to smallholder context must be considered.
- A niche market for indigenous pigs and replacement gilts appears viable for smallholder pig raisers to exploit, given the shortage of breeding pigs in various areas. Policies and institutions to preserve indigenous genotypes and supply indigenous breeding pigs are necessary.
- In the near future, consumer preference for fresh pork and traditional meat market outlets will facilitate and likely sustain smallholder inclusion in pork supply chains. As pig disease and food safety are becoming increasingly important to consumers, and as food safety surveillance in modern outlets is strengthened, smallholder participation in pork supply chains may be compromised unless better production and disease management practices are applied.

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