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## Key Findings

- Conventional HPAI control strategies pose incentive problems and significant long term fiscal obligations.
- As a form of product quality, HPAI safety can be promoted from the demand side, enlisting private agency to improve biosafety and increase value to both consumers and producers.
- Initial results from Vietnam consumer surveys reveal significant concern about food safety and a price premium that could finance HPAI risk reduction and higher producer incomes.

## Controlling Avian Flu and Protecting People's Livelihoods in the Mekong Region

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## HPAI Control from a Demand Side Perspective

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Because HPAI represents a critical public health concern, responses to disease outbreaks countries have generally been led by swift and determined government interventions. Moreover, most intervention and control strategies have been targeted to the supply side of the market, including culling, banning live bird and even meat sales, and mandating changes in husbandry practices. These measures have had varying success, in part because of uneven application and because such command and control approaches do not take full account of the roles of incentives and other private agencies in the food supply. Beyond this, such approaches rely on public resources and institutional capacity, and thus may be difficult to sustain for extended periods, particularly in cases where HPAI becomes endemic.

With these considerations in mind, it is reasonable to examine what kind of market-oriented approaches to HPAI risk management could be developed. From that perspective, this study of the PPLPI examines how the demand side of the poultry market can play a constructive role in reducing risk. To the extent that consumers care about and are willing to pay for certified HPAI-free poultry, there may exist options for private finance of more bio-secure and safe poultry supply chains.

In a pilot effort to ascertain the feasibility of such systems, we are conducting focused market surveys in HPAI epicenter countries of the Mekong sub-region. Early evidence from Viet Nam, reported below, indicates that demand side approaches to reducing disease risk should be more actively investigated.

## Overview of the Hanoi Consumer Survey

Prices are the ultimate determinates of value in markets, and they also contain essential information about scarcity, quality, and bargaining power. All these considerations are essential for actual and potential market participants, and a better understanding of the structure and dynamics of market prices

can likewise improve their economic effectiveness. To support research on livestock value chains, consumer preferences, product quality, and price uncertainty, we conducted a poultry market consumer survey in Hanoi, Viet Nam. The survey is more extensively documented elsewhere (Roland-Holst, Chadwick, Ifft, and Reed: 2007), and we only summarize its general structure and selected findings here.

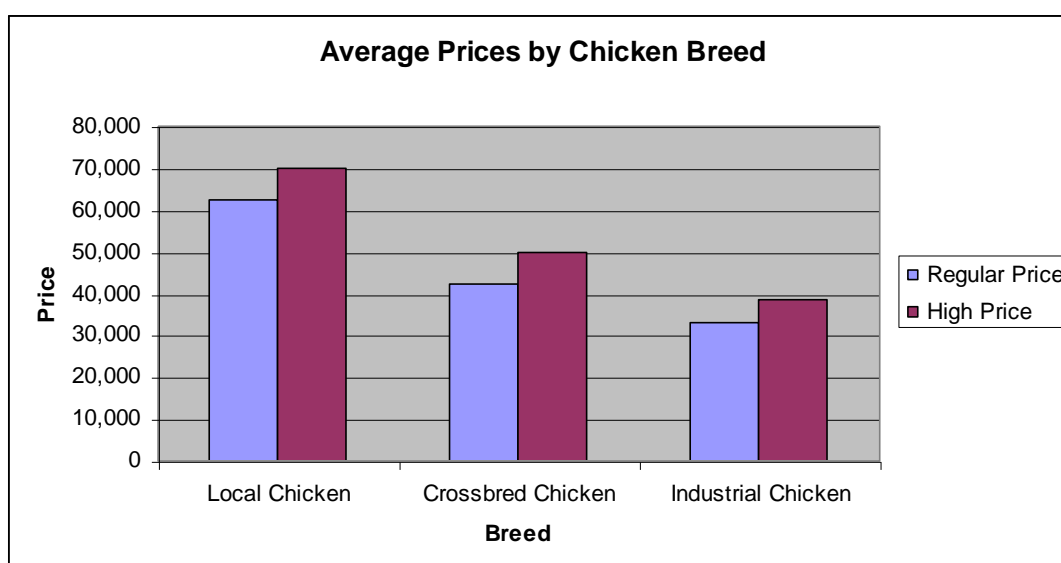
The Hanoi consumer survey had two main objectives. The first was to identify current shopping habits and preferences of Hanoi residents, related to household food consumption generally, and chicken and other livestock products in particular. The second objective was to gauge consumer interest in health-certified chicken. The survey gives insight into weekly spending on livestock products, how chicken is purchased, where it is purchased, and what concerns consumers most about the quality of chicken meat. The survey also measured willingness to pay for different types of chicken.

Hanoi has nine inner districts and all interviews took place there. The survey utilized a two-stage sampling design, based on districts and randomly selected blocks in each district. We were going to further stratify at the sub-district level, but a map with clear sub-district boundaries was not available. Each district was assigned a number of observations for a goal of 1,000 surveys in proportion to population size, also taking into account an estimated refusal rate of 25%.

## Buying Patterns

The general characteristics that emerge from this consumer group are of considerable relevance to HPAI policy generally and especially to the potential for effective demand side approaches. Our respondents are very experienced market consumers: 96% of households report shopping at least once per day and 80% of them shop in wet markets. Of special relevance to the present study are the facts that, despite being urbanites in the capital city, over 30% of households purchase live chickens and over 40% reported buying whole finished birds. Over 30% reported buying only live birds, and just 27% reported buying chicken parts.

Figure 1



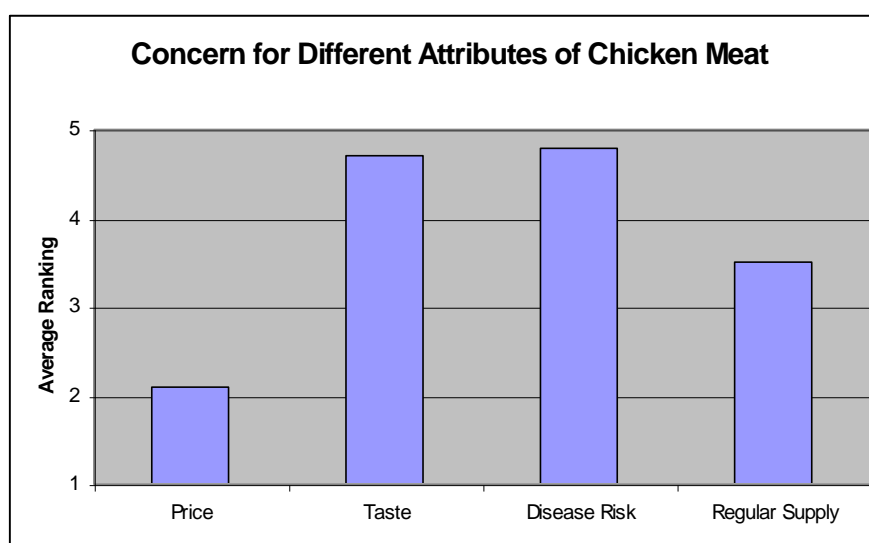
Hanoi consumers are not only very experienced buyers, but also quite discerning. In the household food budget, chicken is a luxury good which accounts for about 14% of total food expenditure. There are three basic varieties of chicken available, local varieties, industrial chicken, and crossbred birds that combine characteristics of both. Most households (66%) report buying all three varieties, but 87% buy local varieties. The main reason for this preference seems to be quality because they pay a substantial premium for local birds. As Figure 1 indicates, local varieties can command nearly double the price of industrially produced birds. Thus the dominant product variety in his relatively low income country is the most expensive one, a fact that has important implications for demand-oriented policy interventions. Moreover, this is particularly significant to PPLPI because smallholders are the main producers of these animals.

## Production, Home Consumption and Market Participation

To better understand the reasons for these observed buying and price patterns, consumers were asked directly about their preferences with respect to chicken. Figure 2 indicates their average scoring of four product characteristics relevant to the present study, on a scale of 1 to 5. As the previous results imply, price is not a high priority, again despite these being very experienced buyers who spend a large fraction of income on this product. On the contrary, quality characteristics were paramount in their expressed preferences, including taste, health status, and regularity of availability. Scores for quality (taste and safety) were more than double the expressed importance of price. Evidently, Hanoi buyers value local, live varieties because of superior taste, and are willing to pay nearly double the price for their quality characteristics.

Having said this, 75% of responding households said they believed the quality of chicken could be further improved. Improvements could take two primary forms, improved flavour and food safety. We did not sample their preferences for the former characteristics, but presumably there is scope for quality investments of this kind to increase producer revenue.

Figure 2



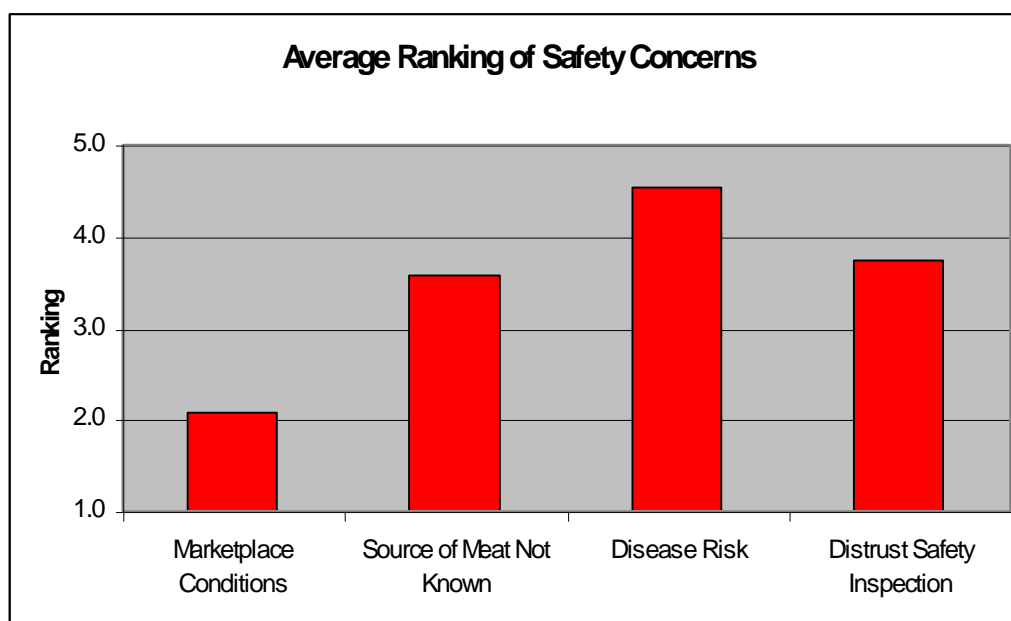
On the subject of safety, our sampling of preferences yielded interesting and suggestive results. As Figure 3 indicates (using the same 1-5 scoring of importance), market conditions were quite a

low consumer safety priority. This finding is significant because market renovation is a standard and sometimes investment-intensive government approach to food safety problems, a public goods intervention that apparently has little credibility in the eyes of local buyers. Of much greater significance were three characteristics that can be targeted by product certification programs: Traceability, Health Screening, and credible Certification.

It is apparent from these results that consumers take food safety very seriously, but supply chain and institutional uncertainties are an important source of their perceived risk. Disease risk itself is the most important concern, but it is closely followed by the most important private and public determinants of real and perceived food safety. Food origin is uncertain in the markets studied, with birds passing between several intermediaries who blend and transport stocks. This agency may provide valuable distribution services, but it introduces compound informational, incentive, and contagion risks that lead to significant moral hazard and adverse product selection. Despite the complex nature of some of these interactions and the uncertainties they create, consumers are acutely aware of this, and a credible product traceability scheme would be needed to improve this situation.

Another important problem is credibility of public health efforts, which has complex origins of its own. While reform and public education can do much to overcome this lack of confidence, policy makers should also consider private agency as a substitute in this situation. Most OECD economies have delegated a significant amount of practical animal health and other agricultural product quality responsibilities to producers and producer cooperatives, recognizing that, with responsible public oversight, the right market incentives can make private agency an efficient and credible approach to food safety.

**Figure 3**



## Willingness to Pay

Given Hanoi consumer's expressed concerns about food safety, what would be their willingness to pay for quality improvements that improve the safety of chicken? The answer to this question is essential to determining the capacity of the poultry market to support demand-oriented risk reduction measures. To ascertain willingness to pay, we presented household respondents with a sequence of hypothetical price premia, asking them if they would be willing to add this amount to their customary price if the chicken they purchased were credibly certified as safe.

Households were asked whether they wanted to pay 5000, 7500, 10000, or 12500 extra for certified chicken of each variety. These results clearly indicate a reservoir of private purchasing power that can finance improved poultry bio-safety. For the most expensive variety, local birds, nearly 100% of respondents said they would voluntarily pay about 8% more for a certified bird, while over three-quarters said they would tolerate a 20% safety premium. As could be expected, price tolerance was lower for less desirable varieties, a majority (52%) of those interviewed were willing to pay a safety premium equal to more than 30% of the base price.

**Table 1: Percent of Households Willing to Pay for Safety Chicken**

Hypothetical Safety Premium (VN Dong)					
Variety	5,000	5,700	10,000	12,500	Ave Price
Local	99%	91%	89%	74%	62,000
Crossbred	92%	87%	70%	66%	42,000
Industrial	93%	74%	69%	52%	32,000

It is important to note that precedence exists for this approach in Viet Nam, in the form of an industrial brand of "safety chicken." Experience with this product has been limited, but consumer reaction to it is revealing. In our survey, we asked responding households if they tried this product, and for those who had, about their experience.

**Table 2: Buyer Attitudes Toward Safety Chicken**

Reasons for Only Trying Safety Chicken	Percent	Frequency
Not tasty	67%	145
Not convenient/available where regularly shop	31%	66
Not important/only trying	25%	53
Didn't seem safer	7%	15
Too Expensive	5%	10
Prefer Fresh Chicken	1%	3

Nearly all households (94%) report having heard of safety chicken, defined as a type of chicken that has an extra safety guarantee beyond the stamp/government inspection. Of the households that have heard of it, 37% have tried this product and reported paying an average premium of 8,400 dong. Of the

households who have tried safety chicken, half only tried it 1 or 2 times. As Table 2 indicates, retention with the product was limited, and the main reason was other product quality characteristics.

Evidently, the existing safe chicken program has limited acceptance because it trades off one important product quality characteristic, safety, against another essential one, taste. Live bird certification programs can overcome this obstacle by delivering higher health quality along with the existing preferred product characteristics. At the same time, they can sustain rather than undermine the long established product marketing advantage of smallholders – production of flavourful traditional local varieties.

## Conclusions

The Hanoi poultry market survey strongly supports the idea that demand-side, market-oriented policies can contribute significantly to sustained management of HPAI risk. In the urban market studied, consumers shop daily in fresh markets and demonstrate strong preference for local varieties that are most likely to be produced by smallholders. They also indicate that animal health is a major concern for the, but express scepticism about public sector approaches to biosecurity and food safety measures, whether these are targeted at the food marketplace generally or at the poultry supply chain.

Most importantly, a significant majority expressed willingness to pay a substantial premium for both credible health / safety certification and local varieties. Given the expressed doubts about public health initiatives, it may be desirable to complement these with private initiatives if these can be responsibly overseen and efficiently decentralized. The preference for local varieties is very important to the PPLPI agenda, since smallholders are the primary source of these products. Indeed, it is reassuring to see that consumers established tastes for these varieties has not been undermined by the advent of HPAI, and that policies may be available to sustain this supply chain and even improve returns to the original producer groups, mainly poor rural and peri-urban households.

These findings indicate that urban Vietnamese markets have the capacity to support demand oriented disease risk reduction measures. If consumers are willing to pay a “safety premium” large enough to finance a bird certification scheme, it could spare significant public expense. As a market based policy, a self-financed scheme would also foster a virtuous quality cycle among producers, encouraging them to make other quality improvements to raise revenue and further the poverty reduction agenda for livestock producers. This stands in sharp contrast to the incentive problems posed by uncertain village surveillance and culling practices, which have a tendency to drive the disease problem underground. In these ways, a demand-oriented approach can be more efficacious as well as more sustainable.