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URBAN CONSUMER PREFERENCES FOR POULTRY FROM SUPERMARKETS VERSUS TRADITIONAL RETAILERS IN THE ERA OF AVIAN INFLUENZA IN HO CHI MINH CITY, VIETNAM

RAISE SPS COUNTRY DIAGNOSTIC REPORT # 25

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EXECUTIVE SUMMARY

In general, we found that the AI period shocks (which include the disease per se but also the government measures and the private investments) has reduced poultry consumption in general. (2) It slowed some longer term trends (like the increase in poultry product consumption) and speeded some others (like the shift away from home-production to market purchase of poultry products). It also accelerated sharply what had been a slow and tiny shift toward buying poultry and eggs in supermarkets, toward supermarkets attaining a share in meat and eggs that rivals the traditional markets. Direct purchase from farmers and from street vendors fell off precipitously. Despite bans, but at a much lower level, purchase from informal retailers of live or non-registered-slaughtered poultry continues. Finally, the shift to packaged eggs was remarkable, while that to packaged poultry was minor. While these trends were somewhat sharper in the case of the center-city and the middle belt and among the middle and upper income terciles in the case of retail changes, they were much less sharp in the case of the more widely shared shift to packaged products such as packaged eggs (that can be sold by any type of retail). (3) The surveyed consumers are still notably in favor of backyard poultry (seen as a tastier variety of chicken because free range) and fresh (but not live) form, but required safety signs on products. Cold-packaged poultry did not “take off” due to AI. (4) The consumption results are closely in line with the rapid reconnaissance results for retailing and processing. The modern retailers and processors felt they gained much market share in the few years under study—and they feel it is unlikely that they lose that ground in the future, although the rate of growth of their sales will dampen without the drivers of the AI and of government regulation changes

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1. INTRODUCTION

There has been, for the past century at least, links between food safety scares and outbreaks, and food industry transformation in the US (Levenstein, 1988) and Europe. In general these experiences have driven consumers from the arms of wetmarkets, small processors, and small shops and street vendors (all of which were the only way that Americans and Europeans bought their poultry products before the 1930s…) into the arms of large processors and supermarkets. This has mainly been because the safety shocks gave rise to new government regulations and/or private industry standards that increased sharply the technology requirements facing actors along the supply chain (need to have traceability and certification systems, cold chain equipment, plants designed and built to good manufacturing practices, and ability to advertise to the consumer, and report to the government or industry association, that the requirements have been met and the food they sell is now safe). These new requirements have been hard to meet for the informal sector and small-scale farms and firms. Moreover, even though the age-old habit of going to small shops or wetmarkets was apt to die long and hard in the European countries and also in the US, the perception spread (and was often nursed by advertising and even government communication to consumers) that the formal sector, with the more obvious ability to control their supply chains (even if centralization and consolidation also increased risk of problems massifying quickly) with signaling devices to persuade the consumer of such control (Reardon et al. 2006).

Until roughly the past 10-15 years, food safety crises in developing countries very probably did not have similar effects (to those discussed above in the case of Europe and the US) on food industry transformation simply because there were very few or no options in food markets to small processors, wetmarkets, and small shops. However, in the past 10-15 years options did indeed arise—in the form of a supermarket revolution in developing countries (Reardon et al. 2003) and the rise of large processed food firms. This is just starting in Vietnam, but emerging quickly. It is thus possible that, as happened in the past in developed countries, a food safety shock felt to be primarily in the informal traditional sector, might push consumers to shifting (at least partially) shopping more in supermarkets, buying packaged and inspected products, and buying from large processors. Acknowledging that purchase and food consumption habits can resist change for some time (as they did in currently-developed countries), this paper tests the hypothesis that consumers in urban Vietnam were induced, by the shock of AI (avian influenza), to accelerate the shift to the new food systems and forms.

2. THE STUDY

This paper presents the descriptive findings of a study of consumption of poultry products before and after AI. . The main research question was whether the AI "shock" induced consumers to shift toward supermarkets (and away from wetmarkets) and toward industrialized poultry (and away from backyard, informal traditionally produced poultry)—and why. We begin by discussing the pre-AI context (roughly 1998-2003) as the "eve" of the period of shocks (2003-2006). We then discuss the nature of the shocks, which included the AI itself, as well as government policies and private investments. We then present the findings from the consumer study, and conclude with implications.

To test that hypothesis, a study was undertaken that included a survey in November 2006 of 704 consumers in HCMC, with a recall of before the first AI outbreak in September of 2003 and then in November 2006, after three outbreaks. The interviewees were the decision-makers regarding food purchases in the household. Their characteristics are shown in Table 1. The respondents are mainly women. The sample was stratified for the descriptive analysis, with location strata of roughly equal thirds of the overall sample (downtown, within 2 km of supermarkets; peri-urban, within 2km of supermarkets, and peri-urban that are 8-40 km far from supermarkets). In each stratum, respondents were chosen randomly, with the sample distribution shown in Table 2. For the descriptive analysis, we further stratified by income terciles of the households. Tercile 1 is the lowest income, using the HCMC government definition of 'the poor' individual as one who has less than VND 500,000/month or VND 6,000,000/year. The average household size in our sample is 5 persons/household. That means a poor household should have less than VND 2,500,000/month/household (=VND 500,000*5 persons/household).

The study also included a rapid appraisal of retailers and processors in June 2006 to observe the context

HCM city was selected as this is the largest food market in Vietnam. Moreover, HCMC was a pioneer in implementing the strictest regulations on poultry industry in Vietnam.

TABLE 1: RESPONDENTS BY LOCATION AND BY GENDER

		Location			Total
		1 = Downtown, within 2km of Supermarkets Downtown	2 = Middle belt, 2-8 km from Downtown	3 = Peri-urban, 8-40km from Downtown	
Gender	Male	13	16	30	59
	Female	278	144	223	645
	Total	291	160	253	704

TABLE 2: RESPONDENTS DISTRICTS AND BY DISTANCE FROM SUPERMARKETS

District	1 = Center City	2 = Middle Belt	3 = Peri-urban	Total
Dist. 1	160			160
Phu Nhuan Dist.	80			80
Binh Thanh Dist.	51			51
Dist. 9		160		160
Dist. 12			80	80
Thu Duc Dist.			104	104
Cu Chi Dist.			69	69
Total	291	160	253	**704**
	41%	*23%*	*36%*	*100%*

3. THE POULTRY PRODUCTION-MARKETING AND CONSUMPTION SYSTEM AT-HOME BEFORE THE AI OUTBREAK IN 2003

The poultry production/marketing/consumption system in HCMC before the AI outbreak in 2003:

(1) Consumption had been growing very rapidly: it increased 100 percent over 1998-2003.

(2) The poultry sector was gradually “commercializing” with a reduction of home-consumption of backyard poultry (produced at home) and increasing purchase from production from outside HCMC.

(3) The wholesale market system for poultry had been steadily growing, to the point where there were three large wholesale markets, and a number of smaller wholesale markets. Poultry was delivered to these wholesale markets by a variety of channels, from larger scale traders to many small-scale informal traders.

(4) From those wholesale markets, poultry went, mainly in live form, to approximately 200 retail markets (wetmarkets, where usually also fish and produce are sold) and street vendors. Very little went to modern retail outlets (supermarkets, specialty stores, hotels).

(5) Slaughter took place either by the small trader in the retail market or by the consumer at home; slaughter was thus scattered, small-scale, with low capital investment, and poor sanitary conditions.

(6) Consumers bought poultry and eggs frequently, and brought the live bird home and slaughtered it and prepared it, or brought slaughtered meat home and cooked right away or refrigerated for a day or two. Food safety was not a major consideration as there had not been a history of food safety scares for poultry.

4. MAJOR SHOCKS TO THE POULTRY SYSTEM DURING THE PERIOD OF SEPTEMBER 2003 TO LATE 2006

There were five inter-relation major “shocks” to the above production/marketing/consumption system starting in September 2003 and lasting through the period under study, late 2003 to late 2006.

(1) There were three AI outbreaks.

(2) There was a government and private sector campaign to alert consumers that poultry can be unsafe to eat—if it is not well-cooked, not inspected and labeled, not sold through formal sector channels, not transported covered and wholesaled and slaughtered and retailed hygienically. There was also another form of government communication, and that is of “safe points” to buy poultry: government regulation for either the retail unit to display certification, or for the poultry (if packaged) to display a label.

(3) There was government restriction on where poultry can be produced (not in the city, so there was a sudden acceleration of a longer-term trend), transported (in covered vehicles), where and how it can be slaughtered (in registered slaughterhouses). There was a ban on street vendors and a requirement for there to be, at all retailers, chilling boxes to preserve cool poultry meat.

(4) There was government infrastructure investment (in modern slaughterhouses and wholesale market upgrading to include covered areas) and government support (cheap credit) for modernization of private sector processing, logistics and wholesale, and retailing of poultry products.

(5) Both because of these incentives, and the shift of demand toward poultry products sold by modern retailers, there was substantial investment by the private sector—with an increase in capitalized larger wholesalers, processors of birds and eggs, and retail. The latter was already occurring for general outlets such as supermarkets, but for the poultry section of those stores it was greatly accelerated. However, there was an emergence of specialty stores and outlets mainly selling the modern sector processors products (such as of Phu An Sinh, Huynh Gia Huynh De, Saigon Agricultural Corporation, who now dominate 55 percent of the sector). Thus the wholesalers and processors who had made the modernizing capital investments won a significant share of the market, and there was technological change plus consolidation, and, to a certain extent, multi-nationalization as the Thai transnational “CP” gained a lot of market share, and foreign retailers increased their share of poultry retail.

5. CHANGES IN POULTRY CONSUMERS' (REVEALED) PREFERENCES

Our survey of 704 persons (nearly all women, and all persons responsible for household purchases of poultry products) in HCMC revealed large changes in purchase and consumption habits between before- and after- the set of shocks described above. The households were chosen at random in three areas—downtown HCMC (291 households), the close peri-urban area of of HCMC (160 households) and the further peri-urban area of HCMC (253 households). The products covered include backyard chicken, industry chicken, ducks/geese, chicken eggs, and ducks/geese eggs. Meat purchase in all forms (live, plucked fresh, etc.) was also studied. The main findings are as follows. Summary numbers are provided in the tables.

(1) Change in overall level of poultry consumption: 76 percent of the households reported having reduced their poultry consumption. They shifted to other meat (this was before the pork food safety problem) or fish. 64 percent noted that they did so because of fear of AI. This general reduction masks a large change in composition that is discussed below.

(2) Change in production source of purchased poultry products: Table 3 shows that there was a sharp drop in the share of backyard poultry purchase: 63 percent of the households (on average, but rising by income terciles) bought backyard-raised chicken before AI—and after AI, the share was only 37 percent at present (on average, still rising by income). There is no clear location pattern/differences. For duck, the figures are 28 percent before and 13 percent after, on average, with location and income correlations similar to those of the chicken case. Note that while there was a sharp reduction in purchases, there is still an important amount of backyard-poultry being bought. When buying backyard-poultry before AI, it was in plucked-form, mainly from traditional markets; after AI, backyard-poultry can be purchased at supermarkets (with certification label for vaccination, and cool or frozen and in pieces or packed), or still from traditional markets mainly in peri-urban areas; the latter do not sell certified chicken and the sales are illegal but persist).

(3) Change in rate of participation in home-production (or the inverse, the commercialization rate): Table 4 shows that before AI, 13 percent on average of the sample households produced and consumed their own backyard chicken; that was sharply increasing in income and in distance from the center city as expected; after AI, that share was only 4 percent, mainly persisting (but greatly reduced) among the poor and the peri-urban areas. For ducks/geese, the respective shares were 5 percent before (highly concentrated in the peri-urban areas), 0.5 percent after. For chicken eggs, 3 percent before (also highly concentrated in peri-urban areas), 1 percent after. Thus the "AI period shocks" nearly eliminated home-production by HCMC urban and peri-urban households. It did so among the poor and in the periphery/peri-urban areas. Thus a long-term trend was sharply accelerated, and made to diffuse early among the poor and those far from the city center.

TABLE 3: CHANGE IN PURCHASE OF WHOLE BACKYARD CHICKEN AND GEESE: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Bought Backyard Chicken–Overall	Terc1	Terc2	Terc3	Bought Backyard Geese–Overall	Terc1	Terc2	Terc3
Before-Overall	63	54	61	73	28	21	30	32
Center City	57	48	49	70	24	15	25	32
Middle belt	69	51	72	77	36	18	46	38
Periphery	65	61	62	77	27	29	24	29
After-Overall	37	28	36	46	13	7	14	17
Center City	36	27	30	46	12	7	11	17
Middle Belt	48	31	58	48	21	10	26	21
Periphery	30	27	27	44	9	6	9	13

TABLE 4: OWN-PRODUCE BACKYARD CHICKEN AND GEESE AND CHICKEN EGGS: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Own-Produce Backyard Chicken–Overall	Terc1	Terc2	Terc3	Own-Produce Backyard Geese	Terc1	Terc2	Terc3	Own-Produce Chicken Eggs–Overall	Terc1	Terc2	Terc3
Before-Overall	13	14	18	7	5	5	5	3	3	4	4	3
Center City	1	0	1	3	0	0	0	0	0	0	0	1
Middle Belt	7	8	9	4	1	0	3	0	1	3	0	0
Periphery	31	30	36	23	12	13	11	14	9	8	7	10
After-Overall	4	6	4	3	0.5	0.4	0	0.9	1	1	1	1
Center City	1	0	0	3	0	0	0	0	0	0	0	1
Middle Belt	1	3	2	0	1	0	0	2	0	0	0	0
Periphery	10	13	9	8	1	1	0	2	2	2	3	2

(4) Change in purchase location of poultry products: Table 5 shows that there was a large shift away from traditional markets and a modest shift toward supermarkets, as follows:

(a) Backyard-chicken purchase (in whole form; we have data on chicken pieces but the patterns go in the same directions but at a much lower level so we abstract from that) from market stalls (in traditional markets) dropped precipitously from before AI to after AI. Before AI, 34 percent of the households reported buying backyard-chicken in market stalls; interestingly, that rose by income and declined by distance from center city. After AI, it dropped to only 12 percent, and the location and income strata differences had nearly disappeared. By contrast, the share of households buying (whole) backyard-chicken from supermarkets jumped from 6 percent to 13 percent. Before AI, this was sharply increasing by income and declining by distance from city center; this pattern persisted after the shocks. Interestingly, there is a pocket of richer consumers in the periphery that shifted to supermarkets (4 percent for the periphery overall versus 12 percent for that group). The upshot overall is that now traditional markets and supermarkets are roughly equal in the market. (Note that backyard chickens sold at traditional markets may be in the form of live chickens—that is, an illegal form- or packed and labeled (with certification). The processed form is the important point, not the purchase location). As we noted, the informal traditional market is in fact illegal, while the supermarkets have the advantage of selling with safety-assurances to the consumer.

(b) Table 5 also shows that industrial-chicken purchase moved out of market stalls (from 10 percent of the households to only 4 percent), with little location or income strata variation - and into the supermarkets (from 4 to 9 percent), with a small bias toward the middle and upper terciles making the shift. Although specialized shops have proliferated, the effect on purchase location is still only tiny (only a rise from 0.5 to 1 percent over the period); the latter is not shown in the Table.

(c) Duck/geese purchase also moved from market stall (with a decline from 16 percent to 5 percent of the households buying there), and toward supermarkets (from 2 before to 5 percent after) (not shown in the table).

(d) Table 6 shows that chicken-eggs purchase (and that of duck/geese eggs, which followed a similar path) shifted sharply away from traditional markets (56 percent dropping to 32 percent of the households using that location), toward supermarkets (with 15 percent jumping to 32 percent of the households). Again, the shift was moderately biased against the periphery and the lower income tercile, but not sharply so

Thus, like chicken meat, chicken (and duck) eggs have two nearly equal rivals, supermarkets and traditional markets, a very different situation from before AI, when supermarkets had a tiny share only. This coincides with the rapid reconnaissance we did of retailers; supermarkets noted that their sales of poultry products jumped massively from before to after AI. While direct purchase by HCMC consumers was rare before AI (only 3 percent bought from farmers), it became rarer still after AI (only 2 percent).

TABLE 5: CHANGE IN PURCHASE LOCATION OF CHICKEN MEAT: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Backyard Chicken From Market Stalls–Overall	Terc1	Terc2	Terc3	Backyard Super-Markets–Overall	Terc1	Terc2	Terc3	Industrial Chicken From Market Stalls–Overall	Terc1	Terc2	Terc3	Industrial Chicken From Super-Markets –Overall	Terc1	Terc2	Terc3
Before-Overall	34	27	30	45	6	4	4	10	10	9	10	11	4	2	5	4
Center City	43	41	37	48	7	4	5	10	10	11	11	9	4	3	3	5
Middle Belt	41	28	43	46	8	5	8	11	9	10	6	11	5	3	9	2
Periphery	18	11	16	35	4	4	1	8	10	7	11	13	3	1	5	2
After-Overall	12	10	13	13	13	7	12	19	4	1	8	10	9	5	8	12
Center City	13	14	12	13	15	11	11	22	4	4	5	4	10	6	9	13
Middle Belt	11	8	14	11	21	8	29	21	3	5	3	0	13	10	14	14
Periphery	11	6	13	13	4	3	2	12	4	4	3	8	4	2	4	8

TABLE 6: CHANGE IN PURCHASE LOCATION OF CHICKEN EGGS: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Chicken Eggs From Market Stalls– Overall	Terc1	Terc2	Terc3	Chicken Eggs From Super-Markets– Overall	Terc1	Terc2	Terc3
Before-Overall	56	49	58	61	15	12	13	19
Center City	58	54	62	58	21	19	20	24
Middle Belt	64	62	62	70	17	15	18	17
Periphery	49	40	52	60	5	4	4	10
After-Overall	32	30	36	29	32	23	27	46
Center City	31	27	38	28	41	37	34	50
Middle Belt	28	41	23	23	48	36	51	52
Periphery	37	29	43	38	11	4	8	31

Note that the reasons given by the households for the purchase-location changes are clear: households are concerned about signs of safety signaled by the government (61 percent want to see inspection stamps) while only 30 percent rely on visual inspection to detect signs of disease, only 19 percent rely only on trust of the seller, and interestingly, only a mere 19 percent rely on the brand of the product. The supermarket is in a stronger position to physically assure the labeling and signage and is more credible to the consumers in this than are the traditional markets, as we note below.

(5) Table 7 shows the change in <u>form</u> of poultry products purchased: There was a sharp shift away from buying live poultry and non-packaged eggs, a strong shift toward buying packaged eggs, a moderate shift away from buying plucked/fresh poultry, and a large relative shift but a small absolute shift toward buying cool/packaged poultry:

(a) For backyard-poultry, there was a sharp shift away from buying live poultry (as 40 percent of the households bought live chickens before AI, and only 15 percent after). Interestingly, while it increases by income and distance from the center, all groups sharply reduced their purchase of live poultry, with surprisingly the middle and upper strata in the middle and periphery belts hanging on to the habit the most persistently. There was also a shift away from purchasing "plucked, fresh": from 20 to 10 percent. By contrast, there was a jump in cool/packaged/labeled from only 2 percent to 9 percent of the households, rather sharply increasing by income but not varying regularly by location. It is, however, still a minor niche however. Frozen poultry went from nearly nothing to 2 percent of the households, a tiny niche still. There was nearly no purchase of baked chicken (contrasting with the Thai experience during AI). That the shift toward cold and cool packaged meat is bought by

only 11 percent of the households is explained by the fact that 93 percent of the households prefer domestic species/backyard chicken (which they do not equate with frozen chicken), and 96 percent prefer to eat fresh poultry meat to cool/frozen. That strong taste preference was in tradeoff to the strong safety preference, as 84 percent of the households wanted to see an official safety label. We see above that that tradeoff translated into a modest shift toward both supermarket purchase and cool/cold purchase. Part of that is because there is only a modest rate of households' believing that the government actually inspects poultry and thus there are doubts that the labels mean true safety.

(b) For industrial chicken, there were similar trends to what we show above, but at lower shares given the lower market share in general that industrial chicken has. Oddly, there was no clear pattern by income and location. Hence, the share of plucked/fresh chicken went from 9 down to 7 percent of the households, and that of cool/stamped/packaged went from 2 to 5 percent of the households.

(c) The chicken and goose egg results are the most striking. Before AI, only 37 percent of the households bought eggs (of either type) in packages; after AI, 71 percent do. This goes along with the spectacular rise of the larger and more capitalized egg processing and wholesaling companies noted above. The consumer sees the package as communicating hygiene, formal sector, and safety, and the packaging shows the certification as well as the brand. But as we show below, it is more the package and the certification than the brand that counts for the consumer. That is perhaps because these companies are young, as is the habit of buying branded eggs, and there has been little time to form in the consumer's mind a link between safety and brand. Interestingly, while before AI the purchase of packaged eggs was sharply increasing in income and decreasing in distance from the center, the shift was greater for the poor and periphery, and while the difference are still there, are much subdued, implying convergence over space and socioeconomic groups in packaged egg purchase.

(6) Change in consumer's criteria for purchase source and location decisions: Table 9 shows that before AI, only 44 percent of the households were concerned with poultry safety—while after AI, that share had jumped to 92 percent. This is not surprising as the households were amply exposed to warnings about safety, not just from the retailers who display labels and signage, but from the government directly. Campaigns on food hygiene and safety as well AI information have reached HH by television (95 percent), by newspaper (62 percent), by neighbors/ relatives (58 percent); by radio (44 percent), by sign boards (15 percent); by internet (9.5 percent). We note that newspaper and television coverage tended to emphasize that safe poultry products are especially accessible from supermarkets.

TABLE 7: CHANGES IN PURCHASE FORM OF BACKYARD CHICKEN MEAT: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Backyard Chicken Bought Whole Live-Overall	Terc1	Terc2	Terc3	Backyard Chicken Bought Whole Plucked/ Fresh-Overall	Terc1	Terc2	Terc3	Backyard Chicken Bought Whole Cool/ Packed-Overall	Terc1	Terc2	Terc3
Before-Overall	40	35	41	44	19	17	18	24	3	2	2	4
Center City	27	25	16	36	28	22	33	29	1	1	0	2
Middle Belt	46	31	51	50	18	15	17	21	5	5	5	5
Periphery	51	47	56	51	11	11	9	13	3	2	1	8
After-Overall	15	13	15	17	10	8	7	14	8	4	10	11
Center City	8	7	7	10	14	14	9	17	9	2	12	12
Middle Belt	18	10	20	20	9	5	8	13	17	13	22	14
Periphery	20	13	15	17	5	4	5	8	3	3	2	4

As safety is a “credence attribute” and cannot be observed by the consumer as she/he cannot perform lab tests, one can see from the households’ responses as to where they get their information about the safety of a given egg or piece of chicken essentially translate into a combination of a message about where and how they buy the poultry products (as the more informal market has less labeling and signage concerning quarantine), and their own beliefs about the trustworthiness of labels and signage. 44 percent of the households said that they determine safety by observing a “quarantine sign” on the product; 14 percent rely on brands; 14 percent rely on their trust in the retailer; and a full 22 percent rely on just visual inspection (as they assume, incorrectly, that the disease can be observed by them). We also found that households buying in supermarkets are more influenced by brand than those shopping in the traditional markets; but from that one cannot say what the attitude of the household is toward a brand per se, as this result confounds the frequency of branding on the supply side in the market.

Moreover, consumers overwhelmingly explained their shift to supermarkets in terms of poultry safety advantages. This is a common finding in the literature—that consumers believe that the modern retailers (and processors) tend to have the means of monitoring their supply chains enough to make safety signals mean something—but that traditional retailers tend not to have this kind of monitoring and control or even incentive.

(7) Do consumers believe the quarantine inspection labels that retailers get from the government and put on their products? Only 39 percent of the households feel that AI control measures by the government are effective, and only 36 percent believe in inspection stamps. Moreover, many respondents thought that even if the government control measures work, it is hard to tell whether the trader is really selling a product that was monitored by the government: during in-depth interviews with the households, many interviewees complained about dishonest practices of traders at traditional markets.

(8) Consumers have a "back-up plan." 92 percent of the households cook their poultry well, and those that did have given up eating blood paste.

TABLE 8: CHANGES IN PURCHASE FORM OF INDUSTRIAL CHICKEN, AND CHICKEN EGGS: PERCENTAGES OF SAMPLE HOUSEHOLDS BY LOCATION AND INCOME TERCILES

	Industrial Chicken Bought Whole Plucked/ Fresh- Overall	Terc1	Terc2	Terc3	Industrial Chicken Bought Whole Cool/ Packed- Overall	Terc1	Terc2	Terc3	Chicken Eggs Bought Packaged -Overall	Terc1	Terc2	Terc3
Before- Overall	9	9	8	10	2	1	4	1	37	37	35	38
Center City	9	9	7	10	2	2	3	1	42	41	47	39
Middle Belt	8	13	5	9	4	0	8	2	32	41	32	25
Periphery	9	7	10	10	1	1	4	1	33	30	29	48
After- Overall	7	5	6	9	5	4	3	6	71	63	70	79
Center City	9	6	9	11	4	4	3	6	78	75	79	81
Middle Belt	4	3	3	5	10	11	9	10	74	69	75	77
Periphery	6	6	8	6	2	1	8	2	60	63	70	79

TABLE 9: ATTITUDES: PERCENTAGES OF SAMPLE

	Concerned About Poultry Safety	Rely On "Quarantine" Label On Product	Believe Govt. AI Monitoring of Products Is Effective	Believe Inspection Stamp True	Care About Brand	Cook Poultry well To make Sure…
Before	44	n.a.	n.a.	n.a.	n.a.	n.a.
After	99	44	39	36	14	92

6. CONCLUSIONS AND IMPLICATIONS

The main points are as follows.

(1) In general, we found that the AI period shocks (which include the disease per se but also the government measures and the private investments) has reduced poultry consumption in general.

(2) It slowed some longer term trends (like the increase in poultry product consumption) and speeded some others (like the shift away from home-production to market purchase of poultry products). It also accelerated sharply what had been a slow and tiny shift toward buying poultry and eggs in supermarkets, toward supermarkets attaining a share in meat and eggs that rivals the traditional markets. Direct purchase from farmers and from street vendors fell off precipitously. Despite bans, but at a much lower level, purchase from informal retailers of live or non-registered-slaughtered poultry continues. Finally, the shift to packaged eggs was remarkable, while that to packaged poultry was minor. While these trends were somewhat sharper in the case of the center-city and the middle belt and among the middle and upper income terciles in the case of retail changes, they were much less sharp in the case of the more widely shared shift to packaged products such as packaged eggs (that can be sold by any type of retail).

(3) The surveyed consumers are still notably in favor of backyard poultry (seen as a tastier variety of chicken because free range) and fresh (but not live) form, but required safety signs on products. Cold-packaged poultry did not “take off” due to AI.

(4) The consumption results are closely in line with the rapid reconnaissance results for retailing and processing. The modern retailers and processors felt they gained much market share in the few years under study—and they feel it is unlikely that they lose that ground in the future, although the rate of growth of their sales will dampen without the drivers of the AI and of government regulation changes.

The implications for policy are as follows.

Policy relating to poultry industry transformation should pay more attention to consumers’ needs in term of their tastes (poultry species, forms of processing, location of slaughterhouses). Consumers are now more aware of safety risk and react by either eliminating poultry from their diets when there appears to be risks or buy at a lower rate. At the time of low risk, as long as production and processing system can not meet their taste, the poultry consumers would find ways to meet their taste by buying either fresh/live chicken or ready-to-eat preferable chicken species. In particular, poultry was not merely food for eating, they are also a type of offering for worship purpose (for example, intestines were required to be displayed alongside poultry bodies). Increased biosecurity for small scale farms should be cared to help them restocking as this production model satisfies better consumers’ tastes and a means for rural development, household’s food security and gender equity.

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