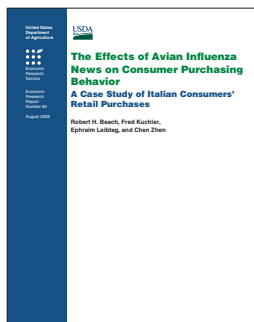


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The Effects of Avian Influenza News on Consumer Purchasing Behavior A Case Study of Italian Consumers' Retail Purchases

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To better understand how information about potential health hazards influences food demand, this case study examines consumers' responses to newspaper articles on avian influenza, informally referred to as bird flu. The focus here is on the response to bird flu information in Italy as news about highly pathogenic H5N1 avian influenza (HPAI H5N1) unfolded in the period October 2004 through October 2006, beginning after reports of the first outbreaks in Southeast Asia, and extending beyond the point at which outbreaks were reported in Western Europe. Estimated poultry demand, as influenced by the volume of newspaper reports on bird flu, reveals the magnitude and duration of newspaper articles' impacts on consumers' food choices. Larger numbers of bird flu news reports led to larger reductions in poultry purchases. Most impacts were of limited duration, and all began to diminish within 5 weeks.

What Is the Issue?

Claims that outbreaks of HPAI H5N1 sharply reduced poultry purchases have accompanied the discovery of the disease in Asia, Africa, and Europe. However, there has been little empirical analysis of consumer response to these outbreaks. Measuring how bird flu has affected consumer demand for poultry is challenging because consumers' risk perceptions were likely influenced by numerous pieces of information: reports indicating the occurrence of disease among wild birds, domesticated poultry, and humans. These events occurred at different times and in different countries.

Consumer reaction to HPAI H5N1 could have as large an impact on the poultry industry as the disease itself. Yet, for countries with large-scale commercial poultry production that have reported outbreaks, claims that poultry purchases declined significantly following discovery of HPAI H5N1 in wild birds or in isolated cases on farms are a bit puzzling. In these countries, poultry raised indoors under tightly controlled environments are unlikely to contact wild birds or other sources of the disease, and farmers have a strong financial incentive to eradicate the disease if it were found in their commercial flocks. In addition, policymakers have strong incentives to ensure prevention and control of HPAI H5N1 to ensure public health and to maintain domestic and export markets for poultry. In effect, the health risk consumers face from consuming poultry products may be very small, in which case the large reported sales losses appear out of proportion to the risk faced by consumers.

Although there have been three instances of HPAI outbreaks in the United States, none were of the HPAI H5N1 strain. Thus, there is no systematic basis for forecasting how U.S. consumers

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might react to domestic detection of this particular strain that has resulted in huge losses to the poultry sector in other regions, killed over 200 people in Asia and Africa, and raised concerns of a potential human pandemic. Studying consumer response to bird flu news outside the United States is informative conditional on recognizing why those consumers and U.S. consumers might respond differently to news about health risks. This case study examines the responses of consumers in Italy to media reports on bird flu. Findings could benefit the design of food policy.

What Did the Study Find?

Over the sample period August 2004 through October 2006, European newspapers averaged 324.4 bird flu articles per week that did not mention Italy and 24.7 that did. The number of European newspaper articles on bird flu surged to 2,455 articles in the week ending October 23, 2005, following reports that the virus had been found in Turkey, Romania, and Croatia. Additional spikes followed in January through April 2006 as HPAI H5N1 was identified in Turkey, Romania, and Croatia, and later in Austria, France, Germany, Italy, Sweden, and Switzerland. The weekly number of newspaper articles on bird flu that mentioned Italy was relatively flat but spiked in the week ending February 19, 2006, with the discovery of the H5N1 subtype of HPAI in dead wild swans in southern Italy.

During the same period, newspaper articles on bird flu had a statistically significant effect on sales of poultry products in Italy, both fresh and frozen. At the margin, each additional newspaper article reduced purchases, and did so over time. Results include the following:

- For fresh poultry, historical sales were, on average, 79.8 percent of what they would have been if there had been no news about bird flu.
- Non-Italy-specific news about bird flu reduced fresh poultry sales by an average of 13.5 percent, and Italy-specific news was responsible for a further 6.7-percent drop.
- Non-Italy-specific news and Italy-specific news reduced purchases of frozen and processed poultry by 4.1 percent and 14.6 percent, respectively.

On average, each additional newspaper report about bird flu reduced consumption, but the reductions were not permanent and eventually diminished. For fresh poultry consumption, the largest decline occurred in the second week after the newspaper report was published. For frozen and processed poultry sales, the response to news that was not Italy-specific was largest in the same week the news was reported and declined to about a third of the initial response in the second week. By the fifth week, the response had become negligible. The response to Italy-specific news increased, fell, and increased again before diminishing.

How Was the Study Conducted?

For most countries in which HPAI H5N1 has been detected, there is little publicly available data suitable for quantitative evaluation of the effects on meat consumption. However, Nielsen reported weekly data on quantities purchased and expenditures for 24 categories of poultry, beef, pork, and fish and seafood products in Italy, capturing a large share of the total market for meats. The weekly frequency of the Italian data made it suitable for investigating the temporal behavior of consumer response to the westward-trending bird flu reports as previous research and attributes of bird flu both pointed to short-lived responses. Two separate demand equations were estimated—one for fresh poultry and one for frozen and processed poultry. Each related the quantity demanded to the price of fresh poultry, the price of frozen and processed poultry, prices of beef, pork, and fish and seafood, and indices of bird flu news. Analysts used the estimated equations to simulate quantities of poultry purchased at retail with and without news reports about avian influenza.

Researchers constructed weekly counts of newspaper articles to address whether changes in consumption were likely related to bird flu versus other explanations. The news index was built from a LexisNexis Academic search of European news articles on bird flu. Splitting the counts into Italy-specific news and non-Italy-specific news partially accounts for different types of risk information in news. Italy-specific news ought to be of greater risk salience to Italians than more general news about bird flu. The non-Italy-specific news, although always greater in volume than Italy-specific news, points to Italian consumers' exposure to information about the situation in the rest of the world.