Turkey Economics, Annotated

By Catherine Rampell November 20, 2013 2:00 pm

My It's the Economy column for this Sunday looks at an economic puzzle: why whole frozen turkey prices typically fall just when demand is highest, around Thanksgiving. Below I've compiled some of the data and theory that went into my reporting for those interested in digging a bit deeper into turkey economics.

First, here's the average month-over-month percent change in retail prices from the last decade, showing just how much prices typically plunge in November:

As I note in the column, one aspect of the turkey market that probably prevents prices from spiking in November has to do with the fact that turkey suppliers can start freezing birds and putting them into cold storage months and months before Thanksgiving. (This is in comparison to, say, fresh turkeys or Valentine's Day roses, which are more **supply-inelastic**. Those products can't be stocked up months in advance, and there are big marginal costs to ramping up supply to meet the holiday demand surge.) Here's a chart showing the accumulation of frozen whole turkeys across the calendar year:

The column talked about some theories behind why turkey prices fall. Here's further reading on those theories:

1) The **loss-leader explanation** says retailers advertise low prices for high-demand items to attract customers, who will then purchase other goods. The Agriculture Department actually has a list of promotional discounts of this kind offered for Thanksgiving 2012; you'll see that some stores actually gave turkeys away, so long as customers met a purchase minimum ($400 at various ShopRite locations, for example).

There is also a theory paper about this phenomenon, by Rajiv Lal and Carmen Matutes. A later well-known empirical paper by Judith Chevalier, Anil Kashyap and Peter Rossi tried to test the theory using supermarket data, and argued that tuna prices fall during Lent because of loss-leader marketing. A 2008 paper uses a similar approach to explain why avocado prices fall around Cinco de Mayo and the Super Bowl.

2) A related supply-side explanation has to do with the breakdown of **tacit collusion**. Basically, if there was ever any informal agreement among competitors to

keep prices a bit higher – that is, to avoid a price war – there's greater incentive to "cheat" around Thanksgiving and offer big discounts because such a huge customer base is available. Even if stores don't take an outright loss on a product (as they would with a loss leader), they might be willing to accept narrower margins all the same, since they can make up for the smaller margins through increased volume. A journal articleby Julio J. Rotemberg and Garth Saloner looks at that premise.

3) Great price sensitivity among consumers (that is, greater **demand elasticity**) is another explanation, related to changes in the composition of customers, changes in their preferences, or more time available to price-shop around the holidays. Consumers might search more during high-demand periods, according to a 1995 paper by Elizabeth Warner and Robert Barsky. Consumers might substitute downward to lower-price-point brands, as another tuna paper by Aviv Nevo and Konstantinos Hatzitaskos argues.

The Bureau of Labor Statistics, which collects turkey price data, says it tries to control for the kind of turkey being purchased (including, where possible, size, brand, organic or nonorganic, frozen or fresh, etc.) in order to make, well, apples-to-apples comparisons over time. Likewise, if you control for TV quality and size, you'll still see big price cuts around the holidays. So this substitution-to-lower-brands effect probably doesn't explain why prices are falling with these two products, at least.

But retailers could still mark down individual product lines because they believe new customers less experienced with their product might be more price sensitive, as a 1989 paper by Mark Bils suggests.