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Meat consumption and demand both in decline!

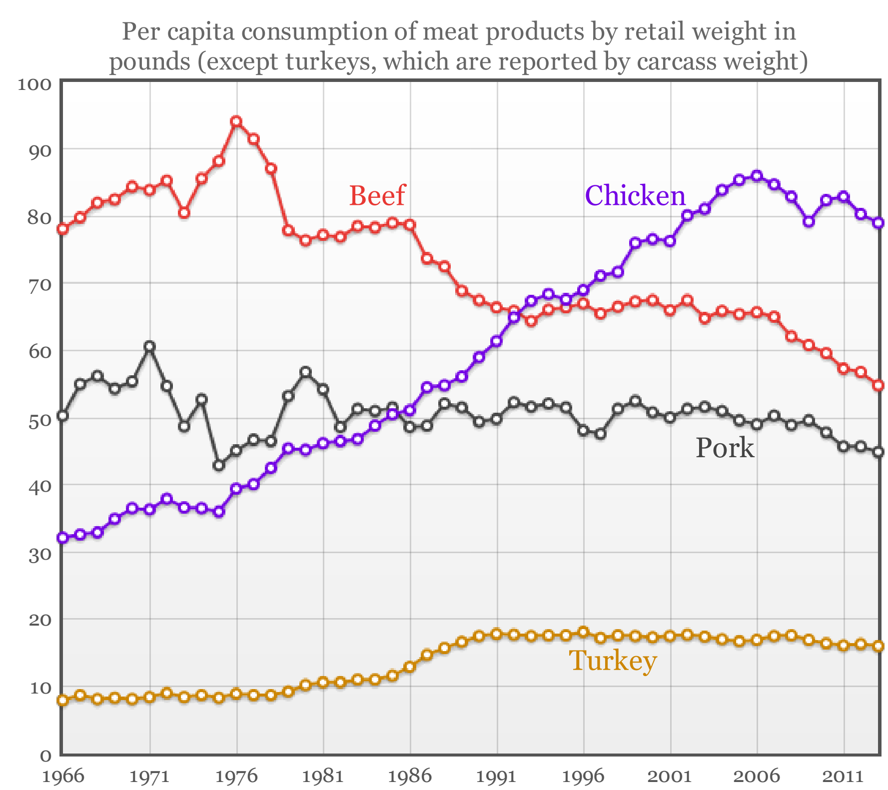
by Harish
Posted on November 20, 2012, 5:22 PM

We have known for sometime that per capita meat consumption in the US has been on a steady decline. But, *consumption* is not the same as *demand*. For example, when prices rise or incomes fall, the per capita consumption of a product may drop but not necessarily the demand for the product. Animal advocates are interested in reducing per capita meat consumption, but they are even more keen on actually reducing the demand for meat. Meanwhile, the meat industry blames the decline on everything but a slump in demand. They have a point—after all, driven by several factors including high feed costs, the retail price of all categories of meat have increased substantially during the last few years and it suggests an explanation other than reduced demand for the reduced per capita meat consumption.

In this post, I examine if it is not just the per capita meat consumption but the *demand* itself that is also in decline. Let's begin first with a look at the consumption numbers.

Per capita meat consumption to continue decline through 2013

The USDA, on November 16, released its most recent forecast of meat production and consumption through the rest of 2012 and the year 2013. These projections indicate a continued decline in the per capita consumption of all four major meat categories: beef, pork, chicken and turkey. The graph below plots the per capita consumption (as implied by per capita disappearance of a product into the market) of meat products beginning with 1966 (the first year for which per capita disappearance data is available for broiler chickens in the food availability data released by the USDA.)



"Not everything that can be counted counts, and not everything that counts can be counted."

— *William Bruce Cameron, 1963*

Per capita chicken consumption is projected to drop by more than 8% in 2013 compared to the peak reached in 2006. During this same period, per capita beef consumption is projected to drop by about 17%. The per capita pork consumption is projected to drop by almost 11% since a recent peak in 2007 and the per capita turkey consumption is projected to drop by more than 9% since a recent peak in 2008.

Nice. But is the *demand* for meat also in decline?

The decline in per capita consumption does not necessarily imply a decline in demand. For any product, economists usually relate price and demand by considering a measure called the *compensated demand elasticity*. This measure for any product incorporates factors such as the share of income spent on the product, the percentage change in the price of the product and the percentage change in the per capita consumption of the product.

The compensated demand elasticity is typically a negative fraction. For example, if it is −0.3 for a product, it means that if the price of the product increased by 1%, one should expect that its per capita consumption would reduce by 0.3%. It is a *compensated* metric because it aims to remove effects of income in this calculation. For example, it will correctly predict that the per-capita consumption of a cheap product (relative to income) like table salt will not change much with a change in its price.

For each of the four categories of meat, the table below lists the compensated demand elasticity reported in a paper published in 2010 in the *Journal of Agricultural and Resource Economics*. This computation is based on quarterly USDA data from 1982 to 2007. The table lists the price in 2006, the corresponding inflation-adjusted price in 2006 (using the CPI Inflation Calculator provided by the Bureau of Labor Statistics) and the actual price in 2012 (my source for prices include USDA data on meat price spreads and the monthly USDA reports on Livestock, Dairy and Poultry Outlook.) Prices are in cents per pound by retail weight for each of the meat categories. The percentage change in deflated retail price multiplied by the compensated demand elasticity gives us the per capita consumption one would expect in the absence of a change in demand (listed in the second to last column). In the last column, the table includes the actual percentage change in per capita meat consumption during the same period from 2006 to 2012.

Changes in price, per capita consumption and implied demand for each category of meat between 2006 and 2012 (prices are in cents per pound of retail weight)

	Price in 2006	Inflation-adjusted price in 2012 cents	Price in 2012	Percent change in deflated price	Compensated demand elasticity	*Expected* change in per capita consumption	*Actual* change in per capita consumption
Beef	397.02	455.54	500.04	9.77%	−0.420	**−4.1%**	**−13.6%**
Pork	280.80	322.19	346.95	7.68%	−0.740	**−5.7%**	**−6.7%**
Chicken	157.07	180.22	188.04	4.34%	−0.099	**−0.4%**	**−6.6%**
Turkey	77.00	88.35	105.80	19.75%	−0.099	**−2.0%**	**−3.6%**

Take a look at the last two columns and note the larger percentage change in the last column in comparison to the last but one. The actual per capita meat consumption has declined far more than what can be attributed to changes in the price of meat brought about by any of the reasons usually given including reduced production, higher feed costs and drought.

Nearly 70% of the decline in per capita consumption of beef since 2006 is likely due to a decline in demand. More than 93% of the decline in per capita consumption of chicken is also likely due to a decline in demand.

Dear animal advocates, rejoice this holiday season in the knowledge that the demand for meat—and not just consumption—is on the decline!

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Comments

Matt Ball 5 days, 18 hours ago

You rock, Harish! Great work on everyone's part to bring about the awareness behind this decline!

Paul Shapiro 5 days, 15 hours ago

I echo Matt's comments. Thanks so much for this insightful--and promising--post, Harish! The animal movement keeps on winning.

David Coman-Hidy 5 days, 13 hours ago

Another amazing post! Always nice to see some hopeful news to remind us that real change is possible!

Erik Marcus 5 days, 13 hours ago

This is so incredibly good. It's wonderful to see such serious scholarship and hard numbers on this vitally important issue!

Mahi Klosterhalfen 5 days, 10 hours ago

Great work, Harish! And congrats to my colleagues in the US who make this happen!

great stuff 5 days, 10 hours ago

thank you so much, people are waking up.. it's happening.

Kelly 4 days, 23 hours ago

Great job! Reason for hope!

John T. Maher 4 days, 20 hours ago

China's consumption is rising faster than US consumption is declining

Laura Hart 4 days, 20 hours ago

This is an excellent and uplifting piece. GREAT news-- very uplifting!! Thank you!

Jon Camp 3 days, 2 hours ago

Love it. Thanks, Harish!

Jack Norris 2 days, 22 hours ago

Really great news - thanks for figuring this out, Harish!

Ben Davidow 2 days, 19 hours ago

Great news and great analysis, thanks for posting this!

Mary Prubant 2 days, 19 hours ago

This is wonderful news. Great story. Thank you.

Debby Sunshine 1 day, 18 hours ago

Job well done! Reason to rejoice! I like your use of graphs!

Robert Davy 1 day, 14 hours ago

Thank you for posting this insightful analysis. In this blog post I took a look at the global situation using (somewhat older) FAO data up to 2009.
http://canberravegan.blogspot.com.au/2012/11/world-trends-in-consumption.html

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