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At the consumer level, beef demand is notoriously difficult to measure, as are shifts in that relationship. One of the difficulties is consumers are all different, and data on what they actually eat are very limited. Another difficulty is the quality of data available regarding the actual price paid by consumers, long-time readers of this newsletter will recognize that fact. Further, beef and pork are not exactly what people consume; they eat meals. A hamburger based meal is much different than steak.

Consumption is only one part of the two components of beef demand. Demand is price and quantity, together. Or, how much someone consumes, or purchases, at a given price. When beef price increases, people normally buy less. Economists call this changing quantity demanded. The demand relationship itself can shift up or down based on changes in incomes, tastes and preferences, the price of pork, etc. Increased demand results when there is a positive shift in the demand relationship.

Incorporating several factors including estimated per capita consumption, inflation-adjusted retail beef price, along with economic assumptions, a long-term measure of beef demand can be calculated. One way to summarize beef demand is to develop an index. Here we use 1990 as the baseline year (index value of 100). Some major economic assumptions are made with this approach. (For our readers that care, if any, the major economic simplification is to assume a fixed elasticity.) Importantly, there are major issues in how the data are collected and then "adapted/aggregated" by the USDA's Economic Research Service. Still, this approach provides some useful things to consider IF viewed as a very broad paintbrush of the sector and not something that can be fine-tuned or dissected down to a percentage or two, and certainly not decimal points.

These indexes should be evaluated annually, or with even more caution for a given quarter compared to that of prior years. Comparisons month-over-month are the least dependable/useable. For additional discussion of these indexes, see the concise article (written in 2010) by Dr. Glynn Tonsor at Kansas State University available here.

If U.S. consumer demand has shifted positively, the index value increases. Red meat demand increases are most obvious when consumers buy more per person and also pay more for an item. The most recent dramatic examples of that situation tend to be periods of strong economic growth coupled with the surging popularity of high protein diets.

Both beef and pork demand eroded (shifted negatively) and then bottomed-out during the depths of the recession (2010). The effect of the economic environment is clear, just look back to the first quarter of 2010 when the beef index value was 74 versus 92 in 2016, a 24% improvement. See the graphics below. If consumer demand was at 2010's level, retail beef and hence cattle prices would be much lower than they are today.

As measured by the indexes, at the consumer level, beef and pork demand diverged in the first quarter of this year. Beef slightly improved year-over-year, while pork slipped. That is worth pondering, but do not jump to dramatic conclusions, yet. Given the data on retail prices and other issues, the beef demand index has been essentially stable the last four years. However, relative to beef the four-year negative shift calculated for pork is more concerning.