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Where's the Beef?
Monopoly and Monopsony Power in the Beef Industry

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Rapid consolidation in meatpacking in the last two decades raises considerable concern about the potential for creating an imbalance of economic power, particularly by meat packers over independent livestock producers, and by food retailers over consumers. Similar concerns, which were expressed in the late 1800s and early 1900s, led to the Clayton and Sherman Antitrust Acts and the 1921 Packers and Stockyards Act (PSA). The PSA and earlier antitrust legislation led to divestiture in some highly concentrated markets, particularly in meatpacking. As we enter the 21st Century, however, we have witnessed an unprecedented wave of mergers, acquisitions and joint ventures leading to horizontal concentration, to vertical integration, to tight bilateral relationships between packers and retailers, and to a web of interlocked firms[1].

The permissive attitude behind approval of recent mergers, acquisitions and joint ventures appears to be based on the single-minded pursuit of economic efficiency. Legislation including GATT, NAFTA, and Freedom to Farm also reflect the pursuit of economic efficiency, as does the teaching of many present day professional economists.

Although many contemporary economists may seem to suffer from tunnel vision, the Fathers of a market economy, including Adam Smith in 1776, recognized that regulation of economic power was required for preservation of a market economy. Smith maintained that the natural evolution of a market economy, through firm growth or acquisition, would be monopoly. And he added that "Monopoly . . . is a great enemy to good management."

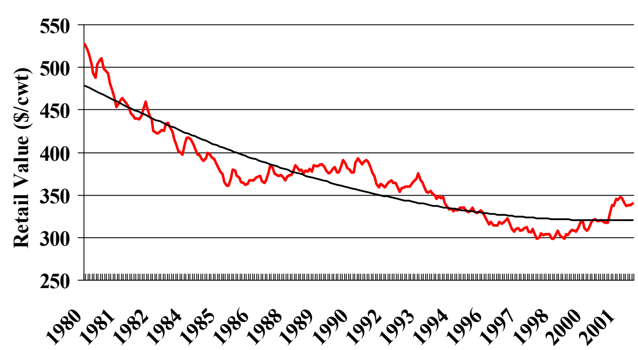
In the same year in which PSA was enacted, Professor Frank Knight, who some credit as the Father of the "Chicago School" of economics, cautioned against the single-minded pursuit of economic efficiency—a warning that appears to be lost on proponents of the present Chicago School as well as economists involved in antitrust enforcement. In Knight's view, the general welfare of society depended jointly on three policy goals: (a) economic efficiency, (b) maintaining economic freedom, and (c) maintaining an acceptable balance of economic power. Moreover, he maintained that the pursuit of economic efficiency alone would be at the expense of economic freedom and a balance of economic power.

Food consumers have enjoyed unquestionable benefits from past consolidation and the resulting gains in efficiency. In the last few years, however, the efficiency gains are arguably negligible, yet the constant flux of reorganization and consolidation continues. It is time, if not past time, to step back from the single-minded pursuit of economic efficiency to examine broader issues such as tradeoffs between efficiency, economic power, and economic freedom. This report focuses on such issues in the beef industry.

Retail Meat Prices

Defenders of consolidation often point to a general decline in inflation adjusted (real) meat prices in support of their argument that consolidation, concentration, and vertical integration are beneficial to consumers. Figure 1 shows real prices for beef by month since 1980. As can be seen, there is a substantial long-term downward trend, to the obvious benefit of beef consumers. Retail prices alone, however, cannot be used to ascertain the effectiveness, efficiency and fairness of the emerging system.

Figure 1. Retail Value of Beef
USDA data adjusted for inflation, with trend-line



Weighted-average value of retail cuts from Choice yield grade 3 beef

[1] Firms can be interlocked through joint ventures, strategic alliances, interlocking directorates, and partial ownership of other agribusiness firms.

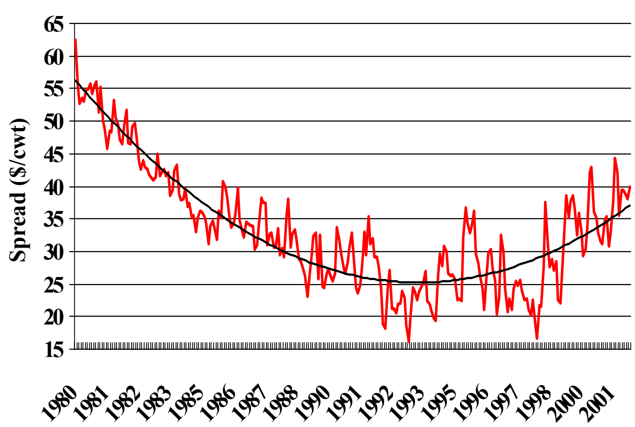
A general downward trend in retail prices may occur, for example, if the upward pressure on prices due to anti-competitive practices is masked or dominated by higher feed efficiency, cheaper feed, and higher slaughter efficiencies. Rather than examining retail prices alone, the farm-to-wholesale price spread (or margin) and the wholesale-to-retail price spread should also be examined for monopsony (buyer) and monopoly (seller) power on the part of meat packers or retailers.

Determination of the exact way or ways in which oligopsony power is exerted would be a mammoth undertaking, requiring extensive data from meat packers. However, we can gain considerable insight into the growing extent of monopsony and monopoly power in the beef and pork industries by analyzing trends in publicly available data on meat price spreads.

Farm-to-Wholesale Price Spreads

Figure 2 shows the monthly farm-to-wholesale price spread for beef, adjusted for inflation using the consumer price index (CPI-U), over the January 1980, through December 2001 time period. Also shown in Figure 2 is a non-linear trend-line, which is highly significant statistically. All data, including the CPI-U, are published periodically in USDA's Agricultural Outlook[2].

Figure 2. Farm-to-Wholesale Price Spread for Beef
USDA data adjusted for inflation



[2] Net farm value is defined as the market value to the producer for live animal equivalent to 1 lb. of retail cuts, minus value of by-products. The wholesale value is defined as the value of wholesale (boxed) beef equivalent to 1 lb. of retail cuts adjusted for transportation costs and by-product values. CPI-U is the consumer price index for all urban consumers. All inflation-adjusted values are expressed in June 2001 dollars.

From Figure 2, it can be seen that the farm-to-wholesale (F-W) price spread for beef trended dramatically downward throughout the 1980s and into the early 1990s. A decrease in the F-W price spread is consistent with efficiency gains (lower unit slaughter costs) in meatpacking in a competitive market. That is, in a competitive market, we expect the F-W spread, which reflects gross revenue to packers, to decrease with unit slaughter cost decreases. The trend in the F-W price spread for beef during the 1980s and into the first few years of the 1990s is thus consistent with the unquestionable efficiency gains in meatpacking during that period in a competitive market. As can be seen in Figures 2, however, the trend in the F-W price spread has been strongly upward since the early 1990s, which is a dramatic departure from the efficiency-driven downward trend in the 1980s.

The trend-line F-W price spread for beef in December of 2001 was 46.9% higher than at the bottom of the trend in late 1993. This increase in the F-W price spread reflects a dramatic increase in the gross revenue to beef packers.

A common argument made by packers to justify the increasing F-W price spread is that they are adding more value. This explanation is easily dismissed for two reasons. First, USDA/ERS calculates the spread for a standard animal so that the spread will reflect only price changes. Second, even if meat quality improves over time, there should be no long-run trend in the F-W spread for given slaughter costs.

Meat packers claim that they are realizing efficiency gains by moving to larger and larger slaughter operations. Moreover, they claim that unit slaughter costs are actually less for the leaner animals now produced. Realization of these efficiency gains in a competitive environment would result in the F-W spread continuing to trend downward, not upward as it has in the mid to late 1990s.

The strong upward trend for much of the 1990s and into 2001 is much too strong and too persistent to be explained by short-term spikes in prices, spreads, production, or competition with other meats.

The F-W price spread for beef was analyzed in an article published by USDA/ERS in the June-July 2000 issue of Agricultural Outlook. This report noted the upward spike in the F-W spread in the last half of 1999 and compared it to previous short-term spikes in 1980, 1991, and 1995.

After noting that previous spikes were short-term, the USDA report stated:

"... a long-term increase would be troubling. Increasing concentration in other sectors of the economy has often reflected intense competition

and frequently led to falling costs and prices for the concentrating firms. But after an industry consolidates, when few firms face each other in a stable environment, competition may often become less intense."

The USDA report concluded by asking the question:

"As consolidation is completed, will packers successfully limit price competition among themselves and maintain 1999's high spreads?

As can be seen from Figure 2, high price spreads in 1999 have not just been maintained, but they have actually trended upward in the two years since this report was published. Since spikes in the F-W price spread for beef due to exogenous demand and supply shocks normally last only 2-3 months, the answer to the question posed by USDA is an unqualified yes. Packers have indeed limited price competition and maintained the high F-W spreads. The real question is why hasn't USDA stepped forward and enforced the Packers and Stockyards Act, which was intended to prevent anti-competitive practices that would lead to this situation?

In summary, exertion of oligopsony power is the only plausible explanation for the strong upward trend in the F-W spread for beef[3].

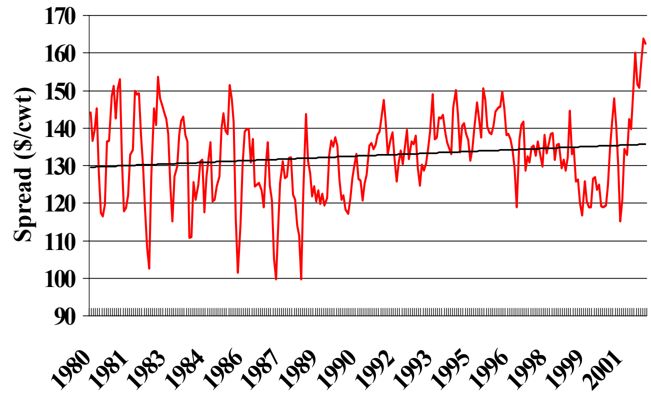
Wholesale-to-Retail Price Spreads

The Wholesale-to-Retail (W-R) price spread for beef is shown in Figure 3. Unlike the F-W margin for beef, there is no discernible U-shaped long-term trend in the W-R spread, although there is a slight upward trend in the W-R spread.

The W-R spread can be seen to be more volatile in the 1980s than in the 1990s. In the early 1990s, the W-R spread swung upward somewhat, and then swung downward somewhat in the late 1990s.During the 1990s, the W-R spread for pork (not shown) tended to move in opposite directions from the W-R spread for beef. Such a linkage between the W-R spreads for beef and pork has been explained by joint costing in meat retailing. But even accounting for joint costing of beef and pork, there is no appreciable long-term trend in the W-R spread for beef during the 1980s and 1990s. However, the recent upward spike stands in stark contrast to the two previous decades. As can be

Figure 3. Wholesale-to-Retail Price Spread for Beef

USDA data adjusted for inflation



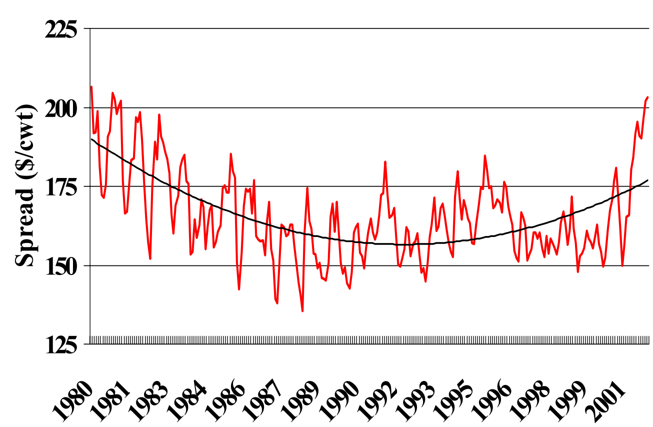
seen, the W-R spread for beef has suddenly shot up, taking the unit gross revenue to beef retailers to unprecedented levels.

The strong upward spike in the W-R spread, which has continued for almost a year, suggests that monopoly power has been and is being exerted by meat retailers.

Figure 4 shows the farm-to-retail (F-R) spread for beef. A downward trend in the F-R spread during the 1980s is apparent from this figure. However, the strong upward movement during the last few years due to exertion of monopsony and monopoly power has negated the efficiency gains in meatpacking and retailing that occurred during the 1980s.

Figure 4. Farm-to-Retail Price Spread for Beef

USDA data adjusted for inflation, with trend-line



[3] It has been suggested that the F-W price movements are due to factors such as price dynamics, competition with other meats, production levels, and expansion versus contraction phases of the industry. However, I have done extensive econometric analyses of beef, pork and poultry spreads, including these factors as candidate explanatory variables. Although some of these variables are statistically significant in explaining the F-W spread for beef, the non-linear u-shaped trend remains highly significant in their presence.

USDA/GIPSA Captive Supply Studies

The Grain Inspection, Packers and Stockyards Agency (GIPSA) of USDA funded several studies of consolidation, with special reference to the effects of captive supplies on the cash market price for beef, the latest of which is the Panhandle study by Schroeter and Azzam. Although the GIPSA studies continue to be cited by economists who are defending consolidation and concentration in meatpacking (e.g. Fuez, et al; and Ward), it is critical to note that even the most recent GIPSA study used data only through 1996. It is curious, to say the least, that GIPSA, the agency charged with enforcement of the Packers and Stockyards Act, would seemingly ignore the obvious implications of the strong upward trend in the F-W price spread for beef (Figure 2) which has occurred largely since 1996.

It is also troubling that GIPSA has "studied" the consolidation and concentration issues for over a decade, apparently oblivious to a body of antitrust literature on collusion detection. This literature points out that if the firms understand the range of econometric techniques available to the antitrust enforcement authority, then those firms can calculate the limits of undetectable collusion (e.g. Phlips, p. 131). So, what GIPSA has done with their highly publicized studies is to inform meatpackers of the issues, the data that will be used for analyses, the econometric techniques that will be used for detection, and what constitutes statistical significance and detectable collusion. Perhaps more troubling is that USDA has not used their authority to obtain potentially richer data sets analyzed with much more sophisticated statistical and econometric techniques.

The Well-Being of Society

In a book published in the same year—1921—in which the Packers and Stockyards Act (PSA) was signed into law, Professor Frank Knight maintained that the well-being of society depended on maintaining a balance of: (a) economic efficiency, (b) economic power, and (c) economic freedom. He cautioned that the single-minded pursuit of economic efficiency would be at the expense of economic freedom and an economic power imbalance; nevertheless, economic efficiency has come to dominate the thinking of contemporary economists and also come to dominate public policy, including interpretation and enforcement of the PSA and other antitrust legislation.

In the last few years, in particular, the efficiency gains from consolidation and concentration in meatpacking are arguably quite modest, yet the economic power imbalance worsens and participation in production agriculture increasingly comes by invitation only[4], which is a loss in economic freedom.

Even Adam Smith, patron saint of CEOs, pointed out that there is an inherent instability in a market economy; namely that through natural growth of firms (e.g. Wal-Mart) or through mergers and acquisitions (e.g. Tyson/IBP) that the market system could evolve to monopoly. He added that monopoly would lead to poor management and to higher prices for consumers.
Regulations and enforcement of those regulations are thus necessary for preservation of a market economy.

Concluding Remarks

Food consumers have historically benefited tremendously from efficiency gains resulting from horizontal concentration and vertical integration. But the manifestation of monopsony power several years ago (Figure 2) and now the manifestation of monopoly power as well (Figure 3) may negate efficiency gains realized by beef consumers prior to the mid-1990s.

So where's the Beef? The "beef" is with USDA not enforcing the Packers and Stockyards Act, which was intended to prevent meatpackers from engaging in unfair, discriminatory, and anti-competitive practices, harming both beef producers and consumers.

References

Feuz, D., G. Grimes, M. L. Hayenga, S. R. Koontz, J. D. Lawrence, W. D. Purcell, T. C. Shroeder, and C. E. Ward. "Comments on Economic Impacts of Proposed Legislation to Prohibit Beef and Pork Packer Ownership, Feeding, or Control of Livestock," January 14, 2002.

Kinsey, J. D. "The New Food Economy: Consumers, Farms, Pharms, and Science," Presidential Address to the American Agricultural Economics Association, published in the American Journal of Agricultural Economics, Vol. 83, 2001: 1113-1130.

Phlips, L. Competition Policy: A Game-Theoretic Perspective. Cambridge University Press, 1995.

Schroeter, J. R., and A. Azzam, "Econometric Analysis of Fed Cattle Procurement in the Texas Panhandle," Report to GIPSA in fulfillment of Cooperative Agreement No. 98-PPD-01, November, 1999.

USDA, "Consolidation in Meatpacking: Causes & Concerns," Agricultural Outlook, June-July 2000, pp. 23-26.

Ward, C. E. "A Review of Causes for and Consequences of Economic Concentration in the U. S. Meatpacking Industry," Current Agriculture, Food and Resource Issues, Number 2, 2002, pp: 1-28.

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[4] Kinsey notes that participation in the evolving food system is often by invitation only.