



Cattle Markets, Price Discovery, and Emerging Issues

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The Evolution of Fed Cattle Market Institutions

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Ménard (1995) defines an institution as “a long-standing historically determined set of stable, abstract and impersonal rules, crystallized in traditions, customs, or laws, so as to implement and enforce patterns of behavior governing the relationships between separate social constituencies” (p. 167). In the context of a market, institutions represent the rules of the game: that is, the rules and customs that govern the behavior of and interaction between buyers and sellers participating in that market. Market institutions include not just the formal rules, regulations, and official standards that market participants must observe and follow but also the less formal practices and behaviors that are established over time by custom and consent.

Market institutions develop organically within a given market in response to the needs of market participants. These needs reflect the unique particulars of a given market and may be related to specific attributes of the product, the production process, or the conditions in which exchange occurs. It should come as no surprise, then, that market institutions are not static; they evolve (Loasby, 2000). The specific needs of market participants are subject to change due to the impact of an infinite variety of factors. Market institutions adjust over time to accommodate those changing needs.

Consider the example of the CME Group, one of the world’s largest commodities futures exchanges. For decades, exchange at the CME took place through open outcry, with buyers and sellers interacting directly with one another in the commodity pits on the exchange floor. Open-outcry trading was an effective market institution for well over a century. With technological innovation, though, it became obsolete. Electronic trading – enabled by advances in information technology – has completely supplanted open-outcry trading. While some traders no doubt miss the boisterous excitement of the pits, the market as a whole benefits from the efficiency and accuracy of the new institution of electronic trading platforms.

The cattle industry includes many examples of evolving market institutions. At one time, cattle drives from Texas to railroad terminals in Kansas were a well-known market institution. Most changes have been more mundane: the evolution from carcasses to boxed beef, changes in USDA grades to address changes on both the producer and consumer sides of the market, the shift from voluntary to mandatory price reporting. Each of these changes represents an evolution in market institutions driven by the changing needs of market participants.

Fed cattle pricing practices represent another market institution, and it is an institution that has clearly been evolving rapidly over the past several years. Given what we understand of market institutions, it should be possible to identify the factors that are driving this evolution.

One of the primary factors driving changes in fed cattle pricing practices has been the powerful incentive to reduce per unit production costs. Obviously, each firm in the meatpacking sector has an incentive to try to reduce costs relative to other competing firms. This incentive is compounded by the fact that the industry as a whole faces strong competitive pressure from the poultry and pork industries. Production processes in both of these industries are inherently more efficient than beef production (e.g., more efficient feed conversion, greater potential for production density, shorter time to market). Moreover, these industries have made greater use of non-price coordination (primarily vertical integration in the poultry sector, production and marketing contracting in the pork sector), to capture additional operational efficiencies along the entire supply chain.

In the face of the intense competition from highly efficient pork and poultry production, a primary strategy for gaining efficiency in the beef sector has been to capture economies of size in slaughter and processing operations. According to MacDonald and Ollinger (2005), technological change in the meatpacking sector gave rise to significant size economies. This helped to drive consolidation and an associated increase in the size of beef packing operations beginning in the 1970s. They estimate that processing costs per head were reduced by over 35% by this process of consolidation and increasing size. Kaufman (2000) notes that retail consolidation has also been driven by the pursuit of scale economies to lower costs of production. Large retail firms realize significant economies from dealing with fewer, larger suppliers, thus providing an additional advantage to larger meatpacking firms.

Capturing economies of size in slaughter/processing operations requires not just building larger plants but actually operating those plants as close as possible to optimal (i.e., cost minimizing) capacity (Morrison Paul, 2001). Given the potential magnitude of these economies as well as their importance to packers in maintaining their position in a highly competitive market segment, it is not surprising that the pressure to maintain cattle throughput in packing plants has strongly influenced the evolution of fed cattle market institutions. Specifically, the growth in “captive supplies” in the 1990s, carrying forward to the extensive use of formula pricing today, represents a key means by which packers have attempted to manage cattle throughput in a manner that holds per unit costs down through the consistent realization of size economies (Schroeder et al., 1998).

Strong incentives also exist for feedlots to adopt pricing institutions that reduce the risk of a failed negotiation. At one time, fed cattle were largely traded via auction. This means of trading fed cattle has obviously declined dramatically over many years, a decline that has been driven by desires to reduce transaction costs and to reduce variability in potential cattle quality available at the auctions. Cash transactions for fed cattle are now dominated by direct negotiations between a buyer and feedlot, rather than by multiple buyers bidding on cattle at an auction. These directly negotiated transactions require both buyers and sellers to discover price via bargaining for terms of trade, typically at the feedlot.

Overall, this institutional change (i.e., from auction sales to direct negotiation) has created other risks for feedlots in terms of timing of sales for cattle due to buyer availability. The failure to sell a market-ready pen of cattle results in significant additional costs for a feedlot, as cattle must be held over – at considerable additional feed expense and risk – for at least an additional week. The longer cattle are held beyond their optimal marketing end-point, the greater the cost to the feedlot, not only in carrying costs but also, at some point, in reduced value related to things like undesirable yield grade and carcass weight. As packers have consolidated into fewer, larger units, many feedlots have faced an increasing risk of

negotiation failure due simply to the reduced number of potential buyers. Some sellers, in order to reduce this risk, may be more attracted to alternative marketing arrangements, further reducing negotiated cash transactions.

On both sides of the fed cattle market, the nature of the investments that are required of both packers and feedlots provide a strong incentive for the adoption of alternative marketing arrangements. Williamson (1979) describes the factors affecting long-term relationships between buyers and sellers. When buyers and sellers must make investments in capital assets that have limited alternative uses, a strong incentive for some type of contracting exists. This incentive is heightened in the case where transactions occur repeatedly rather than just occasionally. This clearly describes the situation existing for both packers and feeders. Alternative marketing arrangements that formalize the trading relationship between a packer and a feeder represent an important way for both parties to reduce the risks associated with their highly-specialized investments.

In summary, a number of interrelated factors have moved the fed cattle market toward greater use of alternative marketing arrangements. It is important to understand that these changing institutions have been driven by market factors causing changes in risks and incentives for both buyers and sellers in fed cattle markets. Packers are trying to reduce risks of not having enough cattle in their plants. If the plant does not run at full capacity, their costs per head increases substantially. Likewise, feedlots are trying to reduce risks associated with not being able to market cattle at or near their optimal endpoint. Failing to do so increases feed costs significantly and also increases the likelihood of discounts for undesirable carcass traits. The use of alternative marketing arrangements is aimed at reducing risks and costs per head on both sides of the market. Additionally, these arrangements also indicate specific carcass quality characteristics driven by consumer demands – again, a concern for participants on both sides of the market.

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