



Examining Market Power in the Red Meat Packing Sector

Summary of Phase III Results

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Why the Market Power Study?

In 2006, Dr. Jeffrey Church and Dr. Daniel Gordon from the University of Calgary examined the extent to which the closure of the border to live animals had increased the market power of packers in Canada. This study found that when competitive conditions in Alberta limited the potential buyers for fed cattle to a small number of packers in Alberta market power was increased, but was not consistent with any coordinated exercise of market power by packers.

Since 2006 a tremendous amount has changed in Canadian fed cattle markets. Market access for fed cattle has increased with the reopening of the U.S. border in 2005 to fed cattle and further reduction of technical requirements with the implementation of Rule II that expanded live cattle trade. In addition Canadian red meat packing capacity, which expanded between 2003 and 2006, has seen substantial consolidation and reduction in capacity. The Cargill acquisition of the Better Beef plant was finalized, the Calgary-based Rancher's Beef was closed, the Natural Valley plant in Saskatchewan is no longer processing cattle, the Quebec-based Billette, Gencor and Levinoff operations were closed. Domestic capacity was further consolidated when Tyson sold their Brooks Lakeside operations to XL Foods, which saw Western Canada essentially down to two major packers (Cargill & XL Foods). XL has since closed their Moose Jaw and Calgary facilities.

Reduced competitive bidding due to the reduction and consolidation of domestic packing capacity has been further exacerbated by the implementation of U.S. mandatory country of origin labeling in September 2008. Mandatory country of origin labeling resulted in a reduction in the number of U.S. packing plants bidding on Canadian cattle due to difficulties in managing and segregating these cattle. Reduced competitive bidding has also been a growing concern for primary producers, with quantitative and anecdotal information showing significant increases in packer ownership and/or contracting of cattle in Canada.

The consolidation of the red meat packing sector, recent regulatory and market events, and concerns over further reductions in packing capacity in light of poor profitability and reduced cattle inventories has seen growing concerns raised about packer concentration and the potential impact of market power on Canadian cattle prices and long-term industry structure. Consequently Canfax Research Services, with support from the Alberta Livestock and Meat Agency, initiated a research project to update and expand upon the Market Power study completed in 2006.

Objectives

Key objectives of this study were broken down into three major phases including:

- 1) Examining the changes in market power that have occurred since the border reopened to trade in live cattle in the summer of 2005 and further restrictions were removed with the implementation of Rule II in 2007.
- 2) Provide estimates of the extent of income transfer from feedlot producers to packers and the loss in economic value attributable to the exercise of market power by the packers.
- 3) Evaluate alternative mechanisms to facilitate effective market surveillance, manage the impacts of market power, and guide potential industry and government policy and regulatory decisions moving forward.

A summary of Phase I & II results can be found at:

www.cattle.ca/industry_analysis/asp

Phase III Overview

The potential for the exercise of market power by packers suggests an examination of market surveillance institutions and approaches. Market surveillance institutions have been created to monitor and, potentially, control the exercise of market power in other jurisdictions and other industries. Given COOL and the consolidation of packers in Western Canada it will be important to be well informed

regarding the strengths, weaknesses, and applicability of alternative market surveillance regimes within a Canadian beef industry framework.

This third phase of the completed research project considered alternatives for effective market surveillance. It examines if they can mitigate negative impacts of market power, and provide options for industry and government when making policy and regulatory decisions moving forward that are both practical and result in the least level of intervention necessary.

Mandatory vs. Voluntary Reporting

A particular focus was placed on the potential role for mandatory price reporting (MPR) by packers. It is often argued that mandatory price reporting is a policy that not only allows for the assessment of market power, but also is a policy response to reduce or eliminate market power.

The benefit of MPR (ignoring the cost of implementation) is that it reduces the cost of searching for sellers:

- Better information allows sellers to make better decisions.
- Lower search costs and better information reduces the ability of buyers to exercise market power – by enabling the seller to substitute to alternative buyers.
- Reduces the distribution of prices by reducing the ability of buyers to discriminate against specific groups of sellers.

There are limitations to voluntary reporting:

- There is an incentive for sellers to over-report (only high prices) and buyers to under-report (only low prices). If prices are reported by a small group of buyers or sellers there is a greater possibility that one report can “move” the market.
- Individuals may prefer to keep transaction information confidential if they have concerns that public knowledge would result in a loss of a competitive advantage.

Research in the US prior to MPR being introduced showed that voluntary price reporting did not fully

capture price movements during rapidly changing markets and that feedlots reported prices selectively.

There are 4 issues relevant to the debate of mandatory vs. voluntary price reporting. These include:

(1) The role of price information to resolve uncertainty about market dynamics. If Canadian cattle prices are strongly influenced by price information in cattle future contracts from the CME, more complete information through MPR might not provide much benefit to feedlots.

(2/3) Data quality & possible confidentiality issues. In order to maintain confidentiality in the US MPR system, the system requires that on 60 days of data, at least 3 companies must have operated 50% of the time, and no one company had more than 70% of the volume and no company was the sole reporting source more than 20% of the time. The US MPR program found it could only publish less detailed data than what had been offered under voluntary program and as a result it offers less timely reports on the granular level. This raises the question of if information provided through MPR is actually better for producers due to the level and timing of information available.

(4) Implementation costs. Implementation of MPR would require an oversight body that defined types of prices (i.e. cash, forward contracts, etc.) and follows up to ensure all information is being reported. Even with MPR, market participants could retain the ability to create alternative arrangements outside of the set standard to avoid reporting. Consequently significant administrative infrastructure and oversight is required to achieve the objectives under a MPR system.

Price Transparency & Market Power

Increasing market transparency, through mandatory price reporting, *if timely*, could: (1) improve the efficiency of price adjustments; (2) reduce information costs; and (3) improve the efficiency of the market by reducing bargaining costs.

A buyer is able to more effectively exercise market power if it can discriminate across sellers. Price

discrimination implies the buyer does not offer the same price to all sellers. In this situation, MPR can create price transparency that reduces the opportunity for price discrimination and therefore benefits feedlots that have fewer selling options. In Alberta, these would typically be feedlots to the north of the packing plants. At the same time, it may be possible that prices paid to feedlots with options could decrease, if they had previously cut a better deal with a packer on the condition of keeping quiet.

If packers are not able to price discriminate, due to price transparency or other reasons, by default the feedlots equal-distant between the two packers will become the focus of competition and the feedlots closest to a single packer will be de facto “captive” to the nearest packer. Note, in this situation, supplies are not captive with a contract but captive due to geographical area and are less likely to switch to another packer due to higher transportation costs.

The effectiveness of MPR may depend on how it is implemented and the market structure of the packers. If there are a small number of buyers, attempts to create price transparency may not have the intended effect and instead may make it easier for the buyers to coordinate on pricing. The existence of price dispersion and secret price negotiations/premiums in oligopsony situations is often interpreted as an indicator of competition. It should be noted that when there are few buyers, secret higher price offers by one buyer are more likely to be detected as they have a bigger effect on rival purchases.

Moves in other sectors to increase price transparency have been documented to increase the exercise of market power by making coordination easier as prices become transparent to buyers not sellers.

In 1993 the Danish antitrust authority decided to collect and publish regional prices for two grades of ready-mixed cement. Within a year, prices increased by 15-20%. It was concluded that most of the price increase was not due to supply or demand issues but increased price transparency. The Danish antitrust authority subsequently stopped collecting data and the legislation was amended to remove the emphasis on the importance of creating market transparency.

Following the introduction of MPR in the US cattle market, farmers stated that the program has not improved their bargaining position with respect to packers. Comparing the pre-MPR with the MPR period, research found that the cooperative phases became slightly longer and non-cooperative phases slightly shorter.

Coordinated exercise of market power

Finding market power present in an industry does not mean that there is coordination of market power. The ability to coordinate market power, or not, in an industry is dependent on a number of things.

When attempting to coordinate activities a buyer has an incentive to free-ride on the lower prices or lower purchases of its rivals. So when a firm’s rival restricts their purchases it is profitable to respond by increasing purchases since it anticipates a lower price of acquisition. And when rivals bid lower, a buyer will find it profitable to reduce its price, but not as much, therefore successfully increasing its own supply.

The problem of a coordinated outcome is that it requires policing; usually in the form of detecting and punishing deviations. Hence, secret offers of higher prices or expansions in purchases can be prevented. Firms will not be punished if their deviations cannot be detected.

Reaching an agreement on the terms of coordination is complicated because in Canada buyers reaching an agreement to restrict purchases or reduce prices are subject to review under the *Competition Act*. There are two ways to avoid this:

(1) Buyers still reach an agreement but in a manner that makes it difficult for enforcement agencies to identify;

(2) Buyers do not reach an explicit agreement, but may be able to tacitly communicate and coordinate behavior by simply observing and anticipating the pricing behavior of their rivals.

Integral to this process of negotiating an agreement by signaling through prices is that the prices offered are public information. If they are not, then the process may unravel. The challenge is if there are valuation asymmetries, where buyers may not have very good knowledge of their rival’s valuation (a

packer's willingness to pay for fed cattle). This provides buyers with an incentive to convince their rivals that their valuations are higher.

MPR would not necessarily provide Canadian packers with the ability to coordinate market power, but increase information on what rivals are doing (*if timely*) can potentially present an opportunity for coordination through price signals.

Alternative Marketing Arrangements

Historically, cattle and other livestock were traded on cash (spot) markets but alternative marketing arrangements (AMAs) have grown in popularity over the last decade and are now a major force in the cattle markets of the US and Western Canada. This leads to the following questions: (1) *what is the role of alternative contracting practices*; (2) *what effects do these arrangements have on the potential for the exercise of market power by packers*; and (3) *can market power in the spot markets affect the efficiency of alternative contracting practices*?

The Role of AMAs

The cash market has responded to quality uncertainty with rail pricing. This suggests that the key difference between rail marketing and many AMAs is not the ability to control for quality, but instead the allocation of risk. In return for ex ante fixed premiums packers reduce their uncertainty of supply and feedlots have less price risk.

AMAs also allow packers more flexibility in specifying cattle characteristics with these characteristics set out in the contract or incentives provided to deliver such cattle.

Packers that exercise market power will have an incentive to create captive supplies, which allows them to price discriminate. Since packer owned cattle are transferred at marginal cost, this avoids paying higher prices on infra-marginal units when they expand purchases in any given week. This likely increases production, but the effect on independent producers can be positive OR negative. If suppliers and purchasers freely and voluntarily enter into contractual agreements we have to assume they do so to their own benefit. The concern is how this

affects other suppliers who might prefer to deal on a cash basis. Cash markets exhibit economies of scale and as spot markets thin, producers may face higher transaction costs that may make traditional negotiated cash markets less attractive.

Captive Supplies & Market Power

There are two issues to consider on how captive supplies might increase market power. The first highlights the importance of geographical separation to show that packers may be able to use captive supply contracts to exert market power and depress cash market prices. Because of transportation costs, packers may use contracts to create geographic buffers that reduce competition between themselves. For example, if unable to price discriminate, competition will focus on purchasing from feedlots that are indifferent on who they sell to given their transportation costs. This creates an incentive to convert feedlots between packers (with no clear geographic preference) to captive supplies (potentially through contracts). This use of captive supplies is more likely with higher transportations costs and greater distances between packers.

The second is how contracted cattle whose price is tied to the spot price changes the incentive for the packer to compete in the cash market. Packers with long positions (lots of contracted cattle) will have an incentive to compete less aggressively in the cash market since their losses from offering a higher price will be greater. The extent of this incentive depends on the market power of the packer, the extent of its long position and the elasticity of supply in the cash market. The greater a packers (1) market power; (2) long position; or (3) the more inelastic the supply - the greater the incentive to be less aggressive in the cash market.

The relationship between increased captive supplies and fed cattle prices is unclear in the literature, with some research showing a negative relation with prices declining as volumes increase. Other research shows that efficiencies exist where packers with more AMAs operated at higher volumes, had less variable volumes, lower average total cost per head because of economics of size, higher gross margins and average profit per head. This in turn resulted in

higher prices bid on fed cattle. Other studies show that relationships between packers and feedlots are consistent (static) as transaction costs make it easier for both to deal with a limited number of trading partners.

Implications on Price Reporting

Declining volumes on cash markets raise the questions regarding the accuracy of price discovery and the use of the cash market as a basis for contracts. Recent work in the US showed that cash markets remain important but thinning markets create uncertainty regarding the viability of cash markets as a price indicator for the future. This is important for assessing the usefulness of the current voluntary reporting system in Canada. If 50% of all cattle are sold through AMAs and only 50% to 70% of the cash cattle are reported to Canfax, then small volumes could have strong effects on the observed price and on formula or grid prices that depend on the cash price. This increases the risk of market manipulation by market participants with market power.

The MPR in the US avoids the issue of thinning cash markets by reporting on four contract types (Formula, Forward Contract, Negotiated and Negotiated Grid). These classifications need to be standardized enough to allow for comparability within a category. However, if the standardization is too strict, it could prevent feedlots and packers from entering into new and innovative contracts or it could encourage alternative arrangements to avoid reporting the transaction. For example, packer owned cattle are excluded from reporting and represent ~7% of annual fed slaughter in the US. If this category increased substantially, a significant share of transactions would be excluded from the analysis and could create bias in the MPR results.

As cash markets become thinly traded it can be easier for packers to influence the plant average price, which might be reported by Canfax and might be used in formula contracts. Schroeder and Ward (2006) see this as an argument in favor of MPR. The alternative could be that formula prices be tied to more robustly traded reference markets, like the wholesale market.

Conclusions

An MPR system is unlikely to facilitate enhanced coordination by the two packers in western Canada. On the other hand it might have the effect of reducing the scope for price discrimination and the exercise of buyer market power in local markets (if present).

There is no evidence to link AMAs to the exercise of market power in Alberta. Instead the rationale for AMAs to manage price risk seem much more important. ***The reason AMA's are currently not an issue in terms of market power is the absence, at the aggregate level, of substantial market power by the two packers (see Phase I&II Results Summary).*** The market power exercised in different regions within Alberta was not examined and could be different given geographical incentives. As with the issue of the benefits of MPR, identifying whether there is geographic price discrimination within Alberta would appear to be an important consideration.

Extending price reporting to non-cash sales would also facilitate competition in determining the grid and quality premiums and discounts. Given the increased use of AMAs, if the base price is publicly available through voluntary reporting or MPR, the next step is to extend reporting to non-cash sales by making the quality premiums and discounts negotiated between the feedlot and packer more transparent.