Non-Competitive Cheese Storage Behavior Raises Price Instability

When positive, optimal competitive stocks imply that the marginal cost of storage equals the discounted expected price change, thus providing an arbitrage relationship for commodity prices over time. But if markets are not competitive, what are the implications of the exercise of market power for storage activities?

Chavas' paper develops a model of economic behavior for storage activities. The model allows for uncertainty and non-stationarity and it covers situations of perfect competition as well as imperfect competition.

The approach was applied to the determination of commercial stocks for American cheese in the U.S. American cheese was chosen because of previous evidence of market power in the American cheese market.

Chavas cites the 1996 report on the National Cheese Exchange by his colleagues, Willard "Fritz" Mueller and Bruce Marion, who found evidence that a few large American cheese processors had been in a position to affect market prices and exercise market power.

This raises the possibility that private stock-holding may have been used in a non-competitive way, Chavas explained. If so, the decision rule used to choose private American cheese stocks would not be the competitive decision rule.

For this study, data on the American cheese market were obtained from the U.S. Department of Agriculture (USDA). They consist of 157 observations on monthly prices and stocks for the period 1993 to March 2006.

During this study period, government stocks of American cheese had been negligible, it was noted. American cheese stocks have been held almost exclusively by private firms since 1993.

Price data used in this analysis involve monthly prices for 40-pound Cheddar blocks. The stock data are for US commercial stocks of American cheese at the end of each month. Stock data varied from 297 million pounds to 628 million pounds during the sample period.

A later finding statistical evidence of non-competitive storage in the US American cheese market contributed to price instability, according to general, competitive storage activities contribute to reduced stock fluctuations and increased price instability.

Much research has been conducted on the economics of commodity storage, the report noted. In general, competitive storage activities tend to stimulate demand in periods of low prices (by increasing stocks) and increase supply in periods of high prices (by reducing stocks).

Global Cheese Production Keeps Rising, Led By Established Markets; World Trade Has Been Flat

Brussels, Belgium— Global cheese production is continuing to grow, and this increase is the strongest in the established markets with a big volume, according to The World Dairy Situation 2006, recently released by the International Dairy Federation (IDF).

In the European Union (EU), which accounts for half of the world's recorded cheese output last year, production increased by more than 100,000 tons. This growth is continuing in 2006 particularly, but not only, in some of the new member countries. Growth is mainly the result of growing demand from domestic markets.

The situation in the US and many other traditional cheese countries is similar, be it in Eastern Europe or in Latin America, where production has increased mainly to cover demand from home markets. The one major exception is Argentina, where improved export opportunities are also a driving force for growth.

In Oceania, the trend in cheese production has not been growing in recent years. This can be attributed both to stagnating milk supplies, which had mainly been used for other dairy products, and to the preference in Europe and other regions for products of domestic origin.

In the traditional markets themselves, the greater part of production growth is observed in the field of commodity cheeses: Dutch types, Cheddar, Mozzarella, Feta-like cheeses and the like. A high share of these cheese types is used for processing in other food and not only for direct consumption as natural cheese, the IDF report noted.

The total volume of world cheese trade was unchanged last year, at 1.44 million tons. After reaching a peak in 2003, world cheese trade declined in 2004 as a result of the EU enlargement. Cheese trade did not recover last year and a return to the usual growth is not expected.

Wal-Mart's Impact Is Lower Prices For Both National, Private Brands; Especially Dairy

Amherst, MA— The effect of Wal-Mart Supercenters in three New England states is to reduce prices by 6 to 7 percent for national brand goods and 3 to 7 percent for private label goods. Price declines are most significant in the dairy and dry grocery departments.

Those findings are contained in a recently released report, The Effect of Wal-Mart Supercenters on Grocery Prices in New England. Authors of the report are Richard J. Volpe III, a graduate student in the department of agricultural and resource economics at the University of California, Davis; and Nathalie Lavoie, of the department of resource economics at the University of Massachusetts-Amherst.

Wal-Mart has been a popular topic of discussion and debate for more than a decade, the report noted. The company’s "meteoric rise" to dominance in food retailing has motivated efforts to understand the effects of Wal-Mart Supercenters on consumers, competitors, and the economy in general.

The primary objective of this study was to estimate the competitive effect of Wal-Mart Supercenters on prices at conventional supermarkets; in other words, the extent to which Supercenters bring about a reduction in their rivals’ price.

Supercenters are Wal-Mart stores that offer entire lines of groceries in addition to all of the usual wares found at conventional Wal-Marts. By the end of 2003, the year in which Wal-Mart became the largest food retailer in the US, the company had 1,376 Supercenters in the US, with over 1,000 more planned by 2008.

Wal-Mart Supercenters follow a different pricing strategy than most supermarkets, which may affect how supermarkets compete in price when a Supercenter is present, the study explained. A 2004 Wal-Mart stores use

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The exercise of market power.

**Cheese Storage**

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**U.S. American cheese market.** Chavas examined the nature and extent of the “distortions” created by the exercise of market power.

This was a difficult task, he explained, since storage activities are only parts of the economic activities affecting marketing market dynamics. First, this requires information on the temporal evolution of production and consumption decisions.

Second and perhaps more importantly, this requires information about how market participants anticipate the future. This involves a large number of possibilities.

Under some scenarios, a monopoly producing a storable good may not be able to exercise its market power. Alternatively, the strategic use of inventory can be used to enforce collusion.

Finally, the amount of information available to each market participant is always relevant. If information is costless, then a rational expectation equilibrium can be justified.

However, if information is costly, then the information obtained by each market participant would depend on its cost.

According to the study, the largest relative excess marginal revenue due to the exercise of market power amounted to 6.4 percent of the market price. In other words, under competitive storage, the market price could have been 6.4 percent lower in May 1999, holding all other factors the same.

This percentage is significantly different from zero, reflecting the price distortion generated under imperfectly competitive storage. However, the exercise of market power in storage activities “appears to be moderate,” Chavas found.

This seems to be the case when considering that 6.4 percent is the largest relative simulated price distortion obtained within the sample period. To further evaluate the implications of the non-competitive price distortions, Chavas simulated the implications of the exercise of market power for storage activities. Imperfectly competitive storage differs most from competitive storage in periods when stocks reach either a maximum or a minimum.

This is expected; these are situations where the path of stock changes varies most, Chavas explained.

Imperfect competition tends to reduce stocks when stocks get close to a maximum, because future stocks are then anticipated to decline.

And imperfect competition tends to increase stocks when stocks are close to a minimum, because future stocks are then anticipated to increase. This illustrates how the effects of market power on stock holding vary with market conditions. Chavas noted.

The ability of stocks to buffer anticipated fluctuations in supply/demand conditions declines when market power affects storage decisions. This finding suggests that imperfectly competitive storage has contributed to increased price instability in the U.S. cheese market.

Chavas did point out that his structural analysis had its limitations. For example, he did not explore the strategic use of stocks in conjunction with joint production activities under imperfect competition.

There is a need for further research to explore such issues. Also, his econometric analysis focused on storage behavior in the U.S. American cheese market, but there is a need for additional research exploring the nature of storage competition in other markets, he concluded.

**Latest WMMB Print Ads**

**Feature Cheese Makers Joe Widmer, Mike Matucheski**

**Madison**—Some of Wisconsin’s top cheese makers star in a new print campaign sponsored by the Wisconsin Milk Marketing Board slated to appear in popular national publications beginning this month.

The campaign is not only designed to spotlight the state’s specialty cheeses, but the talented artisans who create them as well.

The ads will appear in magazines like Food & Wine, Saveur, Midwest Living, Cooking Light, Cottage Living, Midwest Living, Southern Living, Real Simple and Better Homes & Gardens.

The initial ad starred Mike Matucheski, a cheese maker at the Antigo Cheese Company in Antigo, WI. The ad copy illustrates the commitment of Wisconsin’s cheese makers: “He’s been making Wisconsin cheese for 30 years. Except for that one week when he had to go on his honeymoon.”

The latest ad set to launch this month features third-generation Master Cheesemaker Joe Widmer of Widmer’s Cheese Cellars in Theresa, WI.

Widmer’s ad speaks to the lifelong dedication of many of the state’s cheese makers: “A Wisconsin cheese maker can spend a lifetime perfecting his craft. Much of it spent trying to resist the urge to eat all the cheese.”

“Our cheese makers are the heart and soul of Wisconsin’s cheese industry and it is their work that has made Wisconsin a leader in the specialty and artisan cheese movement,” said Bill Drew, WMMB’s vice president of marketing services.

**Simply Unique**

Tri-Clover Unique 7000 Series—look closely, no welds!

From a stainless steel disc...

The one-piece body of the Unique 7000 starts as a 316L steel disc. This is deep drawn and pressed to form the finished body for a new generation of Tri-Clover single seat valves.

To a Unique valve body...

Designed to meet the highest market standards, the annealed body of the Unique 7000 has an ideal surface finish with no welds. Forging the valve body from a single disc also ensures there are no porosities.

To a Tri-Clover Unique 7000 Series...

Hygiene and safety are crucial, the Unique 7000 is the perfect solution. Modular in design for maximum flexibility, and with a bell-shaped design for gentle product treatment and optimum cleanliness, it will give you years of reliable operation, with low life-cycle costs.

To find out more about the Tri-Clover Unique 7000 Series visit: www.alfalaval.com/unique