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US International Trade Commission Releases New MPC Study

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Introduction

One of the most controversial issues facing the U.S. dairy industry is imports of milk proteins. Specifically, U.S. dairy farmers have charged that imports of casein, caseinate, and Milk Protein Concentrates (MPC) lowered U.S. milk prices and farm income, and increased government purchases of nonfat dry milk under the Dairy Price Support Program (DPSP) during 2002-2003. They also noted that MPC imports do not face a tariff rate quota system (TRQ) like imports of nonfat dry milk do, and that some of the imports of MPC are subsidized by the European Union (EU). Thus imports of MPC's and other dry proteins have been characterized as "unfair." Dairy farmers lobbied the U.S. Congress to introduce legislation that would apply a tariff rate quota system to MPC's, casein, and caseinates.

The U.S. Senate's Committee on finance requested that the U.S. International Trade Commission (USITC) conduct an investigation into the competitive conditions of various milk proteins. The USITC held a hearing in December 2003 and released a report (USITC May 2004). That report concluded in part that the EU was a major supplier of low-protein MPC (less than 70 percent protein). This product was blended from nonfat dry milk and casein and was in fact subsidized by the EU. The study also noted that low-protein MPC more directly substitutes for U.S. produced nonfat dry milk than higher-protein MPC's made using ultrafiltration technology.

The USITC investigation analyzed imports of MPC into the U.S. by origin and by grade (less than, or greater than 70 percent protein). They found that MPC imports grew from 26,900 metric tons in 1998 to 49,800 metric tons in 2000, fell to 31,800 metric tons in 2001 and rose to 41,300 metric tons in 2002. During the period 1998-2000 the EU's share of MPC imports to the U.S. ranged from 42-53 percent, most of which was low-protein MPC.[1] By 2001 and 2002 the EU's share of MPC imports to the U.S. fell to 17-24 percent.

One of the questions left unanswered by this initial USITC report was what factors resulted in increased imports of low-protein MPC into the U.S during 1999 and 2000, and what factors resulted in a reduction during 2001 and 2002. More specifically, were there any government policies in the EU and in the US that contributed to this shift in trade? There questions were addressed in a recent USITC study (USITC October 2004). The objectives of that study were:

1. Develop a new variable to reflect U.S. and EU dairy policies that contributed to EU exports of MPC to the U.S.,
2. Develop and estimate an economic model that reflects the relationship between this new policy variable and U.S. imports of MPC from the EU, and
3. Use the statistical model to test the hypothesis that both U.S. and EU policies contributed to greater U.S. imports of MPC's from the EU.

Our initial review of this study is that they did a very good job of explaining why the U.S. imported so much low-protein MPC during 1999 and 2000. Specifically they identified

[1] For example, in 2000, of the 20,900 metric tons of MPC imports from the EU, 85 percent was MPC 40-69.

the fact that U.S. protein prices were well above world prices (EU export prices), that the DPSP resulted in a high and inflexible domestic price, and EU subsidies contributed to an advantage for EU processors to export low-protein MPC to the U.S. On the other hand, the USITC used a statistical procedure to measure the relationship between these factors and greater U.S. imports of MPC from the EU. Unfortunately, the results were less robust than the initial evidence would suggest. Still, there was a strong relationship between the policy variable they designed and U.S. imports of EU MPC's.

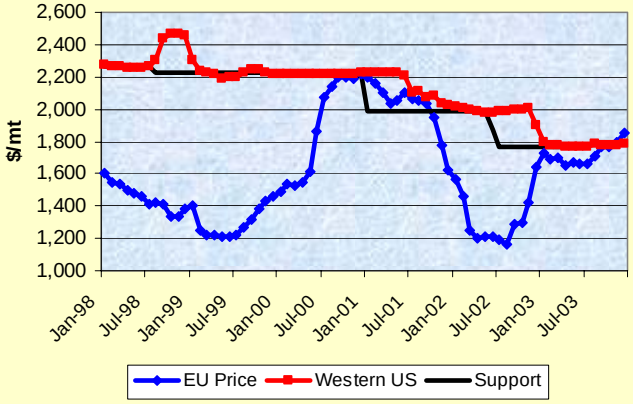
U.S. and EU Dairy Policies

The most interesting aspect of this new USITC study is that it suggests that the intersection of U.S. and EU policies and world market conditions contributed to greater imports of low-protein MPC from the EU. In other words, one could not simply charge that EU policy alone was responsible for this increased trade.

The DPSP is one tool used in the U.S. to support the farm price of milk. This program operates by allowing the Commodity Credit Corporation (CCC) to purchase surplus quantities of butter, nonfat dry milk and cheese from the U.S. market at fixed prices (called CCC purchase prices). These commodity support prices are linked to a "milk support price" via formulas. The idea is to support the price of manufacturing milk by direct purchases of key dairy commodities. This program has been in existence since the 1950's because it is perceived to be both simple to operate and more cost effective than direct producer support.

In recent years the only commodity purchased by the U.S. has been surplus nonfat dry milk. Despite a reduction in the CCC purchase price of nonfat dry milk from $1.0032 per pound in 2001 to $0.80 per pound in 2002, CCC purchases of surplus nonfat dry milk continued to increase from 148,000 mt in 1998 to 374,000 mt in 2002 (Table 3-3, USITC study, May 2004). Not only has this program acted to support the domestic price of nonfat dry milk, but it has also created a price wedge at times between a high rigid domestic price in the U.S. and a low world price. This occurred in 1998-2000 and again in 2002 (Figure 1).

Figure 1. World Nonfat Dry Milk Prices



In the EU, the Common Agricultural Policy (CAP) creates incentives to produce, process, consume and export milk and dairy products. The USITC study (May 2004) reviewed the EU policies that impacted dairy producers and processors during period 1996-2002. Relevant policies include the target price for milk, the intervention price for butter and nonfat dry milk, delivery quotas for milk, high tariffs and TRQ's on dairy product imports, production aid for skim milk and nonfat dry milk used in animal feed, production aid for skim milk used in casein production, processing support for butter used in food manufacturing, and export policies. According to the USITC, "these policies influenced management decisions by EU dairy processors seeking to maximize the return to a fixed milk supply by adjusting production to the most profitable production mix."[2]

The staff of the USITC interviewed EU processors and discussed their decisions to process low-protein MPC for export to the U.S. According to the USITC there were three options for disposing of surplus nonfat dry milk in the EU during the period 1996-2002. The first option was to sell nonfat dry milk into EU intervention at the intervention price. However this option was only feasible during the period April 1 – August 31 each year. The second option was to export nonfat dry milk at world prices and apply for export refunds. This option, however, required an export refund license which was difficult to get for a number of reasons, including restrictions on export subsidies imposed by the World Trade Organization. A third option was to blend nonfat dry milk with casein to produce MPC 42 (42 percent protein) for sale to the U.S. MPC 42 is similar to U.S. produced nonfat dry milk in terms of market price, functionality and protein level. The U.S. price for nonfat dry milk was supported well above the world market price in many years because of the DPSP, thus making the U.S. an attractive market. And, by producing MPC 42, EU processors would qualify for alternative export refunds[3] and production subsidies on the casein used to produce MPC 42. Thus EU processors had a number of incentives to process and sell MPC 42 into the U.S. market rather than sell nonfat dry milk into EU intervention or world markets. According to the USITC, "not only did these economic rents provide the opportunity for EU milk protein processors and exporters to increase revenues, they provided opportunities for U.S. milk protein end-users to reduce their cost of milk protein."

USITC Model

The USITC created a policy variable called POTREV that reflected both the gap between U.S. and world prices and EU subsidies that applied to the sale of MPC to the U.S. The price of nonfat dry milk was used as a proxy for the price of MPC 42 since both were similar products. Thus the EU export price for nonfat dry milk was a proxy for the world price of MPC 42. The USITC then developed a statistical model to evaluate the relationship between this policy variable and U.S. imports of MPC from the EU.

The variable POTREV was specified to reflect revenue from the sale of MPC 42 to the U.S. over and above revenue from sales to world markets. The variable is as follows:

$$POTREV = (PCCC_{nfdm} + 0.9*EUREF_{nfdm} + 0.1*EUSUB_{casein} - TRANS) - PW_{nfdm}$$

[2] USITC, October 2004, pg. 7.
[3] According to the USITC, the EU export refund program applies to dairy ingredients used in manufactured products, called non-Annex I products.

where $PCCC_{nfdm}$ is the U.S. CCC purchase price for nonfat dry milk, $EUREF_{nfdm}$ is the EU export refund on nonfat dry milk in U.S. dollars, $EUSUB_{casein}$ reflects the production subsidy on casein in U.S. dollars, TRANS reflects shipping and U.S. import costs, and PW_{nfdm} is the EU export price of nonfat dry milk.

For example, during the fourth quarter of 2002, the CCC purchase price of nonfat dry milk was $1911/mt, 90 percent of the EU export refund on nonfat dry milk was $622/mt, 10 percent of the EU casein production aid was $199/mt, shipping and import costs were estimated at $120/mt, and the world price of nonfat dry milk (Western Europe) was $1353/mt. Thus gross potential revenue was $2732/mt and net potential revenue, or POTREV, was $1259/mt.

The relationship between the new policy variable POTREV and U.S. imports of MPC 42 from the EU was fairly good, producing a correlation coefficient of 0.57. Generally speaking imports were more erratic than the POTREV variable. Monthly imports of MPC 42 gradually increased from January 1996 through mid-2000 and POTREV grew from roughly $1000/mt to $2000/mt from January 1996 – mid-1999. Then both imports and POTREV declined significantly from mid-2000 through October 2001, and rebounded again in 2002. The statistical model attempted to validate these results. Generally speaking, the statistical results indicated that while the POTREV variable did result in changes in import levels, there was a lag in terms of response. Roughly 39 percent of the variation in MPC imports was driven by movements in POTREV during an 18-month horizon. A more direct estimation method (not using a Vector Autoregressive model), however, may show the same amount of variation over a shorter time horizon (i.e. less than 18 months).
The USITC study reached the following conclusions:

- U.S. imports of MPC from the EU did consist of low-protein MPC blended from nonfat dry milk and casein that was subsidized by export refunds and casein production aide.
- These subsidies alone were not sufficient to induce trade between the U.S. and the EU. Other factors were important, such as a growing gap between the static government supported U.S. price of nonfat dry milk and the more volatile world market price. In addition, willing buyers in the U.S. that wanted to lower their cost for milk proteins was also required.
- The factor that contributed the most to the large gap between the U.S. and world market price for nonfat dry milk was the U.S. Dairy Price Support Program. The CCC purchase price for nonfat dry milk under this program does not adjust to changing world market conditions.
- EU policies affecting the competitiveness of milk protein in the U.S. market should not be analyzed in isolation of U.S. dairy policies when investigating their impact on U.S. imports of MPC.

Conclusions

The EU has made a number of changes in their dairy programs in recent years that will likely result in less skim milk powder going into EU intervention programs and onto global markets. Some of these changes were reviewed in the first USITC study (May

2004). In the U.S., however, the DPSP has changed very little over the years. This program provides a disincentive to product MPC in the U.S. market. It also creates an incentive for U.S. processors to over producer nonfat dry milk in some years and for the U.S. government to purchase surplus quantities of nonfat dry milk. The U.S. government thus becomes a seller of last resort of nonfat dry milk to world markets. When world prices for nonfat dry milk are high relative to the CCC purchase price of nonfat dry milk (i.e. 2004) the U.S. becomes an exporter of nonfat dry milk and incentives for importing low-protein MPC are minimal. However, when world prices for nonfat dry milk fall below the CCC price (i.e. 1999 and 2000) the U.S. imports more low-protien MPC and accumulates domestically-produced nonfat dry milk in the CCC.

The problem is that the DPSP ignores changing global market conditions and opportunities to produce casein products and MPC in the U.S. One policy proposal is to change the DPSP to allow more subsidies to be used to produce these products here. Another option, one that could be considered in the upcoming Farm Bill debate, would be to gradually phase out the DPSP by reducing the support price of milk and to replace this program with a more targeted support program for dairy producers. A new support program for dairy producers could be designed to be production neutral and could focus on achieving other aims (i.e. environmental concerns, supporting small farms, farming near urban fringes, etc). This is the approach that is being used in the EU. These policy changes could allow the U.S. protein market to operate more efficiently and would eliminate much of the incentive to import MPC.

References

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