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Milking the Customers The High Cost of U.S. Dairy Policies

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Executive Summary

The U.S. dairy program, administered through federal and state governments, subsidizes milk production and regulates dairy prices. The current system costs taxpayers more than \$4 billion per year in subsidies and adds millions of dollars to the grocery bills of American consumers and to the costs of food product manufacturers.

By boosting prices, the dairy program encourages overproduction. It also penalizes more efficient farmers in the futile attempt to prop up smaller dairy farmers and stem the tide of decades of changes in the dairy market.

In order to preserve domestic prices above the world prices for dairy products, the U.S. government maintains prohibitively high tariffs on imported dairy products. That invites scorn and retaliation from our trade partners and is one more agricultural program that exposes the United States to charges of hypocrisy as it seeks to paint itself as a country in favor of free markets and opportunity for all.

A better policy would be one that allows farmers to make their living, like other entrepreneurs, from markets rather than a government check. As Congress prepares to draft a new farm bill, world dairy prices are unusually strong. Thus, this is the perfect time for the government to fundamentally reform dairy policy in the United States with minimal "disruption" to dairy farmers.



The significant costs of supporting dairy farmers demand fundamental reform of the current policy.

Introduction

The American dairy industry operates under one of the most complicated programs in U.S. agricultural policy. Using a complex system of price supports, dairy market loss payments, federal and state marketing orders, classified pricing, and export subsidies, the government supports the dairy industry from behind a tariff wall designed to insulate U.S. dairy producers from international competition and to prevent the entire house of cards from crashing down.

By keeping prices artificially high, guaranteeing income supports, and preventing import competition, U.S. dairy farmers produce dairy products regardless of market demand. That encourages overproduction, which puts further strain on the price-support system and the stocks of dairy products the government must buy to maintain it. Consumers of dairy products and food processors who use dairy products as inputs pay above-market prices, which creates welfare losses. Taxpayers must foot the bill—to the tune of more than \$4 billion per year—for dairy programs that provide over 40 percent of dairy farmers' incomes and depress world prices through exports of subsidized dairy products.

The dairy program in the United States is partly a reaction, and certainly a key contributor, to the gross distortions in world dairy markets. The global dairy trade is characterized by very high tariffs and restrictive tariff rate quotas, even after progressive liberalization from previous multilateral trade negotiations. The global market for dairy products is, consequently, "thin," in that only 7 percent of global dairy production (measured in milk equivalent terms) is traded. Exports are dominated by a few main exporters, so fluctuating supplies from those countries cause volatile movements in prices.

The Doha round of trade talks among World Trade Organization members, suspended indefinitely, could have made inroads to correcting the inefficiencies in world agricultural markets, including dairy. For example, WTO members had agreed at the Hong Kong ministerial meeting in December 2005 that they

would cease all export subsidies by 2013. That agreement was meaningful because dairy export subsidies, especially from the European Union, are a major contributor to global dairy market disarray. But that pledge may be abandoned unless the Doha round can be revived.

Congress is due to draft a new farm bill in 2007. That presents an opportunity for policymakers to play their part in correcting the distortions in dairy markets at home and abroad. It is an opportunity that Congress can seize regardless of what, if anything, eventually happens in the Doha round. By significantly reforming the U.S. dairy program, the government could reduce the burden on taxpayers and consumers, including downstream industries in the food-processing sector. Current policy contributes to disarray in world markets for dairy prices, aggravates our trade partners, and invites retaliation from them in the form of dispute settlement action. It also contributes to the rancor over global trade liberalization and therefore is a burden to U.S. consumers and industries that would benefit from freer and more open markets in other sectors. Almost one third of the amount that the United States is allowed to spend on trade-distorting support is spent on dairy programs. The significant costs of supporting dairy farmers demand fundamental reform of the current policy.

This study will provide a background on the U.S. dairy program: how it began, its objectives, and how its various elements contribute to market distortions. The costs to consumers, taxpayers, and trade partners will be explored. The study will conclude by suggesting changes to the dairy program that would better serve America's interests.

A Dairy Program Designed for Another Era

Like many of the commodity programs in place today, U.S. dairy policy originated in the 1930s. The dairy price-support system was authorized by the New Deal-era Agricultural Adjustments Act of 1933, which was part of a broad program to control supplies and prices

paid to producers. The depressing economic conditions of that time, combined with a lack of processing and storage capacity, led Congress to create the Federal Milk Marketing Order system (explained below) in 1937. In 1949, Congress made the milk price support program permanent, with the ostensible purpose of assuring an adequate supply of milk and a level of farm income to maintain productive capacity sufficient to meet future needs.

The 2002 Farm Bill (more formally, the Farm Security and Rural Investment Act of 2002) removed the permanent authority given by the 1949 act, but did renew the program until the end of 2007. There have been changes in the milk price support program over the years, bringing it to a lower "safety net" level, and changes in the minimum prices of butter and skim milk powder (also called nonfat dry milk). Congress and the U.S. Department of Agriculture have regularly tinkered with the federal milk marketing orders (which establish minimum prices that handlers must pay for milk). However, the type of support given to the U.S. dairy industry is largely unchanged since the early 1930s, and the market remains extremely distorted.

The Federal Agriculture Improvement and Reform Act of 1996 reduced the dairy supports and specified that they should be completely eliminated in 1999.² However, falling dairy prices in the late 1990s saw Congress authorize emergency dairy support in two steps to the end of 2001, and then to the end of 2007 through the 2002 Farm Bill.³

If the nature of government intervention is largely unchanged from the depression era, the dairy market itself is not. Shifts in consumption patterns, technology, and production methods have made the price controls and other interventions of the government increasingly damaging. On the demand side, consumption of dairy products has changed from primarily fluid milk to more cheese and processed products. In the 1930s, fluid milk made up over 60 percent of the total amount of milk sold, whereas only 36 percent of milk was consumed in fluid form in 2002.⁴ Additionally, consumption patterns have shifted from retail (direct) sales to restaurant and

food processor use. The federal milk-marketing orders impose higher costs on consumers who live further from certain milk producing areas. The shift in consumption from highly perishable, fluid milk to more processed products has led to an increase in demand for ingredients such as milk solids and protein products. The current price support system, with its emphasis on fluid milk products, discourages farmers from producing those niche products experiencing growing demand.

On the production side, there has been an increase in the average farm size and consolidation of the industry, with more of the nation's milk being produced by fewer, but larger, farms. Since 1980, the number of dairy farms has fallen by over 70 percent. There are fewer dairy farms overall, but the average size of dairy farms is increasing: from an average herd size of about 30 cows in 1980 to more than 100 milk cows today. Technological change, economies of scale, and increased productivity have led to a large concentration of production: 3 percent of all dairy farms (those with more than 500 cows) produce over 40 percent of all milk in the United States.7 A similar trend can be seen in processing, manufacturing, and distribution plants, where plants have become larger and fewer.

There has also been a regional shift in dairy production: less expensive land, larger access to labor and feed, and a more favorable climate have led to a shift to the west and southwest of the country. California has been the largest milk-producing state since 1994, overtaking traditional dairy areas in the Upper Midwest and Northeast. Improved processing, transportation, and storage techniques mean that dairy markets are regional, if not national, in scope.

In an effort to prop up the less productive areas of the country, policies such as the federal milk-marketing order system stifle innovation and prevent the most efficient producers from growing. And the original goal of the dairy program—to ensure adequate supply of milk—is no longer relevant. Indeed, the USDA states that "[the] market . . . is growing more slowly than milk production capacity."

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Objectives of the Dairy Program

U.S. dairy policy is pursued through two somewhat linked objectives: price or income support and regulated or "orderly" marketing. Price and income support are provided by the Milk Price Support Program, the Milk Income Loss Contract, import barriers, and the Dairy Export Incentive Program. Federal and state marketing orders regulate markets.

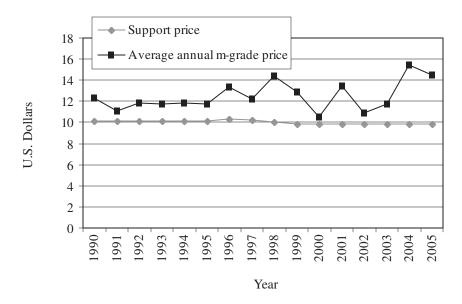
Price Support

Under the Milk Price Support Program, also called the milk support purchase program, the Commodity Credit Corporation will buy any amount of cheese, butter, and nonfat dry milk offered for sale at specified prices (currently \$1.05/lb. for butter, \$0.80/lb. for nonfat dry milk, \$1.1314/lb. for block cheddar and \$1.1014/lb. for barrel cheese) from processors. The MPSP is designed to ensure that the average plant that produces those items will be able to pay dairy farmers the announced support

price for the milk they supply. Instead of buying fluid milk to support the price, the CCC thus indirectly places a floor on the price of manufacturing milk, by creating guaranteed demand for the products for which it is an input. The 2002 Farm Bill set the support price for milk at \$9.90 per hundredweight (hundred pounds) until 2007.

Although the prices that the CCC will pay for products are allowed to be reviewed semiannually, the prices are, according to the Office of Management and Budget, "out of alignment with each other and their respective market prices." That is to be expected when governments intervene in markets: bureaucrats respond much more slowly than independent actors in a market. One can be almost certain that milk prices in a free market would fluctuate more often than twice a year. In any event, as Figure 1 shows, the U.S. domestic price of manufacturing grade milk (the average price paid for milk that can be used only in butter, powder, and cheese) has generally been above the support price since about 1990, due to the influence of yet other policies and market-driven premiums.

Figure 1
U.S. Annual Support Price and Average Annual Manufacturing Grade Milk Price,
1990–2004



Source: U.S. Department of Agriculture, National Agricultural Statistics Service, QuickStats website, www.nass.usda.gov.

Table 1 U.S. Tariff Rate Quotas on Selected Dairy Products

Product	In-Quota Tariff (\$/kg)	Out-of-Quota Tariff (\$/kg)
Fluid milk, 1-6% fat	0.043	0.15
Cream	0.032	0.772
Butter	0.123	1.541 to 1.646
Skim milk powder	0.033	0.865
Whole- and butter- milk powder	0.137	1.556
Cheddar Cheese	10(%)	1.227
American-type cheese	10(%)	1.055

Source: Harmonized Tariff Schedule of the United States, chapter 4 and additional notes.

Trade Barriers

In practice, the milk price support program has been playing a relatively minor role in keeping the domestic U.S. price for dairy products above the world price, at least in recent years. ¹¹ Far more important are the import restrictions that prevent cheaper products from countries such as Australia and New Zealand, and from the heavily subsidized European Union, from entering the U.S. market.

Domestic price supports would be impossible if imports were unrestrained, because then the price floor would be undermined by cheaper imports. Imports of dairy products to the United States are limited by a series of tariff rate quotas, which establish a two-tier system of tariffs: a certain threshold amount of imports is allowed to enter duty free or at a reduced tariff rate (called the "in-quota rate"), whereas imports above that quota enter at a higher, often prohibitive, rate. Most out-of-quota tariffs are specific tariffs (i.e., specified as a certain dollar amount per unit). Table 1 shows the general (i.e., most-favored-nation) tariffs for certain dairy products.

In addition, some dairy products are subject to "special safeguards," whereby temporary additional duties may be applied to the out-of-quota (i.e., higher) tariff rates to prevent low prices or import surges from "injuring" a domestic industry. These prevent especially competitive imports from reaching U.S. food processors and consumers, who would benefit from lower prices.

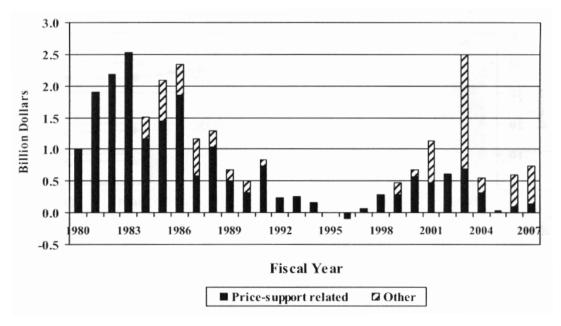
The effect of these tariffs is, not surprisingly, very little import penetration. Butter is the most commonly imported product, albeit with an import share of only 7.3 percent of production. Cheese imports are equal to slightly less than 5.4 percent of production.

Although the value of imports to the United States is growing (by 18 percent between 2003 and 2004), this is primarily due to higher international prices for dairy goods, because the volume of dairy imports that year increased by only 4.6 percent.

Income Support

The Milk Income Loss Contract is an income-support program that provides monthly payments to milk producers when market prices fall to a certain level. The MILC program was introduced in the 2002 Farm Bill: prior to that, direct payments from the government to dairy farmers were in the form of ad-hoc "supplemental" or "emergency" payments (introduced in fiscal year 1999 and renewed until FY01) that dairy farmers successfully sought to make permanent. MILC is separate from the dairy price support program outlined above but has an indirect (and undermining) effect on milk prices by encouraging production. The MILC program expired in September 2005, but Congress, through budget appropriation legislation passed early in 2006, extended the program until August 2007. MILC payments are limited: they cover eligible milk production up to 2.4 million Import barriers prevent especially competitive imports from reaching U.S. food processors and consumers, who would benefit from lower prices.

Figure 2 Net Outlays by CCC for Dairy Programs



Source: Keith Collins, chief economist, USDA, Testimony before the Senate Committee on Agriculture, Nutrition and Forestry, presented by Joseph Glauber, July 20 2006, http://www.usda.gov/agency/oce/newsroom/congressional_testimony/Dairy%20Testimony7-20-2006.pdf. Figure for 2007 is an estimate.

pounds per operation per federal fiscal year. Farmers receive MILC payments when a reference market price falls below the target price of \$16.94 per hundredweight and the payment is equal to 34 percent of the difference between the two prices multiplied by the amount produced (up to the 2.4-million-pound limit). 12

The program shields farmers from the effects of "price volatility," but only on the negative side. Thus it really only protects against price falls rather than volatility per se. Aside from being unfair (how many other non-farming entrepreneurs in America receive government insurance against the inherent risk of running their own business?), this asymmetry—making payments when prices fall below a certain level, but not requiring anything of farmers when prices rise—creates production distortions and moral hazards (i.e, it creates incentives for farmers to be less careful about production decisions). It also costs a considerable amount of money—an estimated \$425 million in FY06 and \$502 million in FY07and has cost more than \$2 billion since 2002.¹³

Outlays on the MILC program have occasionally been lower than the revenue raised by disposing of surplus inventory (as in FY04, for example), so that the net outlays have been negative. But that situation is the exception rather than the rule and does not take into account the deadweight losses to society from inefficiencies and distortions and the damage done to the milk price support program (see below). Figure 2 shows the net outlays by the CCC on all dairy programs (i.e., price support, MILC payments, and dairy export subsidies).

Market (Dis)orders

The Federal Milk Marketing Order system aims "to promote orderly milk marketing relationships to ensure adequate supplies of milk and dairy products to meet consumers' demands at reasonable prices." FMMOs were established in the 1930s as a response to peculiar characteristics of the milk market: the perishability of milk, the perceived monopsony power of milk buyers, and temporal patterns of milk supply and demand. It sets minimum regional

Making payments when prices fall below a certain level but not requiring anything of farmers when prices rise creates production distortions and moral hazards. prices of milk according to its different uses. The four classes of milk established by federal orders are as follows:¹⁵

Class I – plain and flavored whole milk and fat-reduced milks,

Class II – milk used for cream, cottage cheese, frozen desserts and other food products,

Class III – milk used to produce hard cheeses and cream cheese,

Class IV – milk used to produce butter, and any milk product in dried (e.g., powdered) form.

The prices of Classes II, III, and IV are the same nationwide and are calculated by the USDA using impenetrable formulae—hardly a model of "orderly marketing." Class I attracts the highest minimum price, and is equal to the highest of the Class III or IV price plus a location differential that varies from region to region, usually according to how far the production region is from the milk surplus regions of the Midwest and West. Ostensibly, this is to ensure that adequate supplies of fresh milk are available in densely populated consumption areas, which historically were a long distance from where production and processing occurred. By setting a higher minimum price for milk, the FMMOs try to encourage the movement of milk from areas where it is plentiful to where it is relatively scarce. Over 80 percent of milk produced in the United States is marketed under regulated pricing systems (both federal and state marketing orders). Milk prices vary within the United States, partly because of these marketing orders and the restrictions on moving milk from one order area to another. 16 The restrictions also prevent consumers from enjoying the benefits of competition because lower-cost milk from more efficient milk-producing regions cannot be sold at a price below the government-mandated minimum in any region.

Mandating a higher price on fluid milk makes sense if the government's aim is to transfer wealth from consumers to producers: since demand for fluid milk is less price-elastic, fluid milk can 'absorb' higher prices with a relatively mild effect on demand. Aside from transferring wealth, however, there is no reasonable rationale

for mandating a higher price for fluid milk than for other products. If consumers demand fresh milk they will pay a price to have their demand met. Producers would adjust the ratios of the goods they produce in response to market demand rather than an obscure government formula.

The FMMO system is especially redundant now that some of its original aims—to account for the perishability and high transport cost of milk, and the buying power of milk buyers—are of lesser importance. Transport, production, and storage technologies have evolved to reduce problems with perishability. Farmers' cooperatives that pool resources to market their milk have lessened the disparity in market power between farmers and dairy product manufacturers.

Rather than pay producers directly for their milk, FMMOs use revenue or price pooling, whereby each producer within an order area is paid a uniform use-weighted average or "blended" price. Total receipts in each order area are calculated by multiplying the class prices by the amount of milk used in each class. Then, total receipts are divided by the amount of milk (in hundredweights) sold to handlers, so that a blended price per hundredweight is established. In that sense, it does not matter what products are made from each individual producer's milk; the same minimum blended price is paid to each producer in an order area.

In practice, market conditions and contractual arrangements mean producers generally receive a higher than minimum price for their milk. This is called the "over order premium" and will flow directly to the producers or cooperatives supplying the milk (i.e., it is not shared by all producers in a market area). Presumably, the market will continue to provide "premiums" when demand for products of a certain quality exists, and thus there is no reason to continue the FMMO system that is based on 1930s ideas, technology, and market conditions.

Export Subsidies

The support price, when it is effective, makes it uneconomic for American exporters to sell their products abroad because domestic prices are higher than world prices. The Dairy The Federal Milk Marketing Order System is based on 1930s ideas, technology, and market conditions. Paying abovemarket prices for dairy goods imposes significant costs on consumers: in 2004 the implicit tax on dairy consumption was 26 percent. Export Incentive Program aims to "develop export markets for dairy products where U.S. products are not competitive because of the presence of subsidized products from other countries."17 The rationale, implied in the DEIP's mission statement, is based on supposedly unfair export subsidies from other countries (notably the EU). The DEIP was first introduced in the 1985 farm bill and subsidizes the export of selected dairy products by giving exporters of domestically sourced products a check to allow them to sell their goods abroad at world prices without incurring a huge loss. By removing surpluses from the domestic market, the DEIP may, like the foreign aid program, indirectly play a role in the milk price support program.

WTO commitments to reduce export subsidies as well as domestic support (discussed below) constrain American outlays on the DEIP. The Federal government spent approximately \$55 million in 2002 under the DEIP.¹⁸ In recent years, however, world dairy prices have increased such that spending on the DEIP was negligible in 2004 and 2005. 19 For example, the world price for nonfat dry milk (skim milk powder) increased by almost 30 percent between 2003 and 2004, cheese by 55 percent, and butter by 39 percent.²⁰ Consequently, the USDA did not provide any export subsidies for nonfat dry milk in 2005, and subsidized only cheese in that year (albeit to the maximum level allowable under WTO rules).²¹ As countries cut global export subsidies because of their trade liberalization commitments, world dairy prices are likely to trend higher and the USDA expects favorable conditions for U.S. exporters of dairy products in the years ahead, continuing recent impressive growth in dairy exports.²² Now is the time to remove a redundant and potentially costly program that damages international relations.

In addition to the policies outlined above, dairy farmers also benefit from ad hoc "emergency" assistance and "market loss payments," as well as general farm provisions such as subsidized electricity and water. Dairy cooperatives also are exempted conditionally from anti-trust provisions, as regulators believed that granting oligopoly power to cooperatives would address the buying power held by processors.

Peculiarities/Perversions in the Program

Not surprisingly, these interventions in markets cause many problems, some of them overlapping and others in direct conflict. Consider the perverse effects of the Milk Income Loss Contract and dairy price support, for example. One (the MILC) encourages overproduction, which causes downward pressure on the price, while the other (the Milk Price Support Program) attempts to hold the price up. The USDA itself has acknowledged the perversity of this situation:

The price support program establishes a safety net floor under milk prices—prices are allowed to fall enough to induce a correction in oversupply or underconsumption. However . . . the results are partially muted by the MILC program, which, by providing production-linked funds to milk producers, may encourage production and retard the supply adjustment. The result is that milk prices stay lower longer than they otherwise would, increasing the likelihood of larger CCC purchases, and raising government costs for both programs.²³

Paying above-market prices for dairy goods imposes significant costs on consumers. The Organization for Economic Cooperation and Development estimates that in 2004 the U.S. Consumer Support Estimate for milk, which (if negative) is a measure of the burden on consumers from agricultural policies that create higher prices, was -26 percent.²⁴ That means that there was an implicit tax on milk of 26 percent of consumption expenditure, at farm gate prices (i.e., what the farmer receives). In 2004, the average all-milk price paid to dairy farmers was \$16.13 per hundredweight. Given that there are, on average, 11.6 gallons in a hundredweight of milk, then a gallon of milk at the farm gate cost \$1.39. The implicit tax therefore amounted to 36 cents per gallon. Assuming that tax is passed on to the consumer, the average American paid "tax" amounting to \$7.56 in 2004 (assuming the average consumption of about 21 gallons of milk),²⁵ or about \$30 per year for a

family of four. That implicit tax does not include any "taxes" paid on other dairy products, such as cheese and butter.

By raising prices above the competitive market-clearing level, the price support provided by the MPSP, the FMMOs, and the DEIP and import restrictions creates surpluses. The surplus milk is then diverted to the production of other, more storable products such as cheese, butter, and milk powders and concentrates. Thus, the price supports generate a kind of cross-subsidy whereby consumers of premium (in this case fluid) dairy products subsidize the production (and therefore the producers and consumers) of lower-priced manufactured products. A World Bank study has suggested that this implicit consumption cross-subsidy could be construed as an export subsidy if the United States then exports the lower-priced manufactured products.²⁶

The FMMO system in particular adds to these production distortions by pooling the prices received for milk. Absent the distortions caused by U.S. dairy policy, farmers would respond to the marginal price offered for their product. But under the FMMO system, the prices paid are a blended price of all milk classes. The price received by any farmer is thus an average price rather than a price based on the actual use of their milk. If their milk did not go to a processor for fluid milk production, but other farmers' milk in their order area did, they will respond to a blended price that is higher than the value that the market assigns to their particular product.

Some of the products that the government buys from dairy farmers to support prices are not sold on the domestic or international market at all: they are given away as food aid or as domestic drought relief. This can have unintended consequences. For example, in 2003, following a drought in some Plains states, the federal government gave farmers and ranchers powdered milk from the stockpile accumulated through the price support program. USDA bureaucrats thought the farmers could use the milk to feed livestock. Instead, some farmers sold the powdered milk, for windfall profits, in a secondary market that reached non-drought-

stricken states and other countries such as Mexico and New Zealand.²⁷

Federal Milk Marketing Orders have also led to perverse consequences for dairy manufacturers. When the government sets the minimum prices that processors have to pay for milk, they provide for a "make allowance," a part of the pricing formula that takes into account the cost of turning raw milk into a manufactured product. However, the cost data that is used to calculate the allowances is from the late 1990s and does not reflect the costs of production today. Dairy processors are losing an estimated \$26 million per month as long as the data remain out of date.²⁸ Surely a free market system that allows contractual arrangements that are negotiated directly between product manufacturers and sellers of milk would provide a far more "orderly" way of marketing products.

The USDA has admitted to the futility of the dairy program in the United States:

Because they have modest effect on prices and returns, Federal dairy programs have a limited impact on profitability and viability of dairy farms...by increasing farm level returns, these programs may enable high-cost farms to remain in the business longer, but only in the short to medium term. In the longer run, high-cost farms will have difficulty competing with low-cost dairy producers. ²⁹

Note that in this context, "Federal dairy programs" do not include trade barriers, which, as discussed above, are the main source of protection and support to American dairy farmers.

Even with the trade barriers in place, though, the market seems to be a step ahead of the government. Milk protein concentrates, which are extracted from fluid milk and used in cheese production and other manufactured products, are efficient to ship long distances because most or all of the water has been extracted. Imported milk proteins are typically cheaper than domestic milk solids. And, so far, the government has not been able to restrict their entry using tariffs or tariff rate quotas

The USDA has admitted to the futility of the U.S. dairy program: "Federal dairy programs have a limited impact on profitability and viability of dairy farms."

As the Farm Bill comes up for renewal and as lawmakers look for ways to reduce the budget deficit, the dairy program is a prime example of a policy that belongs in a bygone era.

because the products were developed after the scheduling of concessions in the WTO. In other words, most of the products under discussion were not invented when the tariffs were put in place and WTO rules prohibit new import restrictions.

Consequently, imports of those products are increasing rapidly—imports doubled from 1998 to 1999 alone—and thus are undermining the price support system, according to dairy farmers. Although the growth in imports of these products has fallen somewhat since the peak of 2000, the National Milk Producers Federation was concerned enough to file a formal challenge to the way that the U.S. Customs Service classified dairy products as a way around the lack of tariffs. That challenge was unsuccessful, but the NMPF has indicated that it will appeal the decision. Previously, they had lobbied the federal government to consider imposing anti-dumping and countervailing duties. 32

As the Farm Bill comes up for renewal and as lawmakers look for ways to reduce the budget deficit, the dairy program is a prime example of a policy that belongs in a bygone era. It is in America's interest to remove a program that the Office of Management and Budget says is "causing unnecessary expenditures, product accumulation well above use, and significant market distortions."

Does the U.S. Dairy Program Square with WTO Commitments?

In addition to the costs of U.S. dairy programs to domestic consumers, taxpayers, and food product manufacturers, U.S. dairy policies are damaging to our trading relationships. The United States agreed, as part of its commitments under the Uruguay Round of the General Agreement on Tariffs and Trade (the predecessor to the WTO), to freeze and then reduce the value of its agricultural export subsidies by 36 percent over a six-year period. The current ceiling is \$594 million per year for all 13 agricultural commodities covered by the commitments (the Agreement on Agriculture precluded the subsidization of commodities not previously subsidized). According to the last export subsidy notification made by the United States (covering 2002), the total spending on agricultural export subsidies was \$31.5 million, all of that on butter and butter oil, skim milk powder (which comprised the greatest share of subsidized exports on a volume basis), and cheese.³⁴ Recently, the international markets have been strong and yielding prices above the support price in the case of nonfat dry milk, so government outlays on the DEIP have been relatively low. The latest information available from the USDA's Foreign Agricultural Service indicated that the total spending on the DEIP in the fiscal year 2004 was \$2.68 million.³⁵

It thus appears that the United States is probably within its commitment levels for export subsidies. However, export subsidies are among the most trade-distorting kinds of subsidies. The fact that other WTO members, such as the EU, continue to use export subsidies does not excuse the United States from pursuing its own destructive and misguided policies, even if the spending is within the legal limits established by the WTO. The DEIP is a redundant and inflammatory policy and should be abandoned immediately.

The Uruguay Round negotiators also included a limit on the amount of trade-distorting support the United States could pay its farmers (trade-distorting support is that in which the subsidies are linked to production of specific commodities). The current ceiling on those so-called "amber box" subsidies is \$19.1 billion per year. The United States has not made a notification to the WTO on its domestic support outlays (including export subsidies) since 2004, and that notification covered the two marketing periods before the 2002 Farm Bill. The lack of information in the meantime is a significant irritant to other WTO members.

According to the 2004 notification, the aggregate measure of support (AMS, the annual measure of total trade-distorting support) to dairy in 2001 was \$4.483 billion (almost all of that in market price support), which comprised just over 31 percent of the total trade-distorting support that year. ³⁶ Despite the lack of official information to the WTO, however, we can glean some rough estimates of the more recent AMS amounts for dairy. For example, the mar-

ket price support component of the AMS is equal to the "price gap" (the difference between annual prices fixed by policy and the world price in the fixed base period, 1986-88) multiplied by the amount produced. The author calculated that in 2003, the price support component of AMS was \$3.49 billion. Adding the approximately \$1.8 billion in MILC payments for that year, assumed to be amber-box because they are linked to market prices, yields a product-specific AMS for dairy at \$5.3 billion in 2003. Daniel Sumner, an agricultural economist at the University of California-Davis, estimated that total AMS in 2003 was approximately \$9.5 billion, so dairy supports likely constituted over half of total trade-distorting support that year.³⁷ More recently, the price support component reached approximately \$3.6 billion in 2005 (MILC figures for years beyond 2003 are not available to the author's knowledge). According to the USDA, over the last decade, dairy has made up on average 55 percent of the total AMS to all agricultural commodities in the United States.³⁸

Whatever the exact figure, it is clear that supports to dairy farmers contribute a large share of total trade-distorting support to agriculture. Anyone who favors increased global trade—and anyone who thinks that the United States should abide by its WTO commitments—ought to favor reducing or eliminating these subsidies.

In fairness to the U.S. dairy program, the reference international price used to calculate the aggregate measure of support in the WTO is very much out of date: \$7.25 per hundred-weight, based on the average price in 1986–88. This peculiar aspect of the methodology means that the AMS for dairy will continue to increase, even if the domestic support price is well below the current international price, unless the base period prices or calculation method can be renegotiated.³⁹

According to the USDA, the United States federal government spent approximately \$2.5 billion in 2002–03 on price and income support, 40 a figure that differs from my calculations above because of the use of different time periods and methodologies for measuring support (note that it is my calculations that would be

closer to the WTO-relevant figure). The OECD uses an even broader definition of producer support and calculates that the annual monetary value of transfers from consumers and taxpayers to milk producers was \$11.3 billion in 2004. Note, however, that this figure is also not an accurate guide to the AMS for 2004, since the OECD's calculation includes *all* transfers to farmers from agricultural policy, whereas the AMS calculation used by the WTO includes only support linked to production and excludes the effects of tariffs and export subsidies.

As a percentage of gross farm receipts, OECD calculations suggest that over 40 percent of American milk farmers' income is derived from government policies (most of that as market price support and trade barriers). In total, support to dairy producers accounts for over 24 percent of total PSE to all commodities, making milk the second largest recipient of government support after sugar.⁴¹

A WTO ruling in 2004 found that the payments given to U.S. cotton farmers were not in accordance with the U.S. obligations to the WTO. But that ruling has implications beyond just cotton because it clarified the type and amount of subsidies that the United States can properly give to its farmers. It thus appears that the United States is vulnerable to future challenges from its trade partners based on current WTO rules. Daniel Sumner, in a 2004 study on the cotton ruling, explicitly mentioned the dairy program as a potential target:

The price discrimination and pooling schemes under the milk marketing orders stimulate overall milk production and divert milk from beverage products that are generally not traded internationally to the production of cheese, milk powder, and butter, which are the main traded dairy products... the net result is a lower price of the tradable products and displacement of imports or stimulation of exports. ⁴²

As Sumner explains, if the result of those distortions is 'serious prejudice' to the trading

Anyone who favors increased global trade—and anyone who thinks that the United States should abide by its WTO commitments—ought to favor reducing or eliminating dairy support.

interests of other WTO members, then claims against the United States under the Agreement on Subsidies and Countervailing Measures are likely to be successful unless there are significant changes to the program. Such claims would be even more likely to succeed if complainants could show that exports are stimulated in large enough quantities to have an appreciable effect on world markets.

Foreign dairy exporters suffering from the effects of the subsidies paid to American dairy farmers also face prohibitive U.S. import tariffs on dairy products. Given that WTO negotiations are not currently a promising avenue for increasing market access, would-be exporters may look to bilateral or regional deals with the United States, although the terms of those deals usually mean limited and delayed access for 'sensitive' agricultural products such as dairy. If trade deals don't improve market access opportunities, frustrated exporters will likely instigate dispute settlement proceedings at the WTO. Disputes are rarely in the interests of a smoothly operating trading system and will have adverse consequences for producers of other industries targeted for retaliatory tariffs.

At a time when the multilateral trading system is in peril from failed WTO negotiations, proliferating preferential trade deals, and slower growth, the United States has much to gain from showing leadership and commitment to free markets and liberal trade. By radically reforming the payments and protection it gives to dairy farmers, the United States will contribute to a fairer global market for dairy, signal its broader commitment to reform of the agricultural sector and consequently to the goal of more open trade, and benefit dairy consumers, taxpayers, and U.S. food processors.

Prospects and Vehicles for Reform: Doha

The suspension of the Doha round of trade negotiations is a setback for those hoping for freer world trade and less distorted markets. The various offers on the table, including the proposal put forward by the United States, would have required substantial cuts to the total allowable level of trade-distorting support paid to agriculture and would have led to increased market access in the form of lower tariffs and expanded tariff rate quotas. The negotiations were, however, suspended in July 2006 with no current prospect of renewal.

Many dairy markets, particularly in the major developed countries, are characterized by heavy government intervention that obscures market signals and affects investment decisions. In 2003-04, OECD countries maintained an average dairy PSE of over 40 percent of gross farm receipts.43 Average tariffs (including in-quota and above-quota tariffs) for dairy products are at the upper end of the range for agricultural commodities, with prohibitive above-quota tariffs of over 1,000 percent for some products.44 The extensive, although decreasing, use of export subsidies depresses world prices and adds to volatility. A recent USDA study opined that "much of the world trade in dairy products is driven more by policy intervention than by market factors."45

It is difficult to gauge what would have happened had the Doha round been successful, because of differing assumptions about how exactly the commitments would look and how they would be implemented in practice. A recent World Bank study found that the largest net welfare gains from global dairy trade liberalization would accrue to the "Quad" countries (the EU, United States, Canada, and Japan). 46 It is not a coincidence that those countries have the most distorted dairy markets: reforming those markets thus produces large consumer gains (through lower prices) and reduced budgetary costs that, in aggregate, negate the losses accruing to previously protected farmers. Further-more, the World Bank study concluded that the largest welfare gains would be captured by those countries that can attract foreign direct investment, take best advantage of technology improvements, and have the ability to overcome supply and marketing constraints to supply products that meet strict quality and food safety standards. Many American dairy producers would be well placed to do just that. The USDA

The United States has much to gain from showing leadership and commitment to free markets and liberal trade.

study showed that the United States would maintain its position in most export markets as a result of global trade liberalization and even gain slightly in its exports of nonfat dry milk.⁴⁷

The World Bank study, using 2000 as its base year, estimated that full global trade and domestic liberalization in dairy would see production fall by 7 percent in the United States. Producer prices would fall by 12 percent and the balance of trade would change dramatically, with a 61 percent fall in dairy exports and a 130 percent increase in imports. Those changes are approximately three times greater than the changes that would occur through domestic reform alone. But since consumers would see a welfare gain of 4 percent and taxpayer outlays would fall by \$147 million, the net welfare gain to the U.S. economy from global dairy liberalization would be \$729 million. 48

In an interesting 2004 study the International Trade Commission included a table of the price gaps between U.S. domestic prices and world prices for certain dairy products. Creamery butter in the United States was 60 per cent more expensive relative to the world price; natural, processed, and imitation cheeses, 40 percent; dry, condensed, and evaporated milk products, 35 percent; fluid milk, 13.65 percent; and ice cream/frozen desserts, 20 percent. Trade liberalization, according to the ITC, would see consumer prices fall, along with production and employment in the dairy sector.

An Australian Bureau of Agricultural and Resource Economics study in 2001 estimated the effects of a doubling of tariff rate quotas and a halving of tariffs in dairy. Those results showed a decrease in dairy production by about 1.2 percent in the United States but estimated that the effect on farm gate prices would be "small and manageable." Cox et al. found that full trade liberalization in dairy markets would lead to only small changes in prices (-0.4 percent) and production of milk in the United States. 51

The USDA study mentioned above estimated that removing price support programs in the United States would lead to only a 0.2 percent drop in milk prices. The price of butter would increase by about 0.7 percent, but the prices of cheese and nonfat dry milk would

decrease by 0.2 percent and 1.1 percent, respectively. Production was estimated to fall by 0.1 percent, but as the authors point out, "a continuation of 1-percent productivity growth in milk production per year would offset any losses to U.S. milk producers." 52

On balance, model results on the effects of unilateral reform (in the absence of multilateral reform opportunities) suggest that it would be in America's interest to remove the distortions to the U.S. dairy market regardless of whether other countries liberalize. Consumers, dairy foods manufacturers, taxpayers, and more efficient producers in the United States and abroad all stand to gain.

Should the Doha Round get back on track, the United States' offer to reduce its allowable levels of trade-distorting support to \$7.6 billion (its latest offer in the Doha Round of trade talks) would make it very unlikely that dairy supports could remain as they are. Without reform, they would comprise well over half of total allowable trade-distorting support. Of course, some largely cosmetic ways around cutting the total value of support could have been found, such as changing the nature of the subsidies to less trade-distorting kinds of support that are not subject to the same reduction commitments, or by declaring the products concerned "sensitive," and thus excluded from reductions in tariffs. But a successful Doha outcome would have been a useful pressure for reform that has now been removed.

The 2007 Farm Bill: New Hope?

Even in the absence of a successful outcome from the Doha round, America's budget deficit, vulnerability to WTO disputes, and reputation as a liberal economy demand that Congress seize the opportunity presented by the rewriting of a new Farm Bill to reform significantly the dairy program. The Bush administration, to its credit, has proposed \$1.2 billion worth of cuts to the dairy program, including a three-cents-perhundredweight "assessment" on all dairy production in their FY07 budget request. However,

It is in America's interest to remove the distortions in the U.S. dairy market regardless of whether other countries liberalize.

All price supports, trade barriers and other market distortions should be removed. similar measures were proposed in the previous financial year and were ignored by the congressional agriculture committees.

Ideally, all price supports, trade barriers and other market distortions should be removed, paving the way for a market where products flow to the use for which they are most highly valued by consumers, where producers are free to negotiate directly with buyers on the basis of the quality and quantity of the milk they supply, and where milk prices can respond to supply and demand. That may help farmers, too. As a recent article pointed out, regulated prices under the current system can fall even as retail prices for milk stay the same and input costs rise, because prices for farmers are set by government formula based on prices of milk and cheese elsewhere in the country rather than local conditions. ⁵³

At this time of relatively high global dairy prices, removing the price support should be politically easier and should be done first. Similarly, the Dairy Export Incentive Program has been used only rarely over the past few years. Abolishing it would send a positive signal to trade partners. It will signify that the United States remains committed to removing market-distorting subsidies, at a time when that commitment is being questioned.

The damaging Federal Milk Marketing Order system should also be abolished. It is creating regional divisions, hampering investment and productivity gains in the most productive regions, and is no longer relevant to today's markets or technology. Its potential as a target for dispute settlement action should be a concern to anyone who values a free, open, and stable global trading system.

Removing import barriers is an overwhelmingly beneficial reform—a favor that American lawmakers can bestow on the nation without any permission from trade partners. Whether or not it is done as part of trade negotiations, removing barriers to cheaper and a wider variety of goods is in America's interests. Unilaterally removing these economically damaging tariffs would also, like ceasing the export subsidy program, reassure trade partners. It is important the price support system be abolished before trade barriers are removed; attempting to hold prices

up in the face of unrestrained imports would create large dairy stockpiles at taxpayers' expense.

The Milk Income Loss Contract should also be abolished. Farmers who are concerned about income security will have access to forward contracting, so they can manage price volatility without being reliant on—or beholden to, as the case may be—the government pricing system. As for concerns about food security, there is no reason to believe that the United States cannot produce the quantity and quality of fluid milk demanded by consumers without government support. In any case, with freely flowing trade the United States can import those goods for which it does not have a comparative advantage or where there are domestic shortfalls. Modern transportation and refrigeration techniques would minimize the limits that dairy product perishability would otherwise place on trade to and within the United States. And, with free trade in fluid milk between states, we could expect highly efficient producers in fast-growing dairy states like California to supply the rest of America with fresh, wholesome milk that could not currently be supplied from sources abroad.

Lessons from Down Under

Useful lessons can be learned from the deregulation experience of other countries. Although the Australian dairy policy differed in many respects from the U.S. dairy policy (for example, domestic quotas controlled production in the major milk-producing states), there were some parallels. Australian state and federal governments provided support to dairy farmers through price floors, restricted imports, and export subsidies from the mid-1980s.

The Australian government initiated reform of the Australian dairy industry in the mid-1990s, after the relative prices of market and manufacturing milk became increasingly distorted (despite their being basically identical products). As part of its general reform program for the Australian economy, the government began phasing out market support and export subsidies. After the complete, overnight deregulation of fresh milk pricing in July 2000, there was an immediate and substantial decline in milk prices—a 35 percent

decline in the case of raw milk for processing and a 16 percent decline in retail prices (although export prices were unusually high at this time, which would have cushioned the domestic price effect for those farmers with export interests). Over 17 percent of farms had retired from the industry after three years, although this was really just an acceleration of the trend toward retirement that had been evident for some time and would have also been exacerbated by the severe drought that occurred contemporaneously.⁵⁴

The Australian government gave transition assistance to farmers in the order of A\$2 billion (approximately \$1.5 billion), but payments were fully decoupled from current or future production decisions, which meant that farmers had to adjust immediately to market signals. That gave them a strong incentive to consider their viability and make structural changes as necessary. Since the incentives given to them were directly from the market, and not channeled through government filters, farmers were aware of the full effects of the change to their industry and could make investments in scale and in productivity improvements necessary for them to be internationally competitive. Since the Australian government's reforms, the percentage consumer support estimate for milk has fallen from 40 percent to 14 percent.⁵⁵ The number of dairy establishments in Australia has declined significantly, but the average herd size has increased and, after some period of adjustment immediately following reform, milk production and export performance has recovered.

The New Zealand experience generally is one from which many countries can learn: it has the lowest level of support for farmers in the OECD and, in the years since its own deregulation in the mid 1980s has seen the value of the economic activity in its farm sector increase by over 40 percent in real terms and productivity gains of an average 5.9 percent. ⁵⁶ In 2000, New Zealand, a nation of just over 4 million inhabitants, comprised over 31 percent of world dairy exports with a 1 percent PSE for milk. ⁵⁷

Those lessons have taught us that there are a few ways that government can minimize the disruptions that can occur from reform, including rent-seeking behavior from firms. Changes should be announced in advance and in as public a manner as possible so that consumers and farmers know what to expect from reform and can adjust purchasing and investment decisions accordingly. Minimizing the adjustment time would minimize the ongoing cost of these inefficient programs to consumers and taxpayers.

Financing the Transition

Political considerations mean that eliminating dairy programs and a wholesale withdrawal of government intervention in dairy markets is unlikely without some sort of "compensation" for farmers. Usually, however, compensation is paid by taxpayers or consumers: when Australia reformed its dairy market in the 1990s, the buyout of dairy farmers was financed by a consumer tax on milk sold domestically. Certainly that seems to be unfair; essentially it is asking the very same people who had been paying above market prices for decades to then pay the price for reform. If anything, it would have been more fitting for consumers to seek compensation from the dairy farmers who had benefited from a protected market. Similarly, financing transitional adjustment from general revenue is adding insult to taxpayers' significant accumulated injury.

If compensation is deemed absolutely necessary to enact reform, the fairest way to finance it would be to tax those producers who choose to remain. Producers will decide to either stay in the industry and pay a tax to finance the adjustment for their least efficient brethren or see that they are no longer competitive in the dairy market and should allocate their resources to some other industry for which they would be better able to compete.

Some may choose to leave farming altogether, although since their land is not valueless and at least some of their skills are transferable, it is likely that many farmers could turn their attention to other crops. If some sort of buyout is politically inevitable, then surely it is better to ensure that the payout is limited and is financed by the very people who have benefited from taxpayer and consumer support over many years. In short, consumers or taxpayers should not and would not have to finance an outcome they have long deserved: a more efficient market for dairy products.

Consumers or taxpayers should not and would not have to finance an outcome they have long deserved: a more efficient market for dairy products.

Given historically high world dairy prices, now is an opportune time to implement fundamental reforms with a relatively small political and taxpayer cost of adjustment.

The large budget deficit, significant costs to consumers and downstream producers, and America's interests in free and open markets demand that Congress use its opportunity in the next farm bill to abolish the federal dairy programs. These outdated policies are stifling innovation and irritating our trade partners and are egregiously out of date with modern dairy farming. Given historically high world dairy prices, now is an opportune time to implement fundamental reforms with a relatively small political and taxpayer cost of adjustment.

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