A Trade Liberalization in International Dairy Markets

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Paper prepared for presentation at the American Agricultural Economics Association Annual Meeting, Montreal, Canada, July 27-30, 2003

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Abstract: *International dairy industries remain among the most distorted agricultural sectors. Dairy average bound tariffs remain among the highest of all agricultural commodities, and dairy trade is characterized by a large number of megatariffs and tariff-rate quotas (TRQs). The objective of our study is to examine how the international dairy markets might respond to policy changes under various assumptions, using a partial equilibrium, multiple-commodity, multiple-region model of agricultural policy and trade. Our results indicate that liberalization will reduce supplies, increase dairy trade, and raise world prices.*

Keywords: Dairy Markets, Trade Liberalization, Model, Policy

Dairy industries around the world remain among the most distorted agricultural sectors. Dairy average bound tariffs remain among the highest of all agricultural commodities, and dairy trade is characterized by a large number of megatariffs and tariff-rate quotas (TRQs). Canada, the European Union (EU), and United States have subsidized their dairy product exports. With the highly distorted domestic and international markets, international dairy markets have benefited only modestly from trade liberalization to date. The World Trade Organization (WTO) Agreement on Agriculture allowed certain WTO members to maintain a system of tariff rate quotas. Countries have converted non-tariff barriers to tariff rate quota systems for dairy products to maintain import access levels and to provide minimum access levels. Under the agreement, many member countries also can subsidize dairy products for exports but they have committed to reduce both subsidized quantities and expenditures. On domestic support, dairy support makes up a large share of aggregate support for all commodities; countries agreed to specific reductions in aggregate support, but left dairy support largely untouched.

* Our results do not reflect the views of USDA or the U.S. Government on the impacts of dairy trade liberalization.

The current debate on market access in the WTO negotiations on agriculture focuses mostly on two specific issues—the high level of over-quota tariffs and the size and administration of quotas. It is still too early to know how further liberalization of tariffs and quotas will be handled in the current trade talks. Some countries support a zero-for-zero approach —complete elimination of tariffs—while other countries favor a more moderate approach. On export subsidies, many countries call for complete elimination. With respect to domestic support, the key issue is to decide on the reduction method, Blue Box, Green Box, and *de minimis*.

Comprehensive studies of world dairy trade liberalization are limited. Shaw and Love (2001), using OECD's AGLINK model, examined the economic effects of increasing market access and reducing export subsidies for dairy products and found that the value of world dairy trade increased substantially. Relative to a 1999 baseline, the study estimates that the value of world dairy trade rises by $1.8 billion under an increased market access scenario, with the value of milk production rising in Australia, New Zealand, and Argentina (with increases from 7-9% relative to the base), and declining in the EU and the United States (1.2%-1.4% decline). With export subsidies reduced by half, the value of milk production also increases in Australia, New Zealand, and Argentina, declines in the EU, and does not change in the United States.

Cox, Coleman, Chavas, and Zhu (1999) used a hedonic spatial equilibrium analysis of dairy trade liberalization for 21 world dairy regions, and found that full trade liberalization has sizable impacts on milk prices in Canada (-32%), the EU (-26%), Japan (-36%), Australia (22%) and New Zealand (51%). They found only small impacts on U.S. milk producers due to small changes in milk prices (-0.4%) and production. The study estimates consumer surplus to be about

$10 billion higher from the base under a free trade scenario. The study does not include the domestic support in its liberalization scenario.

There are a number of studies that analyze the effects of dairy trade policy reforms on individual countries (Doyon and Novakovic (1996), Bouamra-mechemache and RJquillart (2000), Van Bekkum Onno-Frank and Jerker Nilsson (2000), and Lariviere and Meilke (2000)).

Next, we briefly summarize dairy policies of major dairy product trading nations and key issues affecting dairy trade. We then discuss the model used in this study. Results and suggestions for further research follow.

Dairy Policies and Key Issues Affecting Trade

The major dairy policy instruments for most countries include income and price support, import restrictions, and export subsidies. A few countries also use consumer subsidies as a means of disposing of surplus or increasing demand for dairy products. In the U.S., income support for dairy producers includes direct payments, and *ad hoc* disaster assistance programs. Price support measures include government purchase programs, intervention purchasing and storage. Price support to EU and Canadian dairy producers also involves supply management. All price support programs, and the most trade-distorting income support programs, are disciplined under the domestic support provisions of the WTO Agreement on Agriculture. Trade policy instruments, including tariffs, tariff-rate quotas, and export subsidies also provide support for prices in many countries, but are subject to disciplines under the Market Access and Export Competition

provisions of the Agreement on Agriculture. Appendix Table 1 outlines key domestic and trade policy instruments for the major dairy producing countries.

Countries agreed to disciplines on dairy policies and programs under the Agreement on Agriculture. Under Domestic Support provisions, countries agreed to reduce the total amount of trade-distorting support, but did not require countries to reduce support to individual agricultural commodities. Many countries left dairy policies largely untouched, and reduced support to other commodities to comply with the aggregate support commitment. For many developed countries, domestic dairy policies or programs represent a significant share of the total support for agriculture. Further domestic support reductions that may be imposed in the new negotiating round will likely put increased pressure on countries to reduce support to dairy.

Prior to the Agreement on Agriculture, highly restricted import access was the rule among major dairy-producing countries, with the exception of Australia and New Zealand. Under the Agreement's Market Access provisions, countries agreed to replace nontariff barriers like quotas, prohibitive levies, import monopolies, and duties and other taxes with equivalent tariffs, and to reduce those tariffs. Despite reductions, the resulting tariffs for dairy products tended to be very high for many developed countries. To maintain existing market access levels and provide for new access in the face of high tariffs, most major dairy trading countries established a tariff rate quota (TRQ) system for dairy products. TRQs are two-tier tariffs that combine both tariffs and quotas. A relatively low tariff applied to a fixed quantity of imports is coupled with higher tariffs for quantities imported above that quantity. TRQ quantities were generally set at 3 percent of total dairy product consumption, to increase to 5 percent over the implementation period.

Countries already importing 3 percent of consumption set minimum import access quantities at the existing import levels.

Access to previously protected dairy markets expanded under the Agreement. Most countries had to increase the amount of products that could enter at relatively low tariff rates. However, the import access for some countries did not equal the nominal 3 percent of consumption originally specified because fluid milk and some other fresh dairy products generally were excluded from the calculations. The excluded products accounted for sizable shares of total consumption in some cases.

Differences among countries in the level and coverage of TRQs have been a source of controversy. The out-of-quota tariffs vary tremendously among countries, in part because they purportedly reflect the level of protection afforded by previous nontariff barriers. The equal proportional reduction of these tariffs means countries with the highest protection before the Agreement have high tariffs at the end of the Agreement's implementation.

The very tight U.S. dairy market of 1998-99 illustrates one advantage of a TRQ system over the previous rigid quotas. Under the new system, over-quota imports began once domestic prices reached levels that made such imports profitable and stopped when the prices fell to levels where importing was no longer profitable. The new system avoids the uncertainty and lumpiness of government policy actions to deal with tight supply situations.

Prior to the Agriculture Agreement, many of the dairy products exported from the EU, other western European countries, and Canada were subsidized. The United States also exported relatively large quantities under subsidy through the Dairy Export Incentive Program (DEIP). Even Australia and some eastern European countries, countries not usually connected with export subsidy programs, have used export subsidies at times. The Agreement on Agriculture required developed countries to reduce quantities exported with subsidies and also to reduce the expenditures on those subsidies. Export subsidy disciplines were applied specifically to cheese, butter, dry milks, and a miscellaneous product category.

International dairy product markets remain very distorted by export subsidies in spite of changes that have occurred under the Agreement on Agriculture. About a third to a half of exports of the major traded dairy products continue to be subsidized. Nonetheless, the disciplines have resulted in reduced levels of subsidized dairy product exports.

The WTO Agreement on Agriculture was unclear about the actions a member nation could take if their subsidized exports were below its limits during the early years of implementation. Some countries interpreted the agreement as allowing unused quantities or expenditures to be "rolled over" into following years, except for the final year. The U.S. used this provision for dairy product exports in 1997-1999, and the EU used it in 1997 and 1999.

Some issues not explicitly addressed in the Agreement have posed problems in implementing the Export Competition provisions. Revenue pooling, whereby revenues from multiple classes or uses of milk are collected and a single "pooled" price is returned to producers, is a common

practice. However, pooling may provide a means to circumvent export subsidy commitments by allowing revenues from higher-priced domestic sales to subsidize lower-priced sales to export markets. Canada's system of two-tiered pricing system was successfully challenged before the WTO as an export subsidy and therefore must come into compliance with their commitments. Australia had a temporary transition plan with similar effects. Similarly, domestic price differentials can lead to artificially low prices for manufactured dairy products, discouraging imports and making it easier to export.

Other disciplines may themselves create distortions by inhibiting the market from allocating product or forcing trade into uneconomic patterns. For example, dairy product markets will always seek positions that equalize the value of milk in alternative uses. In many countries, domestic dairy policy regimes have worked by adjusting relative values of milk and dairy products rather than by direct controls. In general, policy measures that allow the product mix to adjust to market conditions will minimize market distortions. Policy-related distortions like import restrictions or export subsidies that don't adjust to changes to relative prices can interfere with this process.

The Agreement on Agriculture defined product categories for commitments narrowly, and established separate, and sometimes rigid, commitments that fail to account for changes in relative values. Establishing import restrictions or export subsidies on the basis of milk equivalents would allow these measures to have roughly the same net impact on markets. Market forces could then adjust the product mix, allowing trade flows in international product markets to stay in closer balance and adjust more smoothly. Although a few countries were allowed to

aggregate products into some form of milk equivalent, most countries' obligations were defined in a much more detailed way.

Other Issues

Other issues relevant to dairy product trade were covered under separate agreements. State Trading Enterprises (STEs) have been active players in world dairy product markets. Article XVIII of the GATT requires that STEs not discriminate among importers or exporters in making purchases or sales. WTO members did not agree to new rules to regulate the trade and pricing practices of agricultural STEs. Several important importing STEs (including those of Mexico and Japan) have been eliminated or curbed. The New Zealand Dairy Board was the largest STE involved in dairy product exports but it was absorbed by a new exporting organization. The Canadian Dairy Commission and (at least sporadically) various government support agencies in other countries served as minor STEs. The actions of STEs are disciplined by the general rules affecting subsidy and market access policies, but some are concerned that lack of price transparency could be used to mask export subsidies and import tariffs, or unfairly restrict trade and competition.

Sanitary and phytosanitary (SPS) regulations are essential for protecting a country's food safety and animal and plant health, but sometimes have been used as barriers to legitimate trade. The SPS Agreement required that such measures be based on objective science and applied in a nondiscriminatory manner, but allowed countries to establish stricter-than-international standards if based on legitimate scientific rationales. Despite relatively strong existing SPS measures

imposed internally on dairy products in most countries to prevent potential disease transmission or drug or chemical contamination, they have not generally been major impediments to dairy product trade.

Because of the high levels of support and protection that continue for many countries' dairy sectors, and other unresolved issues that affect trade in dairy products, the dairy sector is likely to have a high profile in the new round of trade talks. Further liberalization could have significant effects on individual countries and important impacts on world dairy trade.

ERS/Penn State WTO Model

The ERS/Penn State WTO model is an applied partial equilibrium, multiple-commodity, multiple-region model of agricultural policy and trade (Abler et al, 2001, Abler, 2002, and Stout, forthcoming 2003). It is a gross trade model that accounts for exports and imports of each commodity in every identified region. The model does not break out a country/region's imports or exports by their origin or destination. The model is dynamic in that it allows for lags in adjustment over time in crop and livestock production, dairy processing, and oilseed crushing.

The model includes twelve countries/regions--the United States, the European Union (EU-15), Japan, Argentina, Australia, Brazil, Canada, China, Mexico, New Zealand, South Korea and the rest of the world (ROW). It has thirty-five commodities (rice, wheat, corn, other coarse grains, soybeans, sunseed, rapeseed, peanuts, other oilseeds, cotton, sugar, soybean oil and meal, sunseed oil and meal, rapeseed oil and meal, cottonseed oil and meal, peanut oil and meal, tropical oils, other oilseed oil, beef and veal, pork, poultry, raw milk, butter, cheese, nonfat dry

milk, whole dry milk, fluid milk, and other dairy products). Raw and fluid milk are included as non-traded commodities.

The model is different from other partial equilibrium models in trade liberalization research in that this model has explicitly incorporated a wide range of domestic and border policies in agriculture. The core set of policies for all countries includes both specific and ad valorem import and export taxes/subsidies, tariff-rate quotas (TRQs), and producer and consumer subsidies.

The US model includes loan rates with marketing loan benefits for crops, and also marketing orders and export subsidies for dairy products. The Japan model includes tariffs and "mark-ups" such as for rice, wheat, and sugar. The EU model includes intervention prices (which entail government purchases and then export subsidies), tariffs and import levies, compensatory payments, acreage set-asides, and base area bounds (which limit the total area of grains and oilseeds by cutting off payments if the base area bound is reached), and production quotas for raw milk and sugar. Producer compensation schemes for Japan and South Korea that compensate producers for declines in producer prices relative to a reference price are also included. Milk production quotas for Canada and EU are included.

The current version of the model differs from the Abler and Stout versions in two respects. Other dairy products are tradable commodities in this study to reflect the fact that cream and some of these products, like ice cream, are traded. Second, the model recognizes Canada's new dairy export regime implemented in 2000.

Parameters in the model come from various sources, including the European Simulation Model (ESIM), the ERS baseline model projections, the Food and Agricultural Policy Simulator (FAPSIM), OECD's AGLINK model, and the SWOPSIM (Static World Policy Simulation) model. Adjustments and restrictions were imposed on elasticities to satisfy theoretical requirements.

The base year for dairy data is 2001, adjusted for the 2002 Farm Bill and China's WTO accession in the base model solution. Base data for crops on area, yield, production, consumption, stocks, and trade are from the 2000 crop year and are drawn from USDA and country sources, including the USDA PS&D database. [1] Tariffs and TRQs are from the Agricultural Market Access Database (AMAD)[2] and Gibson et al. (2001).

The model is a reduced form model with production, consumption, and other behavioral variables represented by constant elasticity functions. All countries in the model have a similar structure with different parameters and values of variables in behavioral equations. For a net importing country, dairy imports (and other commodity imports) are a residual to equilibrate exports and imports. For a net exporting country, dairy exports (and other commodity exports) are a residual.

Dairy Product Equations

[1] Found at http://www.fas.usda.gov/psd/.
[2] Found at http://www.amad.org.

Processed dairy products (butter, cheese, nonfat dry milk, whole milk power, fluid milk, and other dairy products) consist of fat, skim solids, including protein, and water in relatively fixed proportions. In order to preserve this characteristic, each dairy product supply equation is derived from its price, prices of other dairy products, and the price of raw milk. The model also imposes production quotas where needed and a linkage between raw milk and beef supply.

Dairy products production (*PRD*) for fluid milk, butter, cheese, nonfat dry milk, whole dry milk, and other dairy products is a function of production of raw milk (*PROC*) and milk products in the previous period, raw milk production in the current period and dairy product prices (PP).

$$PRD_{it} = \alpha_i * PRD_{it-1}^{\lambda^1} . (PROC_t / PROC_{t-1}^{\lambda^1}) \{ \prod_{j,i=1}^{n} PP_{jt}^{(1-\lambda^1)\sigma_{ij}^1} \}$$

Indexes j and i represent dairy products, t represents time, and α_i is a constant; λ^1 is a partial adjustment parameter; and σ^1_{ij} is an elasticity. The partial adjustment parameter depends on an adjustment cost of producing the dairy product. The higher the adjustment cost, the greater the λ^1, and the lesser the change of PRD, given a value of σ^1_{ij}.

Demand for dairy products (FO) is specified as a function of own price and prices of other dairy products (CP).

$$FO_{it} = \beta_i * \prod_{j,i=1}^{n} CP_{jt}^{\sigma_{ij}^2}$$

Where σ^2_{ij} is an elasticity and β_i is a constant term for an i product.

Raw Milk Processing Equation

Milk processing (*PROC*) is specified as function of producer (*PP*) and consumer (*CP*) prices as:

$$PROC_t = \gamma * PROC_{t-1}^{\lambda^3} \cdot \left(\frac{\sum_{j=1}^{n} (PRD_{jbase} * PP_{jt}}{PROC_{base}.CP_i} \right)^{(1-\lambda^3)\sigma^3}$$

Where λ^3 is a partial adjustment parameter and σ^3 is an elasticity.

Modeling production controls are modeled using assumed supply elasticity after liberalization. Raw milk supply response after liberalization needs further study. Other dairy product components in the model also require more attention due to varieties of products that lack price and quantity data in international markets. The current version of the model can not handle state trading enterprises or non-trade issues in the WTO debates. Therefore, the trade liberalization scenarios only cover market access, domestic support, and export subsidies.

Dairy Trade Liberalization Scenarios

We conducted two liberalization scenarios—total liberalization for milk and dairy products (Scenario I) and for all commodities (Scenario II). The objective of our scenarios is to examine how the international dairy markets might respond to policy changes under various assumptions.

Because the ERS/Penn State WTO model includes other commodities, we could examine the indirect effects of dairy market liberalization on other commodities such as feed grains. A trade liberalization scenario involves increasing market access by reducing tariffs and eliminating TRQs, decreasing the volume of export subsidies, and decreasing producer and consumer subsidies—to dairy products for countries in the model. Specific policies that are liberalized include tariffs, tariff-rate quotas, mark-ups, import levies, loan rates, intervention prices, export subsidies, production quotas, and consumer subsidies. Some other policies in the model remain unchanged under the scenarios, including marketing orders in the U.S., compensatory payments, set-aside, base area bound, and the Blair House provisions in the EU.

Results

The results of the experiments are presented in Table 1-2, and Figures 1-2. World dairy prices increase for all dairy products, ranging from 9 percent for nonfat dry milk to 58 percent relative to the base for butter for scenario I, and from 10 to 60 percent under scenario II (Table 1). Butter price increases the most under both scenarios. Higher world dairy product prices are expected because of lower milk and dairy product production in heavily subsidized countries.

The world trade value increases about 37-38 percent for butter under scenarios I and II, respectively, and 29-33 percent for cheese (Table 1). On average, the volume of dairy product trade is down but products are traded at higher prices due to the smaller amount of milk and dairy products being produced after the liberalization (Figure 1). The value of dairy trade

increases by $2 billion under scenario I and nearly $3 billion under scenario II, an average of nearly 28 percent increase from the base.

The medium-term effects of the experiment result in higher world dairy product prices in both scenarios, as expected, due to lower production of raw milk and dairy products in heavily subsidized countries (Canada, EU, Japan, and US), ranging from 3-4 percent lower under scenario I, and 4-6 percent lower under scenario II in the EU and the United States. Raw milk production in Canada, however, increases due to the elimination of production quotas, about 12-17 percent under scenario I and II, respectively. Raw milk and dairy product prices decline in heavily subsidized countries. Dairy product production in Canada, however, increases due to greater milk supply. Raw milk production also increases in Australia, New Zealand, and the South American countries, non-subsidized countries, by about 5-6 percent.

The effects of the dairy trade liberalization on the U.S. dairy sector are small relative to the value of U.S. dairy industry (The value of U.S. dairy industry was about $60 billion in 2001). Raw milk price declines by 8 percent from the base under scenario I, and by 5 percent under scenario II. Cheese price is down 5 percent under scenario I, and by 3 percent under scenario II. Butter prices decline more, as expected, about 16 percent from the base under scenario I and 15 percent under scenario II. Raw milk production declines slightly, about 4-6 percent from the base for both scenarios. The United States exports more cheese under the dairy-only liberalization (scenario I), but cheese exports and imports decline under full liberalization (scenario II) for all commodities. Cheese imports decline 70 percent from the base, as domestic cheese production increases about 4 percent from the base under scenario II.

Australia, New Zealand, and Argentina, low cost non-subsidized exporting countries, gain the most from the liberalization, with raw milk prices increasing by about 22-29 percent from their base in both scenarios. Dairy product prices also increase (Table 1).

Milk and dairy product prices decline in the EU, about 25 percent under scenario I and 24 percent under scenario II from the base for butter and 7 percent to 5 percent down for cheese, under scenario I and II, respectively. The EU exports less dairy products relative to the base.

In Canada, dairy production is up from the base due to the relaxation of the milk production quota, although prices are down by about 34-35 percent. Milk production value, therefore, declines. Canada exports dairy products after liberalization.

The effects of the trade liberalization are different under both scenarios. Feed costs decline marginally in most major dairy producing countries under dairy only scenario (I) (Table 2). However, when all commodities are liberalized—dairy, oilseed, livestock, and grain sectors—feed costs increase in all these countries, except the EU because of its relatively high protection in the grain sector. EU livestock producers benefit from lower grain prices resulting from liberalization.

Table 1—Impact of International Dairy Market Liberalization						
% Change from Base	**Milk**	**Butter**	**Cheese**	**NFD**	**WDM**	**ODA**
	Percent change from base					
World price, dairy only (I)		58	30	9	18	19
Full liberalization (II)		60	33	10	20	23
World trade value, (I)		37	29	1.2	11	63
(II)		38	33	0.2	12	63
Price						
Argentina, (I)	22	57	23	9	17	19
(II)	26	60	26	10	20	23
Australia, (I)	26	57	28	9	18	19
(II)	29	59	31	10	20	23
Canada, (I)	-35	-17	-24	-30	-29	-32
(II)	-34	-16	-23	-29	-29	-30
EU-15, (I)	-8	-25	-7	5	-10	-3
(II)	-5	-24	-5	6	-8	0.5
Japan, (I)	-8	-62	3	-56		-24
(II)	-34	-62	6	-56		-21
New Zealand, (I)	24	57	30	9	18	10
(II)	27	61	33	10	20	13
US, (I)	-8	-16	-5	-7		-14
(II)	-5	-15	-3	-6		-11

Table 2--Feed Costs, (% change)						
	usa	**e15**	**can**	**arg**	**aus**	**nzl**
Scenario I	-0.6	-0.4	-0.6	-0.5	-0.4	-0.3
Scenario II	11	-8	9	12	9	6

Figure 1--Nearly $3 Billion Higher World Dairy Trade After Full Liberalization

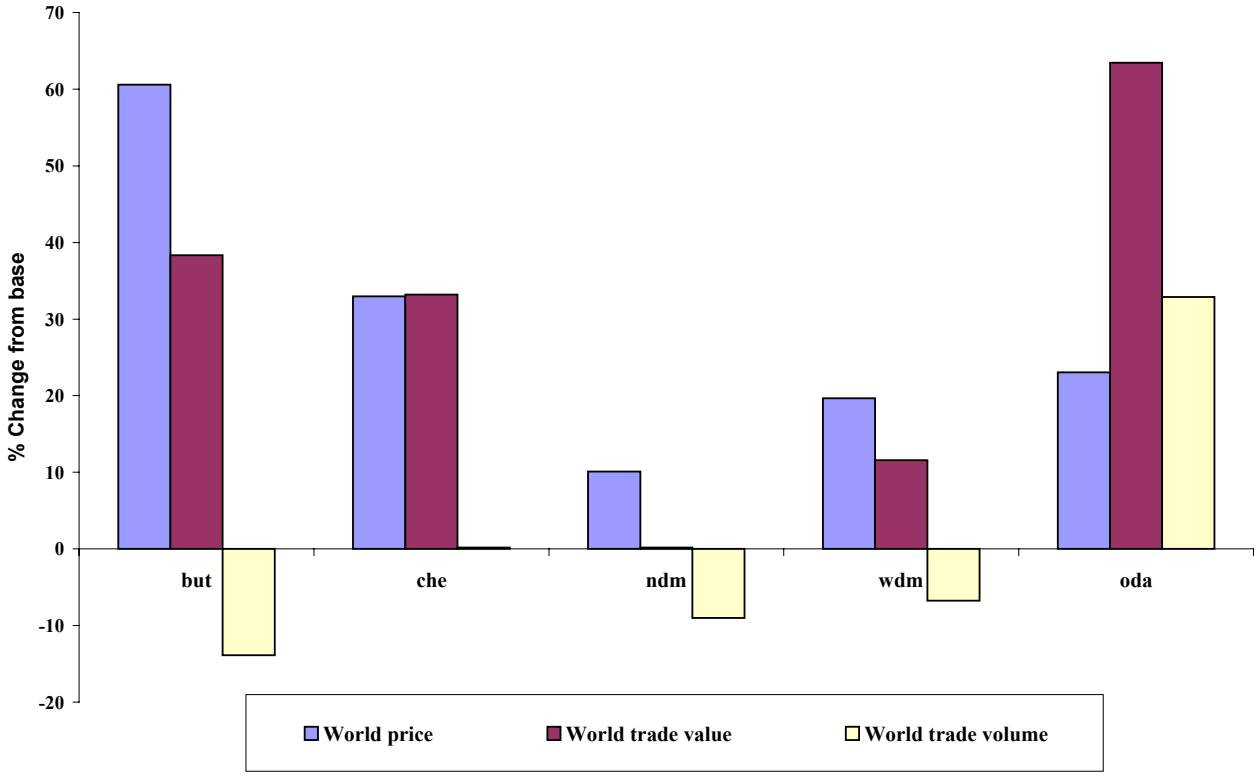
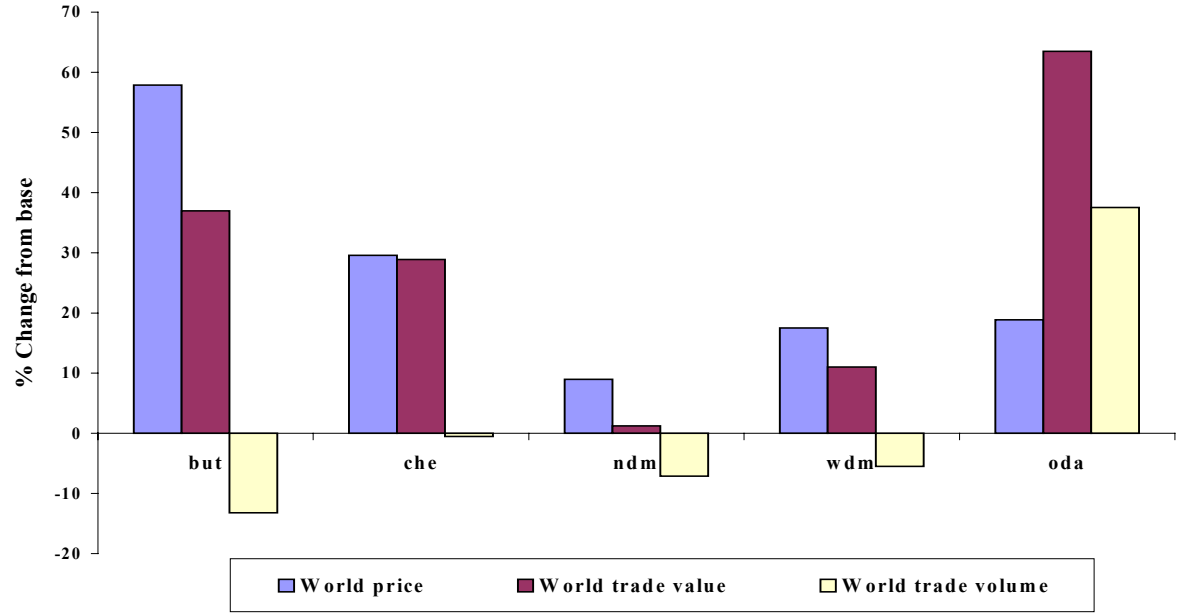


Figure 2--$2 Billion Higher Trade After Dairy Trade Liberalization



Conclusions and Implications

Liberalization of the dairy industry would result in lower supplies, higher world dairy prices and higher value of dairy trade. As expected, non-subsidized exporting countries such as Oceanic and South American countries benefit from the liberalization, with higher trade and higher value of milk production. Heavily subsidized countries such as the EU, Canada, and the United States face lower prices relative to the base. However, Canada exports more, and the United States could potentially export more after liberalization. For the U.S., the decline in value of milk production is small, compared to the value of the whole dairy industry.

The experience of this study reiterates calls for further research for trade policy modeling with respect to supply controls such as those implemented in Canada and the EU. It is uncertain how milk producers in both countries would react to policy changes. Further study could shed light on raw milk supply response after liberalization. Our research on forces shaping the dairy industry is an ongoing process.

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Appendix: A

DAIRY POLICY MATRIX

Table 1—Dairy Policies Affecting Trade

UNITED STATES			**DOMESTIC SUPPORT**				**TRADE POLICIES**		
	Milk Production ('000 Metric Tons)	Export Market share	**Income Support**		**Price Support**	**Other**	**Market Access**		**Export Competition**
Commodity			Direct and Countercyclical payments	Disaster Aid	Government Purchases	Marketing Orders	Import quotas (TRQs)	Tariffs	Export Subsidies
Milk	77035	19.7 1/	X	X		X			
Butter	620	0.3			X		X	X	X
Cheese	3790	5.1			X		X	X	X
Nonfat dry milk (NFDM)	695	10.2			X		X	X	X
Whole milk powder (WDM)	25	**					X	X	
Other dairy products (ODA)							X	X	

Source: USDA's PS&D 2002 data.
1/ World production share
**: NA.

Table 1—Dairy Policies Affecting Trade (continued)

EUROPEAN UNION			**DOMESTIC SUPPORT**				**TRADE POLICIES**		
			Price Support			**Other**	**Market Access**		**Export Competition**
Commodity	Milk Production	Market Share	Supply Management	Intervention	Other Storage Aid	Consumer Subsidies	Tariffs	Import Quotas (TRQs)	Export Subsidies
Milk	115355	29.5 1/	X			X			
Butter	1740	26.2		X	X	X	X	X	X
Cheese	5450	42.5			X		X	X	X
NFDM	1040	15.4		X	X	X	X	X	X
WDM	840	27					X	X	X
ODA							X	X	X

Source: USDA PS&D Data.
1/ World production share.

CANADA			**DOMESTIC SUPPORT**			**TRADE POLICIES**		
			Income Support	**Price Support**		**Market Access**		**Export Competition**
Commodity	Milk Production	Export Market share	Disaster Aid	Supply Management	Support Prices	Tariffs	Import quotas (TRQs)	Export subsidies
Milk	8130	2.1 1/	X	X	X			
Butter	90	3			X	X	X	X
Cheese	315	1.1				X	X	X
NFDM	100	6.1			X	X	X	X
WDM	**	**				X	X	
ODA						X	X	X

Source: USDA PSD 2002 data
1/ World production share.
**: NA.

Table 1-Dairy Policies Affecting Trade (continued)

AUSTRALIA/NEW ZEALAND			DOMESTIC SUPPORT	TRADE POLICIES	
			Income Support	Market Access	
	Milk Production	Market share (Aus/NZ)	Producer payments	Tariffs	Import Quotas (TRQs)
Milk	11,607 /13,925	3 /3.6 1/			
Butter	166 /321	16.1 /46.8		X	X
Cheese	424 /312	18.5 /24.6		X	X
NFDM	273 /237	21.7 /25.1			
WDM	207 /540	12.1 /37.5			
ODA					

Source: USDA PSD 2002 data.
1/ World production share.

JAPAN			DOMESTIC SUPPORT			TRADE POLICIES	
			Income Support	Price Support	Other	Market Access	
	Milk Production '000 metric tons	Import market share	Producer payments	Production quotas	Consumer subsidies	Tariffs	Import Quotas (TRQs)
Milk			X 1/	X 1/	X		
Butter	88	1.1				X	X
Cheese	**	23.1				X	X
NFDM	180	3.7				X	X
WDM	**					X	X
ODA							

Source: USDA PSD 2002 data.
1/ Only for milk for the purpose of manufacturing butter and milk powder, not for drinking milk.
**: NA.