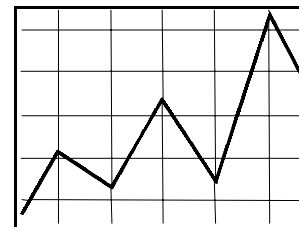


MARKETING AND POLICY BRIEFING PAPER



Department of Agricultural and Applied Economics, College of Agricultural and Life Sciences, University of Wisconsin-Madison
Cooperative Extension, University of Wisconsin-Extension

Paper No. 75
March 2002

WOULD U.S. DAIRY FIRMS INCREASE LONG-TERM PROFITS BY BECOMING BIGGER EXPORTERS AND BIGGER INVESTORS IN FOREIGN DAIRY-FOOD BUSINESSES?

W.D. Dobson*

Abstract

The answer to the question posed in the title is arguably, yes. U.S. firms appear to be well positioned to profitably expand exports of highly differentiated dairy products and selected dairy ingredients, especially dried whey products. However, U.S. bulk cheese, butter and nonfat dry milk (NFDM) are, for the most part, priced out of foreign markets by U.S. border protection and the dairy price support program. If, as claimed by a former Nestle CEO, the U.S. dairy-food market is "flat and fiercely competitive," U.S. companies may find it profitable to expand direct investments in foreign dairy-food businesses both in the near term and over the longer-run. Failure of U.S. companies to take advantage of opportunities in foreign dairy markets poses risks and will continue to cede early-mover advantages for serving the growth markets of Asia and Latin America to the New Zealanders, Australians, Western Europeans, and others. U.S. firms are doing some things right to prepare for a world where foreign dairy sales will be more important.

Calls for Expanded Foreign Dairy Sales

In the past decade, veteran international dairy marketers have exhorted the U.S. dairy industry to become more heavily involved in international markets. For example, Mr. Bruce Stuart, former CEO of M.E. Franks (a leading exporter of U.S. dairy products), said in 1992 [15]:

The (U.S.) dairy industry should also keep in mind the fact that one of these days we may be without government assistance, but still in need of the secondary international market. The more experience and presence we can gain now in markets across the ocean, the better prepared we will be for the challenge such a situation would bring.

* W.D. Dobson is Professor of Agricultural & Applied Economics, Program Director for Trade and Policy of the Babcock Institute for International Dairy Research and Development, and Director of the Renk Agribusiness Institute, all at the University of Wisconsin-Madison. This paper is based primarily on research carried out by Babcock Institute analysts during the late 1990s and early 2000s.

In 1999, Mr. Thomas Suber, President of the U.S. Dairy Export Council (USDEC), described the future of the U.S. dairy industry as one where real costs of milk production are declining, domestic demand is growing modestly and the role of government is declining. Suber argued that in this environment "...the processors, cooperatives, traders, and farmers who determine USDEC policy face the future with a cold realism that either we compete internationally or we will shrink as an industry [16]."

Behind these two comments are assumptions of declining government support for the U.S. dairy industry. Suber had good reason to make such an assumption since the USDA's dairy price support program had been scheduled for termination on December 31, 1999 under the 1996 Farm Bill. Bruce Stuart recognized that dairy market liberalization was in prospect under the Uruguay Round GATT/WTO trade negotiations. Furthermore, there was reason to expect further liberalization of world dairy markets in later WTO negotiating rounds.

But the dairy industry deregulation that appeared to be in prospect in the 1990s was less sweeping than many had anticipated. The USDA's dairy price support program has been extended through May 2002 and appears likely to have a lengthy further extension of life under the 2002 Farm Bill. There was some liberalization of dairy markets under the Uruguay Round of GATT/WTO negotiations. For example, access to segments of the European Union (EU) and U.S. dairy markets did increase as a result of the Uruguay Round WTO Agreement. World cheese prices rose as a result of this development and reduced European Union (EU) export subsidies for cheese. But border protection and nontariff barriers in many countries continue to provide strong impediments to expanded international trade in dairy products.

The upshot is that the U.S. dairy industry remains heavily protected and not much more involved in international dairy markets than when Bruce Stuart encouraged the industry to gear up to sell to the secondary international market. Indeed, many trade analysts continue to lump the U.S. dairy industry and the U.S. sugar industry together, characterizing both as being strongly protected from international market forces.

This Marketing and Policy Briefing Paper examines why U.S. dairy firms collectively continue to be "bit players" as dairy exporters. As we shall see, for bulk butter, cheese, and NFDM this is no big mystery. Border protection and the USDA's dairy price support program frequently price these bulk U.S. dairy products out of world markets. U.S. firms have increased exports of certain dairy products—especially whey powders—for which they are price competitive. It is less clear why U.S. firms do not export more highly differentiated dairy products (price is less of an impediment to exports of these items) and why U.S. companies are not more heavily involved in direct investment in foreign dairy-food markets. Case studies conducted by Babcock Institute analysts partially explain this phenomenon. The study concludes with a discussion of implications of maintaining the status quo regarding foreign dairy sales for the U.S. dairy industry, and directly addresses the question posed in the paper's title.

Why U.S. Firms Export Limited Quantities of Bulk Dairy Products

U.S. milk production costs are sufficiently low that the U.S. dairy industry could become more export-oriented. While U.S. milk producers admittedly are not the lowest-cost milk producers in the world, they do have lower costs than producers in many other countries. Indeed, only farmers in the pasture-based dairy industries of New Zealand, Australia, Argentina, Uruguay, and parts of a few other countries have lower average milk production costs.

Table 1. U.S. Dairy Exports as a Percentage of Production, Selected Years, 1990-2001*

Product & Year	Exports	Production	Exports as % of Production
	(1,000 metric tons)		
Cheese			
- 1990 (low year)	12	2,749	0.4%
- 2001 (high year)	52	3,700	1.4
Butter			
- 2001 (low year)	1	550	0.2
- 1993 (high year)	145	596	24.3
NFDM			
- 1990 (low year)	10	399	2.5
- 1999 (high year)	217	617	35.2

* Source: Appendix Table 1.

Moreover, some milk producers in California, other parts of the Western U.S., and a few areas outside the Western U.S. are thought to already have milk production costs as low as those in pasture-based countries. However, reasonably competitive U.S. milk production costs do not produce strong incentives for U.S. firms to export dairy products.

Background: The Size, Nature and Trends in U.S. Dairy Exports

Before seeing what being more export-oriented would entail for the U.S. dairy industry, it is useful to consider a few figures on the size and nature of recent U.S. dairy exports. Appendix Table 1 contains figures on U.S. exports of cheese, butter and NFDM for 1990 to 2001, which are summarized below in Table 1.

Clearly there is substantial variation in U.S. exports of dairy products in the three categories. U.S. cheese exports rose during 1990 to 2001, but still comprised a small percentage of U.S. cheese production in the latter years. U.S. butter exports were relatively large in 1993 but comprised less than a percentage of U.S. butter production in 2001 as the tight U.S. butter market sharply reduced exports of the product. NFDM exports were low in 1990, but large as a percentage of production in 1999, reflecting in the latter year the structural surplus of this product in the U.S. Moreover, most U.S. NFDM exports in 1999 were made with Dairy Export Incentive Program (DEIP) export subsidies. Those subsidies are limited under the current WTO agreement to 68 thousand metric tons per year (with no carryover of export subsidy authorization from previous years) after 2000/2001. Therefore, unless U.S. NFDM can be exported without subsidy in the future, expect future U.S. exports of the product to be substantially lower than the 217 thousand metric ton figure for 1999.

Figures in Table 2 reveal changes in U.S. dairy exporting trends. The table lists net exports (X-M) for cheese, butter, NFDM and all dairy products, expressed as a proportion of total trade (X+M). Under certain circumstances, the ratio (X-M)/(X+M) can be used to show changes in a country's comparative advantage as an exporter of a product [8]. Thus, a decline (increase) in the value of the ratio can, in some cases, reveal a reduction (increase) in a country's comparative advantage in exporting a product. This ratio cannot be meaningfully used for that purpose for the

Table 2. U.S. Net Exports (X-M) as a Proportion of Total Trade (X+M), Selected Dairy Products and Dollar Value of All Dairy Products, 1990-2001*

Year	Net Exports as a Proportion of Total Trade			
	Cheese	Butter	NFDM	All Dairy Products
1990	-0.84	0.88	0.82	-0.45
1991	-0.84	0.92	0.97	-0.45
1992	-0.79	0.97	0.98	-0.12
1993	-0.77	0.97	0.99	-0.06
1994	-0.72	0.98	0.98	-0.15
1995	-0.69	0.94	1.00	-0.19
1996	-0.65	0.58	0.88	-0.27
1997	-0.58	0.57	0.95	-0.14
1998	-0.62	-0.82	0.91	-0.19
1999	-0.67	-0.80	0.96	-0.26
2000	-0.60	-0.65	0.96	-0.25
2001	-0.58	-0.95	0.96	-0.21

* Source: Computed from USDA, *Dairy: World Markets and Trade*, various issues, 1991-2001 [20] and USDA, *Agricultural Outlook*, various issues, 1995-2002 [19].

U.S. dairy industry because border protection and price supports mask the comparative advantage of the industry. However, the ratios are useful for describing exporting and importing trends for the U.S. dairy industry. When interpreting the numbers in Table 2 take the following points into account:

- The ratios for cheese, butter, and NFDM were computed using tonnage figures, while those for "All Dairy Products" were computed with dollar values.
- A negative sign in front of the ratio for a product means that the U.S. is a net importer of that product.
- A declining value for a negative ratio—i.e., one that begins to approach zero or turn positive—means that the U.S. is closer to becoming a net exporter of the product.
- No sign in front of the ratio for a product (an implied + sign) means that the U.S. is a net exporter of the product.
- For the column headed "All Dairy Products," the negative sign in front of the ratio means that the dollar value of U.S. dairy imports exceeds the dollar value of exports.

The ratios for butter are noteworthy. The U.S. switched from being a net exporter to a net importer of butter beginning in 1998. Butter imports increased despite the high U.S. tariffs on butter as the supply-demand relationship for the product tightened in the late 1990s. While the U.S. remained a net importer of cheese during 1990-2001, net imports of the product as a percentage of total cheese trade declined during the period. The U.S. remained a net exporter of NFDM during 1990-2001 and witnessed little change in the ratio of net exports to total trade for the product.

Figures in the "All Dairy Products" column, if graphed, would trace out an irregular shape, indicating that the value of U.S. dairy imports:

- 1) Exceeded the value of U.S. dairy exports by a substantial margin in 1990 and 1991,
- 2) Approached equality with the value of exports in the mid-1990s, and,
- 3) Rose again in relation to the value of U.S. exports in the late 1990s and early 2000s.

The figures in the last column may seem counterintuitive since the U.S. has long been known to export about the same tonnage of dairy products as it imports. For example, in 1999, U.S. dairy exports actually exceeded imports in terms of tonnages and milk equivalents by 2% to 3% [18]. But in this same year, U.S. dairy exports had a dollar value equal to only about 62% of the dollar value of imports [18]. U.S. dairy imports persistently have a higher value than exports because they consist substantially of cheese, including high-value specialty cheeses. U.S. dairy exports, on the other hand, consist more heavily of the commodity items, NFDM and whey powders. One implication: the technologically-advanced U.S. dairy industry could increase the value of industry exports by changing the product mix to emphasize differentiated dairy products.

Let's look at what becoming internationally competitive would require in terms of price reductions for the U.S. As indicated in Table 3, U.S. central market prices for bulk dairy products from 1990 to 2001 averaged 43% to 60% higher than world prices as measured by the midpoint of prices reported by the USDA for fob Northern Europe. U.S. butter prices—which averaged lower than world prices in 1995—represent the single exception.

The importance of price to exporting competitiveness is indicated by a 1995 Cornell University survey. Fifteen hundred U.S. agricultural exporters were asked by Cornell researchers to rank the importance of 13 obstacles to exporting [1, p.38]. Respondents named "meeting prices of foreign competitors" as the most important obstacle by a sizable margin. The Cornell researchers also examined obstacles to exporting for agricultural products in addition to dairy products. There is anecdotal information showing the importance of price competitiveness for exporting bulk dairy products. For example, P. Gutierrez, Director of International Sales for Century Foods in Sparta, Wisconsin, described margins on bulk dairy exports to Mexico as being "razor thin" in the early 2000s [6]. When margins on almost any bulk commodity are "razor thin," it is difficult to compete internationally if domestic prices are not competitive with those of other countries. Thus, when U.S. dairy product prices exceed world prices by the amounts shown in the Table 3, it is no surprise that these U.S. bulk dairy products are frequently priced out of world markets. In addition, the strength of the U.S. dollar in recent years has exacerbated the problems facing U.S. dairy exporters.

Table 3. Percentages by Which U.S. Central Market Prices for Cheddar Cheese, Butter and Nonfat Dry Milk Exceeded World Prices, 1990-2001*

Year	Percent by Which U.S. Central Market Prices Exceeded World Prices		
	Cheddar Cheese	Butter	NFDM
1990	71.4%	58.3%	53.1%
1991	56.8	59.5	0.97
1992	41.6	20.5	0.98
1993	60.3	21.1	0.99
1994	56.0	20.2	0.98
1995	29.4	-18.0	1.00
1996	33.8	42.6	0.88
1997	18.9	48.3	0.95
1998	55.4	111.0	0.91
1999	61.7	89.6	0.96
2000	36.2	97.2	0.96
2001	45.6	174.7	7.8
1990-2001 Avg	47.3%	60.4%	43.0%

* Source: USDA, "Dairy: World Markets and Trade," various issues 1991-2001 [20].

What keeps U.S. dairy product prices above world prices? U.S. dairy product prices stay above world prices mainly because of tariff-rate quotas employed by the U.S., the USDA's dairy price support program, and differences between supply-demand conditions in the U.S. and the rest of the world. The importance of the dairy price support program in maintaining the price differences shown in Table 3 should not be overestimated. As is well known, U.S. prices for manufacturing milk and bulk dairy products stayed above the USDA support levels for extended periods during 1990-2001.

The Disincentives for Eliminating U.S. Border Protection and Price Supports for Dairy Products

Judging from past behavior, many U.S. producer organizations would fight hard to maintain the border protection, the related price support program, and the associated higher domestic milk and dairy product prices. Certain U.S. processors, of course, would value the opportunity to obtain cheaper dairy products from abroad. Moreover, consumers would benefit from lower consumer prices that would accompany elimination of U.S. border protection and price supports. But the latter two groups have limited power to persuade policymakers to deregulate the U.S. dairy industry.

A few U.S. beneficiaries of the current system might take a long view and consider relinquishing border protection and associated price supports in order to expand dairy exports and take advantage of production and marketing efficiencies they possess. This long view might be adopted in the belief that dairy and other agricultural tariffs—like the world's industrial tariffs before them, which fell from an average of about 40% in the late 1940s to about 4% at present—will eventually come down to levels that provide little protection for the U.S. dairy industry.

Those who are early movers, it might be reasoned, will be better positioned to profit from freer markets over the longer-term.

What would early mover advantages be worth to a U.S. dairy firm? Mr. Neville Martin, an official of New Zealand's Dairy Board, said in 1995 that based on the Board's international experience, initial entrants into a market gain, on average, a 15% advantage over second entrants. Third place entrants into a given market tend to break even. Entering a market fourth or later is a strategy for losing money [12]. While early mover advantages probably cannot be defined as precisely as these comments suggest, it is reasonable to conclude that those advantages might be substantial.

The Lack of Price Incentives for Deregulation and Expansion of U.S. Dairy Exports

In the short-run, at least, the economics are stacked against U.S. firms that might consider making a pre-emptive move to gain early-mover advantages in dairy exporting. Cox developed a world trade model that illustrates the disincentives for deregulation of the U.S. dairy industry [2]. The model uses FAO production and trade figures for 1989-94 as base period data. Tariff and nontariff barriers and constraints agreed to under the Uruguay Round GATT/WTO agreement are included in the model. While the model fails to take certain market imperfections into account—especially the influence of large traders and investors—it reflects many of the underlying economic forces operating in world dairy markets. Cox evaluated two scenarios that have particular relevance for this paper.

Results for GATT/WTO 2005. This scenario extrapolates from 2000 to 2005 certain provisions of the agreements on dairy (minimum access, tariff changes, and reductions in export subsidies) reached under the GATT/WTO Uruguay Round. In essence, this scenario portrays a continuation of measures to open world dairy markets during 2000-2005 at the same rate that these markets were opened during 1995-2000. While major market imperfections remain under GATT/WTO 2005, the model indicates that the world would move about half way to "Free Trade" by 2005 under this scenario. Cox describes the GATT/WTO 2005 scenario as one that produces sizeable losses for milk producers in Western Europe, modest changes in Japan, Canada and the U.S., and gains for low-cost, pasture based producers. In Western Europe, over-quota tariffs under this scenario substantially limit access to imported whole milk powder, but not NFDM and butter imports. Farm milk prices fall 13% to 14% in Western Europe, increase by 8% or 9% in Oceania, and change relatively little in the U.S. under this scenario.

Free Trade. Results under this scenario are more dramatic. Milk and dairy product production expand in the low-cost producing areas. Dairy exports originating in these same areas increase and decline in high-cost countries. The changes in farm milk prices (percentage change from base period figures) under the Free Trade scenario are shown in Table 4.

Table 4. Percentage Change in Farm Milk Prices from Base Period Levels Under the Free Trade Scenario*

Region or Country	NFDM
Western Europe	-26%
Japan	-36
Canada	-32
U.S.	No Change
Mexico	-17
Australia	+23
New Zealand	+51
Argentina	+17

* Source: Cox [2].

The results under the scenarios correspond broadly to industry expectations. Even results for the Free Trade scenario confirm what dairy exporters have understood in a general way for decades. For example, several dairy exporters interviewed by Babcock Institute analysts have concluded that U.S. farm milk prices would not change much under freer dairy markets.

While the results are perhaps not surprising, they do have important implications. The prospect of little price gain for U.S. dairy farmers from freer trade or free trade in dairy products partially explains the lack of interest on the part of most U.S. dairy cooperatives in dairy trade liberalization.

Two points relating to the results need elaboration. U.S. dairy exports would expand modestly under both scenarios. Thus, low-cost U.S. milk producers and processors, in particular, could gain revenues under the essentially constant farm milk prices associated with the scenarios. However, the incentives for deregulation obviously would be greater if accompanied by price increases. Secondly, the scenarios assume that there would be actions to free the dairy markets of other countries. U.S. farm milk prices would decline—rather than remain essentially flat—if the U.S. unilaterally deregulated to produce the lower milk prices needed to make the U.S. dairy industry more internationally competitive.

Compensation: Why Not Pay U.S. Dairy Farmers to Accept the Deregulation that Would Foster Expanded Exports?

Unilateral deregulation would mean eliminating the U.S. dairy industry's border protection, ending the dairy price support program, and allowing domestic milk and dairy product prices to fall to new equilibrium levels closer to world prices. Since U.S. dairy farmers have strong incentives to keep current border protection and subsidies, why not pay them to accept deregulation? Moreover, there is a model. Australia's dairy industry moved to nearly complete deregulation in mid-2000, partly to become more competitive in international dairy markets [4]. Under a complex compensation package, an average fluid milk producer in the state of Queensland, Australia will receive the equivalent of about U.S.\$63,000 over an eight-year period in return for accepting deregulation.

It is unclear how much money would be required to persuade U.S. dairy farmers to accept deregulation. Moreover, there are few, if any, incentives for U.S. farmers to even seek a package

Table 5. Quantity and Value of U.S. Dairy Exports, 1999*

Product	Milk Equivalent (Million lbs.)	% of Total	Value (Million \$)	% of Total
NFDM	2,750	34.2%	\$256.2	25.6%
Cheese	790	9.8	130.1	13.0
Whey	2,040	25.4	124.3	12.4
Ice Cream	280	3.5	84.7	8.5
Lactose	1,210	15.0	47.8	4.8
Casein and MPC	115	1.4	32.7	3.3
Fluid Milk & Cream	110	1.4	24.8	2.5
Dry Whole Milk	240	3.0	12.2	1.2
Other	505	6.3	287.3	28.7
Total	8,040	100.0	1,000.0	100.0

* Sources: U.S. Bureau of the Census, USDA, National Milk Producers Federation and USDEC, as reported by USDEC [18].

similar to the one obtained by Australia's dairy farmers. In Australia, the powerful Victoria dairy farmer organizations (accounting for about two-thirds of the milk produced in the country) concluded that they gained little benefit from government subsidies and chose to deregulate as part of an effort to expand dairy exports. Victoria's producers were able to present dairy farmers in other parts of Australia with a "God Father" like offer they couldn't refuse: Either accept compensation in return for deregulation or get deregulation without compensation. No dairy groups in the U.S. have the market power or incentives to apply similar pressures for deregulation. However, if policymakers wish to transform the U.S. dairy industry into an export-oriented industry, it would pay to find out how much compensation would be required to persuade U.S. dairy farmers to accept deregulation.

How U.S. Dairy Exporting Strategies Have Evolved in the Prevailing Environment

There is little that is irrational or even surprising in the behavior of the U.S. dairy industry toward exporting—the industry has reacted in predictable ways to incentives. Thus, the strategies of most U.S. milk producers implicitly recognize the following point made by Michael Porter of Harvard's Business School [13]:

Deregulating a protected industry...will lead to bankruptcies sooner and to stronger, more competitive companies only later.

Not surprisingly, U.S. dairy exports have gravitated to (a) products that are not priced out of international markets by U.S. tariffs or the USDA's price support program, (b) products that can be exported with subsidy, and (c) selected differentiated dairy products. A useful breakdown of the quantity and value of major U.S. dairy exports appears in Table 5. The products can be placed in the (a), (b), or (c) categories and generalizations can be made of export growth prospects for the products.

Category (a) Products: Whey and lactose. A prominent product in this category is dried whey, the by-product of the burgeoning U.S. cheese business. U.S. whey manufacturers produce many different whey products with varying protein, mineral, and lactose levels and varying

functional properties. Most U.S. whey products are derived from sweet whey obtained during the production of cheddar, swiss, mozzarella and similar types of cheeses. Processors use sweet cream whey to produce whey powder, whey protein concentrate, whey protein isolate, reduced lactose whey, and de-mineralized or reduced mineral whey.

Whey products have a host of applications, finding uses in animal feeds, baked goods, candies, snack foods, dry mixes, processed meats, infant formulas, and nutritional beverages. Whey products also are finding expanded use in the production of nutraceuticals and pharmaceuticals. Certain specialized whey proteins and fractions used in pharmaceuticals are high value items, commanding prices exceeding \$100/kg [21]. According to the FAS-USDA, the U.S. is one of the world's largest exporters of whey powder and whey protein concentrates [21]. U.S. dried whey exports increased in value from \$60 million in 1992 to 171 million in 2000 or 185%. The top markets for U.S. whey powder and whey protein concentrates include Japan, Mexico, Canada, China and Korea.

World export demand for dried whey products has exhibited a strong, consistent upward trend since the beginning of the 1970s [10]. Moreover, U.S. firms have been competitive sellers in the world market, accounting for 13% to 14% of world exports of the product in 1999 [10]. This market promises to be a good export market for the U.S. for the foreseeable future. The diversity of uses for the product—especially the high-valued uses—make this market particularly attractive.

Dairy blends—consisting of a number of dried milk and dried whey products—also sell well in certain foreign markets. In some foreign markets, these products enjoy preferential tariff treatment.

Cox summarizes world market conditions for dried whey products and other dairy ingredients as follows [3]:

World product markets are increasingly driven by milk components (NOT milk!!!). The milk components include: milk fat (and fat fractionations); protein (casein, whey protein, and other protein fractionations); and lactose. This trend is most manifest in the strong growth of world markets for dairy-based ingredients.

Category (b) Products: NFDM, cheese (sharply limited amounts) and butter. As noted earlier, the U.S. is permitted under WTO rules to export 68 thousand metric tons of NFDM per year with DEIP subsidies. In most years, this subsidy limit will not permit the U.S. to export with subsidy the full structural surplus of the product. While world prices for NFDM periodically rise to levels that allow the U.S. to export the product without subsidy, such events are not frequent or long-lasting. This could change, of course, if additional "tilts" in the price support program further lower the price support for NFDM while simultaneously raising the butter support price. Moreover, world exports of NFDM have exhibited a long-term downward trend. Thus, U.S. exporting opportunities for this product are uncertain and currently appear less than robust. World exports for whole milk powder have exhibited a long-term uptrend, but the U.S. produces little of this product.

The U.S. is permitted under the WTO to export with DEIP subsidies small quantities of cheese (3,000 metric tons per year or less than 1% of recent annual production) each year. Thus, any substantial growth in exports of this product of necessity must be made without export subsidies.

Under WTO rules, the U.S. is permitted to export with subsidy up to 21 thousand metric tons of butter per year. But, given the tight domestic supply-demand situation for butter, the U.S. is unlikely to export much of the product with or without subsidies.

Category (c) Products: Fluid milk and cream, ice cream, and most cheese. U.S. exports of fluid milk and cream are limited by the cost of shipping the bulky products. Mexico represents an important, reasonably nearby destination for U.S. fluid milk and cream. While Mexico's tariffs on fluid milk and cream are low, the nontariff barriers to Mexican imports of these products occasionally are significant. Moreover, domestic processors in Mexico have gained strength and competitiveness and promise to take market share from U.S. processors who fail to maintain competitive prices.

For reasons that are not fully clear, U.S. premium ice cream exports have exhibited limited growth in recent years. It is clear that Mexico's imports of the product have been constrained by the high prices carried by premium U.S. ice cream [6]. Exports of U.S. specialty cheeses may increase modestly but this product will face strong competition from European and Oceania firms.

The Bottom Line: The most promising U.S. dairy exports consist of dairy ingredients—especially dried whey products and dairy blends. U.S. companies would appear to have the capability to expand foreign sales of highly differentiated dairy products including specialty cheeses, nutraceuticals, and pharmaceuticals. A portion of the structural surplus of U.S. NFDMM will continue to be exported with subsidy. Additional price support "tilts" affecting the USDA's support price for NFDMM could increase the frequency with which the product can be exported without subsidy.

Why U.S. Firms Make Limited Investments in Foreign Dairy-Food Businesses

With notable exceptions, U.S. firms have made limited direct investments in foreign dairy-food businesses. Kraft Foods and Schreiber Foods represent prominent exceptions. Indeed, Kraft Foods is in the same set with big foreign direct investors such as Nestle and Unilever. Kraft has important dairy and other food sales in Europe, Asia/Pacific, Latin America, and Canada [5]. Schreiber Foods also has noteworthy foreign direct investments in dairy food businesses in Mexico, Brazil, Germany, and India. However, with such exceptions, there are few big U.S. players involved in foreign direct investment in dairy-food business. Of course, some smaller firms have made significant foreign dairy investments. One such U.S. firm—the operations of which have been analyzed by the Babcock Institute—is Food Master, which has dairy processing and marketing investments in Kazakhstan, Moldova, and the Ukraine [9].

Many hypotheses can be advanced to explain the limited amount of foreign direct investment by U.S. dairy firms. The U.S. market is large, familiar, mostly English speaking, and largely devoid of corruption, making it an attractive market to serve. Second, in the U.S. the risks of nonpayment by customers and defaults on contracts are lower than in many foreign markets. Third, capital constraints limit dairy-related foreign direct investments of some smaller U.S. firms. More generally, many small and mid-sized dairy firms may conclude that foreign direct investment in dairy-food businesses is a "big company's game."

In summary, it may be simply that U.S. firms make the most profits by investing in the domestic market. Thus, when asked about this behavior, U.S. firms might respond with the

question: If attractive profits fail to exist in the U.S., why have so many foreign companies expanded direct investments in the U.S. dairy industry? U.S. companies point out that Danone (France), Lactalis (France), Diegeo (UK), Glanbia (Ireland), Kerry Group (Ireland), Nestle (Switzerland), Unilever (UK-Netherlands), Parmalat (Italy), and Fonterra (New Zealand) increased or maintained substantial dairy-food investments in the U.S. in the 1990s and 2000.

The actions of the foreign firms tend to confirm the attractiveness of the U.S. dairy-food market. Moreover, the pattern of foreign direct investment by the European firms undoubtedly reflects the incentives they face. Certain European firms hope to expand sales of their well-known branded products in the U.S. Brand expansion by the firms in the U.S. is feasible in part because there are no quotas to limit the availability of milk in this country.

Furthermore, disappointing prospects for further liberalization of world dairy markets make direct investment in growth markets an attractive alternative to exporting. Mr. John Roadley, Chairman-Designate of the Global Dairy Company (predecessor to Fonterra), argued in early 2001 that if New Zealand's dairy industry is to grow competitively, it must increase foreign direct investment in dairy businesses and use domestically-produced milk in the country of the acquired business rather than rely exclusively on exports of New Zealand dairy products. Roadley explained his position as follows [14]:

While we have been successful in achieving a third of international dairy trade (mainly through operations of the New Zealand Dairy Board), the lion's share of the global dairy business is not traded across borders. The part of the market that is accessible to us is as small as six percent of world dairy production. Ninety four percent of the market is largely inaccessible to us because of trade restrictions... (We will need to continue) to work closely with government on international trade liberalization. *But far more immediately, we need to seek acquisitions and joint ventures with companies already operating in the inaccessible part of the market* (emphasis supplied). And we need to continue to invest in leading-edge research and development; manufacturing technologies and brand development.

This comment from an official of the world's leading private dairy exporting firm speaks volumes about the advantages of foreign direct investment vs. dairy exporting. His comments reinforce points noted earlier in the paper about the less-than-favorable environment for dairy exports.

Implications for U.S. Firms of Maintaining the Status Quo

While maintaining the status quo is understandable, it is not without risk for the U.S. dairy industry. Recall Suber's comment that, in the U.S., the "domestic demand (for dairy products) is growing modestly." Mr. Helmut Maucher, a former CEO of Nestle was more negative, characterizing the demand for dairy-food products in the U.S. and Western Europe as being "flat and fiercely competitive [17]." In part because of Nestle's perceptions about market conditions in the U.S. and Western Europe, Nestle has placed a priority on expanding sales in the growth markets of Latin America and Asia.

The projections in Table 6, developed by Mr. Robin Johnson of Cargill, provide "ballpark" estimates of the growth of population and incomes in Asia, Latin America and a number of other regional markets. These admittedly dated projections provide only general indications of the strength of the drivers of demand for dairy products in the different regions. However, if approximately correct, the population growth and GDP growth (proxy for income) figures for

Asia suggest that this region of the world will become an increasingly important market for dairy products and other consumer goods. The figures are too aggregated to tell much about sales growth prospects for South America. However, the population and GDP figures do suggest some strength in the South American market. Mexico promises to have both high income growth and a higher population growth rate than the rest of North America, making it a potentially attractive, but highly competitive market for dairy product sales [6].

Table 6. Distribution of World Population and GDP Growth to 2010*

Country Group	Population Growth	GDP Growth
Asia	58%	45%
Central and South Africa	27	1
South America	9	4
North Africa	4	4
North America	2	26
Western Europe	0	16

* Source: Johnson, R., Food Policy in APEC, 1997 [11].

If U.S. firms eschew opportunities to participate in a major way in sales to the expanding Asian and Latin American markets for dairy products, they will find that Australasian and European firms will be deeply entrenched in these markets. Western European firms, in particular, would have strong incentives to expand direct investments in these markets because of the near zero population growth and the sales-constraining presence of milk quotas in the EU.

The status quo has some implications for U.S. domestic firms that are not directly related to loss of early mover advantages to foreign competitors. Specifically, if California firms have few incentives to export cheese, they will battle the Midwestern U.S. dairy industry for market share in domestic cheese markets. In addition, expanded purchases of NFD, in particular, under the USDA's dairy price support program could emerge if no appreciable increase in dairy export sales occurs.

The loss of early mover advantages to foreign competitors and the potential increase in the intensity of domestic competition pose some risks for the U.S. dairy industry. However, there is no indication that these developments will, in the short-run, produce a strong push for deregulation and strongly expanded U.S. dairy exports.

Would U.S. Firms Increase Long-Term Profits by Expanding Foreign Dairy Sales?

Whether a U.S. dairy firm seeking higher profits should engage in exporting or foreign direct investment is, of course, a complex decision that must be based on a firm's individual circumstances and capabilities. In this connection, Suber makes the following point regarding dairy exporting [7, p.8]:

Whether exporting makes sense for a firm is dependent upon how the organization plans to grow. A firm must think through its strategic plan for growth and assess how exporting fits into the plan. Exporting is one channel for growth and can be considered as an option.

The decision should also take into account whether a firm desires to gain possible early mover advantages in foreign dairy sales. However, the U.S. dairy industry as a whole should keep in mind that a world similar to the one described earlier by Bruce Stuart and Thomas Suber is likely to emerge eventually. The appropriate strategic response for many U.S. dairy firms will depend on whether that world emerges in five to 10 years (the short-run) or substantially later (the longer-run).

Most signals to date suggest that U.S. border protection and price supports will change relatively little in the next five to 10 years. Thus, gearing up to expand exports of the category (b) and category (c) dairy products identified earlier may occupy a low priority for many U.S. dairy firms. Indeed, the appropriate response for many U.S. firms might be to experiment with expanded dairy exports in order to be prepared if the world predicted by Stuart and Suber emerges sooner than expected.

The incentives for expanded foreign direct investment appear to be different. Unlike the situation for dairy exporting—where price supports and border protection price certain U.S. dairy products out of world markets—the barriers to direct investment are less daunting. Moreover, if, as claimed by the former CEO of Nestle, much of the U.S. dairy-food market is "flat and fiercely competitive," this will provide incentives for U.S. firms to consider making additional direct investments in foreign dairy-food businesses.

What the U.S. is Doing Right—Gathering Market Intelligence

While conditions favor the status quo, the U.S. dairy industry is securing market intelligence on exporting and foreign direct investment opportunities in foreign dairy-food markets. For example, the USDEC in cooperation with the FAS-USDA has commissioned or carried out studies of foreign demand for U.S. dairy products. In certain promising markets, the USDEC has put in place field operations to familiarize consumers in these countries with U.S. dairy products and has carried out market expansion efforts akin to those employed for more export-oriented products—e.g., corn, soybeans, wheat, beef, pork, and poultry products. These efforts have helped to expand sales of dairy food ingredients and other products that are not priced out of foreign markets by U.S. border protection and price supports. These market studies provide a reservoir of information on foreign demand for dairy products. The studies will be particularly useful if conditions change and U.S. firms find it profitable to become more competitive in selling a broad range of dairy products in foreign markets.

What the U.S. is Doing Right—More U.S. Firms are Dipping a Toe in International Markets

U.S. firms that have had limited or sporadic involvement in foreign markets in the past are becoming more fully immersed in international markets. Examples include:

- The joint venture (under DairiConcepts LP) between Dairy Farmers of America and Fonterra of New Zealand to produce milk protein concentrate and other food ingredients at a Portales, New Mexico plant.
- The Land O'Lakes-Mitsui joint venture for building one of the world's largest cheese plants in California to produce cheddar and mozzarella cheese for the U.S. market, whey fractions for global markets, and whey fractions for dietary and sports drinks.
- Initiatives of the Northwest Dairy Association (formerly Darigold) via its exporting arm (Olympic Foods) to export large quantities of U.S. whey powder, mainly to the Pacific

Rim countries. The Northwest Dairy Association's initiatives bring to mind the significant dairy exporting activities of Darigold in earlier times.

- Expanded DEIP exports of dairy products made by a host of U.S. firms.

While some of these initiatives can be expected to change over time to increase the role of U.S. firms in exporting and direct investment in foreign dairy-food businesses, the existing initiatives will give U.S. firms valuable experience with international dairy ventures and should help to prepare the firms for the world that Stuart and Suber argue will eventually emerge.

Hence, for a number of reasons—especially incentives facing U.S. dairy firms to expand exports or foreign direct investments—the answer to the question posed in the title of paper is arguably, yes.

References

1. Bills, N., J. Maestro-Scherer, and R. Neenan, "Survey of Agricultural Exporters," Final Report for AMS/FAS/USDA, 1995.
2. Cox, T., "An Economic Analysis of the Effects of Trade Liberalization on the World Dairy Sector," Paper presented at the invitational workshop for dairy economists, October 18-19, 1999, Seattle, Washington.
3. Cox, T., "Recent Trends in Dairy Product Development and Markets," Paper presented at Workshop on Agro-Food Policies in Estonia, Latvia, and Lithuania, December 4-5, 2001, Vilnius, Lithuania.
4. Dobson, W.D. and J. Wagner, "The Deregulation and Rationalization of Australia's Dairy Industry—Implications for the U.S. and World Dairy Industries," Babcock Institute Discussion Paper No. 2000-3.
5. Dobson, W.D., J. Wagner, and R. Hintz, "When Will U.S. Firms Become Major Dairy Exporters and Bigger Direct Investors in Foreign Dairy-Food Businesses?" Babcock Institute Discussion Paper No. 2001-3.
6. Dobson, W.D., and R. Proctor, "How Mexico's Dairy Industry Has Evolved Under the NAFTA—Implications for U.S. Dairy Exporters and U.S. Investors in Mexico's Dairy-Food Businesses," Babcock Institute Discussion Paper No. 2002-1.
7. Dobson, W.D., "Why Most Small and Mid-Sized Agribusinesses and Cooperatives Don't Export—Implications for the U.S. Dairy Industry," Marketing and Policy Briefing Paper No. 63, June 1998.
8. Ehui, S., T. Hertel, A. Rae, and A. Nin, "China: Will They Buy or Sell?" Choices, 3rd Quarter, 2000, pp. 8-12.
9. Esenova, S. and W.D. Dobson, "Doing Business in An Industry with Difficult Economics—Food Master's Experience in Dairy Processing and Marketing in Kazakhstan," Babcock Institute Discussion Paper No. 2001-1.
10. Gould, B. and H. Villarreal, "A Descriptive Analysis of Recent Trends in the International Market for Dry Milk Products," Babcock Institute Discussion Paper No. 2002-2.
11. Johnson, R., "Food Policy in APEC," Paper presented at a conference hosted by the Institute for International Economics, April 14-15, 1997, Washington, D.C.

12. Martin, N., Public Affairs Manager of New Zealand Dairy Board, results of May 12, 1995 interview reported in Stevenson, G., R. O'Harrow, and D. Romig, "Dairy Farmer Career Paths, Farm Entry and Exit Transitions in New Zealand and Wisconsin: Observations, Challenges, and Opportunities for Exchange," Babcock Institute Discussion Paper No. 96-2.
13. Porter, M.E., "The Competitive Advantage of Nations," Harvard Business Review, March-April, 1990, pp. 73-93.
14. Roadley, J., Chairman-Designate, Global Dairy Company, Speech to the Wellington, New Zealand Chamber of Commerce, February 15, 2001.
15. Stuart, B., "Dairy Export Incentive Program Deserves Support, Can be Improved," The Cheese Reporter, Vol. 116, No. 44, May 1992.
16. Suber, T., "A View from the Private Sector," Comments presented at a Dairy Outlook Seminar, Buenos Aires, Argentina, 1999.
17. Templeton, J., S. Toy, and D. Lindorff, "Nestle: A Giant in a Hurry," Business Week, March 22, 1993, p. 50.
18. U.S. Dairy Export Council, "The U.S. Dairy Trade Balance," Vol. 6, No. 4, August 2000.
19. U.S. Department of Agriculture, "Agricultural Outlook," various issues, 1995-2002.
20. U.S. Department of Agriculture, "Dairy: World Markets and Trade," various issues, 1991-2001.
21. U.S. Department of Agriculture, Foreign Agricultural Service,
<http://www.fas.usda.gov/dlp2/circular/1999/99-12Dairy/uswhey.html>.

Appendix Table 1. U.S. Dairy Exports as a Percent of Production, 1990-2001*

Product	Exports	Production	Exports as a % of Production
	(1000 Metric Tons)		
Cheese			
- 1990	12	2,749	0.4%
- 1991	12	2,747	0.4
- 1992	15	2,943	0.5
- 1993	19	2,961	0.6
- 1994	25	3,054	0.8
- 1995	28	3,138	0.9
- 1996	32	3,274	1.0
- 1997	38	3,325	1.1
- 1998	37	3,398	1.1
- 1999	38	3,581	1.1
- 2000	47	3,744	1.3
- 2001	52	3,700	1.4

Butter			
- 1990	31	591	5.2
- 1991	49	606	8.1
- 1992	139	619	22.5
- 1993	145	596	24.3
- 1994	94	588	16.0
- 1995	64	573	11.2
- 1996	19	533	3.6
- 1997	18	522	3.4
- 1998	3	530	0.6
- 1999	2	579	0.4
- 2000	4	578	0.7
- 2001	1	550	0.2
Nonfat Dry Milk			
- 1990	10	399	2.5
- 1991	68	398	17.1
- 1992	118	396	29.8
- 1993	138	433	31.9
- 1994	123	558	22.0
- 1995	170	559	30.4
- 1996	32	482	6.6
- 1997	117	552	21.2
- 1998	104	515	20.2
- 1999	217	617	35.2
- 2000	142	659	21.6
- 2001	150	630	23.8

* Source: USDA, "Dairy: World Markets and Trade," Various Issues, 1995-2001 [20].