



AgEcon SEARCH
RESEARCH IN AGRICULTURAL & APPLIED ECONOMICS

The World's Largest Open Access Agricultural & Applied Economics Digital Library

This document is discoverable and free to researchers across the globe due to the work of AgEcon Search.

Help ensure our sustainability.

Give to AgEcon Search

AgEcon Search
<http://ageconsearch.umn.edu>
aesearch@umn.edu

*Papers downloaded from **AgEcon Search** may be used for non-commercial purposes and personal study only. No other use, including posting to another Internet site, is permitted without permission from the copyright owner (not AgEcon Search), or as allowed under the provisions of Fair Use, U.S. Copyright Act, Title 17 U.S.C.*

Domestic Policy Interdependence: Analysis of Dairy Policies in the USA and EC

Mary A. Marchant, Steven A. Neff, and Alex F. McCalla¹

Abstract: This paper compares domestic dairy policies in the USA and EC and examines the impact of these policies on each dairy industry to explore domestic policy interdependence. The EC and USA have similar goals of improving farm income and use similar price support policies to achieve these goals. These policies have encouraged overproduction, generated surpluses and government stocks, and resulted in large government expenditures. Both have followed a mixed surplus disposal strategy with one key difference—the EC has used export subsidies to dispose of part of its surplus on the world market. In the mid-1980s, both the USA and EC took strong action to confront these problems. The EC's use of marketing quotas and commitment to reducing its stockpiles ultimately affected the world market as its exports fell in 1989. As a result, US stocks virtually disappeared, US prices increased substantially, and US surplus disposal programmes ended. By recognizing the policy linkage of EC domestic policy through the international market on US stockpiles, policy makers can choose policy instruments more precisely.

Introduction

This paper compares US and EC domestic dairy policies and examines the impact of these policies on their respective dairy industries so as to explore domestic policy interdependence. By recognizing policy linkages, policy makers can choose policy instruments more precisely, resulting in reduced price and budget variability, increased stability of domestic and international markets, and increased stability of government stockpiles and of the programmes that use government stocks (e.g., domestic and international donations).

Since 1988, significant changes have occurred in both the US and EC dairy industries that indicate the existence of policy linkages. Both the USA and EC use price support programmes to support manufactured dairy products (butter, cheese, and milk powder) directly and support fluid milk prices indirectly. Both reinforce domestic support programmes with restrictive border policies. The USA restricts the amount of imports primarily by imposing a quota, supplemented with small tariffs. The EC imposes a variable import levy, which generates government revenues. In addition, the EC uses export subsidies, making EC dairy products competitive on the world market. The USA implicitly subsidizes exports through its international donation programmes.

US and EC domestic prices have been two to three times greater than the world price. These domestic prices have encouraged overproduction and generated surpluses that were purchased by each government, stored initially in government stockpiles, and disposed of using a variety of methods. The USA has used donations primarily to dispose of its surplus manufactured dairy products.²

In addition to donations, the EC also used export subsidies to sell surplus manufactured dairy products on the world market at world prices. The use of export subsidies as a method of surplus disposal for both EC butter and milk powder increased dramatically during 1985–88 due to the EC's extraordinary appropriation of funds to reduce its stocks.³

Supporting the dairy industry has been costly and variable, with record-high government expenditures by both the USA and EC in the 1980s. For example, US dairy programme costs during the 1980s ranged from \$700 million in 1988/89 to \$2,700 million in 1982/83, compared to an EC range of 3,300 million ECUs in 1982 to a maximum of 6,000 million ECUs in 1987.⁴

The budget problem was magnified in the EC where dairy policy was draining the Common Agricultural Policy (CAP) budget.

Both the USA and EC took strong domestic action in the mid-1980s. In 1984, the EC instituted a marketing quota, reinforced with a super-levy penalty for its violation. In 1987, the quotas were further reduced and the EC made an extraordinary appropriation of funds to dispose of its mountain of butter and milk powder stocks. Milk powder stocks fell markedly to 14,000 t in 1988 from 847,000 t in 1986. Butter stocks were reduced to 223,000 t in 1988

from 1.3 Mt in 1986. This policy ultimately affected the world market since the EC had used the export market for surplus disposal.

Concurrent with EC policy setting, the USA sought to reduce its surplus through strong action in the 1985 Farm Bill by instituting (1) the Dairy Termination Program (also known as the Whole Herd Buy-Out Program), which paid dairy farmers to leave the industry for five years; and (2) the supply-demand adjuster (trigger mechanism), which for the first time related changes in the support price to government stock levels. Due to large government stockpiles upon passage of the 1985 Farm Bill, the US support price fell, and continued to fall from \$12.60 per cwt (100 lbs) in 1985 to \$10.10 per cwt in 1990 (annual average fat test). As a result of the Dairy Termination Program, dairy farmers left the industry. Both of these events caused US government stockpiles to decline.

Both US and EC policies of the mid-1980s affected the world market. Due to the EC's effective marketing quota and subsequent reduction in exports, world supply of manufactured dairy products, particularly milk powder, diminished. As a result of the decrease in world market supply, US stockpiles were drawn down, beginning in 1985, as stocks were placed on the world market. The export market then became a feasible outlet for disposal of US surplus stocks. The Minnesota-Wisconsin price (base price for manufactured dairy products) rose substantially, from \$11.48 per cwt in 1985 to \$14.93 per cwt in December 1989 (3.5 percent milkfat). Donations from government stockpiles came to an abrupt end, since surplus manufactured dairy products no longer existed. From the beginning of 1990, little, if any, US government stocks existed for cheese and milk powder, although there were still some butter stocks. The point here is that EC dairy policy affected the world market, which in turn affected the US market. Policy makers must recognize the international environment in which domestic policy is set (McCalla and Josling, 1985).

Government Stock Accumulation

Examination of government stock levels provides insight into the overproduction problem since governments must first purchase surplus manufactured dairy products and then determine the appropriate surplus disposal method. Related to government stocks is the price support level. In general, high support prices encourage overproduction, generating surpluses that are purchased by the government and stockpiled. Milk powder has been the dominant US surplus manufactured dairy product since the mid 1970s. Commodity Credit Corporation (CCC) purchases peaked in 1983, corresponding to high support prices and large surpluses of manufactured dairy product. CCC stock levels for all manufactured dairy products peaked in 1984. As of 1989, CCC stock levels for butter, cheese, and milk powder decreased 63 percent, 95 percent, and over 99 percent from their 1984 peak levels. In the EC, both butter and milk powder have been dominant surplus manufactured dairy products. Stocks peaked in 1986 for both products. As of 1988, EC stock levels for butter and milk powder decreased 83 percent and 98 percent from their 1986 peak levels.

Surplus Disposal Policies and Methods

Once stocks are accumulated, this surplus can be: donated as food aid via domestic and international donations; stored in domestic stockpiles; controlled via production controls, buy-out schemes, or a reduction in the price support level; and sold domestically or on the world market. No matter which method is chosen, taxpayers incur a cost for surplus disposal.

The USA and EC manage surpluses generated from domestic policies differently. The overproduction problem is more severe in the EC than the USA. When comparing government stock levels of manufactured dairy products to fluid milk production (on a milk equivalent basis), EC stocks peaked in 1986 and equalled 37 percent of production while US stocks peaked in 1984 and equalled 24 percent of production. Consequently, EC dairy policy has

evolved into taking strong action to reduce surpluses, culminating with a marketing quota. The EC uses a variety of strategies to dispose of surplus manufactured dairy products, including domestic donations, subsidized consumption, export subsidies, and stock accumulation. The strongest policy measures have occurred in the supply control area. EC policies to curb production and reduce stocks have included: slaughter premiums and beef conversion programmes, which diverted cows from the dairy sector to the cattle sector (similar to the US Dairy Termination Program); and a producer co-responsibility levy used to finance sales promotion and school milk subsidy programmes. These EC policies failed to control the ever-growing surplus and ever-increasing stocks. Production dramatically outpaced consumption, even with expansion in exports. In the early 1980s, EC production increased 2.1 percent per year, while consumption increased only 0.2 percent per year. By 1983, total manufactured dairy product stocks reached a record peak, totalling 19 percent of EC milk production. The future looked rather bleak, with surpluses expected to continue growing. Storage costs, export subsidies, and price supports were draining the CAP budget. As a result, in 1984 the EC ministers agreed on new reforms using a five-year milk marketing quota system that imposed a "superlevy" penalty for over-base production and froze the target price.

The USA has also developed many different surplus disposal policies, including: domestic and international donation programmes (e.g., P.L. 480, food stamps, school lunch, and the special distribution programme of the 1981 Farm Bill, which directed the US Department of Agriculture to distribute Commodity Credit Corporation (CCC) commodities to the needy⁵); subsidized exports (e.g., the export enhancement programme and the dairy export incentive programme for the purpose of making US exports more competitive on the world market;⁶ international marketing programmes (e.g., the targeted export assistance programme); and stockpiling.

With regard to specific surplus disposal methods for manufactured dairy products in the USA, for butter, the primary surplus disposal mechanism has been domestic donations. When large surpluses accumulated, surplus disposal methods also included exports and stock accumulation. Dominant EC butter surplus disposal methods include exports, export subsidies, and subsidized domestic consumption (e.g., Christmas butter sales).

In recent years, the EC has both increased its butter stocks and subsidized international sales, particularly to the former USSR. For cheese, which is supported in the USA, but to a much lesser extent in the EC, domestic donations and stockpiling have been the dominant US surplus disposal methods.⁷

Milk powder has been the leading surplus manufactured dairy product in both the USA and EC. In the USA, milk powder surplus disposal has consisted of stock accumulation, particularly during 1974–84, and export disposal, primarily international food aid. In the EC, the dominant surplus disposal method has been subsidized domestic consumption, with the majority used as animal feed. In summary, the USA has disposed of surplus processed dairy products using domestic and international donations along with stockpiling, whereas the EC has used domestic consumption and export subsidies. Both have thus used some form of domestic disposal.

Supply control is the most direct method to control surpluses. The USA has used voluntary supply control programmes, including the Dairy and Tobacco Act of 1983, whereby participating dairy farmers agreed to reduce herd size in order to receive a diversion payment financed by the dairy industry, and the Dairy Termination Program (Whole Herd Buy-Out Program), whereby participating dairy farmers left the dairy industry for five years and had to dispose of their herds. In addition to the Dairy Termination Program, the 1985 Farm Bill created a supply-demand adjuster (trigger mechanism) that linked the support price to projected CCC net removals. During 1988–90, if forecast CCC removals were greater than 5,000 million lbs (milk equivalent), then the support price decreased by 50 cents per cwt. If net removals were estimated to be less than or equal to 2,500 million lbs (milk equivalent), then the price support increased 50 cents per cwt. Since enactment, the support price has dropped 20 percent from the original 1985 level of \$12.60 to the 1990 level of \$10.10 per cwt of grade B milk, testing 3.67 percent butterfat. The USA has thus also attempted to control

supply via support price reductions. The EC has taken even stronger action with its marketing quota.

Dairy Programme Cost Comparisons

In the EC, the dairy support programme has been the largest expenditure in the CAP budget, 21.3 percent in 1988. Dairy expenditures have increased dramatically since the EC switched from being a net importer to a net exporter of manufactured dairy products in 1972. Government expenditures increased 18 percent per year during 1975–83, primarily due to the large dairy surplus storage costs and the cost of export subsidies corresponding to the expansion of export markets and the fall in the value of the dollar through exchange rates. The nominal cost of each of these two items increased 50 percent in the mid-1970s. The EC expenditures for agricultural support increased from \$15,700 million in 1985 to \$32,500 million in 1989.

In the USA, annual expenditures for the Dairy Price Support Program averaged \$325 million during 1953–73. Costs fluctuated in the 1970s corresponding to the variability in milk production. In the 1980s, high support prices encouraged overproduction, which generated surpluses and resulted in large budget outlays associated with CCC purchases of this surplus. US government expenditures peaked in 1984, reaching nearly \$2,800 million, which appears relatively small compared to EC expenditures.

Trade Comparisons

Due to the perishability of fluid milk, only manufactured dairy products are traded. Once again, the magnitude of EC exports exceeds that of the USA. Milk powder is the dominant US export, while cheese is the dominant import—mainly specialty cheeses from the EC. For butter, US exports have fluctuated widely since 1950, while imports have been almost nonexistent during that period. In regards to US cheese trade, imports dominate. USDA exports are minimal. Virtually no imports exist for milk powder. In regards to US exports of milk powder, the CCC follows a mixed strategy, whereby approximately 75 percent of exports were international donations and the remaining 25 percent were international sales during 1975–85. In the early 1980s, exports of all manufactured dairy products increased, with milk powder being both the dominant surplus manufactured dairy product and also the dominant export manufactured dairy product from CCC stocks. Since 1985, both US exports and CCC stocks of all manufactured dairy products have declined dramatically and, from the beginning of 1990, have been virtually nonexistent.

The EC is the world's largest producer and exporter of dairy products with a 50 percent market share of world dairy trade, where dairy exports equal 13 percent of total EC agricultural exports. Prior to obtaining self-sufficiency in 1972, the EC was a net importer of dairy products. Export subsidies make EC products competitive on the international market but have been a costly budget item for the CAP.

Butter exports at the world market price using subsidies have dominated, peaking in 1980, declining until 1985, and increasing during 1985–88. Food aid has been a minor, yet fairly constant, outlet for exports. Prior to 1984, butter exports at reduced prices were nonexistent. Since then, the EC has sold reduced-priced butter to the former USSR, providing an even greater subsidy. Butter imports have been fairly constant.

For milk powder, exports at the world price using export subsidies follow a similar trend as that of butter—peaking (initially) in 1980 and dominating as the primary outlet for exports. Milk powder exports at the world price using subsidies increased dramatically during 1985–88, surpassing the previous 1980 peak. This dramatic increase in the use of export subsidies for both butter and milk powder is the result of the EC's commitment to reduce stocks. Special schemes for milk powder, consisting of sales to developing countries at reduced prices, only occurred prior to 1980. Since 1988, milk powder as food aid has maintained a relatively

constant share of the export market. Unlike butter, milk powder imports are virtually nonexistent.

Conclusions

It can be concluded that the USA and EC have a similar goal of increasing farm income and use similar price support policies to achieve that goal. These policies have encouraged overproduction, generated surpluses and government stocks, and resulted in large government expenditures. These impacts have been more severe in the EC. Both have followed a mixed surplus disposal strategy, with one key difference—the EC has used export subsidies to dispose of part of its surplus on the world market. In the mid-1980s, both the USA and EC took strong action to confront these problems. The EC's marketing quota and commitment to reducing its stockpiles affected the world market, resulting in decreasing EC exports. As a result, US stocks virtually disappeared, US prices for manufactured dairy products increased substantially, and US surplus disposal programmes (e.g., donations) ended. Thus, it appears that EC dairy policy affected the world market, which in turn affected the US market. Policy makers must recognize the international environment in which domestic policy is set. By recognizing the policy linkage of EC domestic policy, through the international market, to US stockpiles, policy makers can choose policy instruments more precisely.

Notes

¹University of Kentucky, US Department of Agriculture, and University of California (Davis), respectively.

²During 1955–89, domestic donations were the dominant disposal method for butter and cheese relative to international donations for milk powder.

³During 1974–83, the dominant disposal method for EC butter was the world market using export subsidies; during 1984–86, a combination of domestic and international strategies was used. For EC milk powder during 1974–86, the dominant disposal method was subsidized domestic consumption, with a primary outlet being animal feed for calves.

⁴An undetermined amount of this variability is due to fluctuations in international prices.

⁵The programme was extended under the temporary emergency food assistance programme and further extended under the 1985 Farm Bill.

⁶The dairy export incentive programme enabled US exports to meet the prevailing world price, using export subsidies in the form of dairy products from CCC stockpiles.

⁷See Marchant (1989) for detailed analysis of US and EC surplus disposal methods based on data from the US Department of Agriculture and the Commission of the European Communities.

References

- Marchant, M.A., "Political Economic Analysis of Dairy Policies in the United States," Ph.D. thesis, University of California, Davis, Calif., USA, 1989.
- McCalla, A.F., and Josling, T.E., *Agricultural Policies and World Markets*, Macmillan Publishing Company, New York, N.Y., USA, 1985.

Discussion Opening—*Lydia Zepeda* (University of Wisconsin)

Marchant, Neff, and McCalla trace the link between increases in US dairy prices and responses to EC policies (and the 1988 drought). These price incentives have led to increased US milk production, with the result that prices at the beginning of 1990 were near an all time high, and fell by record amounts by the end of 1990.

Proposals by US policy makers to the current crisis in the dairy industry exemplify the lack of linkage pointed out by the authors. Policy proposals focus on interregional differences within the USA and on increasing support prices, without addressing the interaction with world markets. In particular, changes in the Eastern Bloc, a major importer of dairy products, are ignored.

While Marchant, Neff, and McCalla focus on the links between the USA and EC, impacts on other economies are profound. Subsidies and donations of milk products reduce the cost of importing milk products by Third-World countries, but also create disincentives to their own producers. Instability in free market prices also creates incentives for self-sufficiency in milk production by Third-World economies. Food aid is ineffective if it destabilizes prices and supplies. In addition, smaller countries that export dairy products are hit hard by EC and US subsidies and fluctuating world prices.

In order to recognize the linkages between the dairy policies of the USA and EC, the policy goals of the two economies need to be examined. If the goal is to enhance farm incomes, a less destabilizing method than price supports or quotas might be found. Price supports will continue to be costly and result in overproduction, which affects world milk product prices. Price supports and quotas also create inequities within each system; large producers tend to benefit the most.

The need to recognize and address the links in policy and the objective of the policies has never been greater. The 1985 US policies, designed to enhance farm incomes, ignored the linkages and resulted in lower farm prices. In addition, the mounting costs of agricultural programmes needs to be dealt with. We can predict with high probability what will happen if support prices in the USA increase or if the EC continues export subsidies. We also know that buyout programmes and small support price cuts do little to counteract the continuing increase in the milk supply due to technological advances.

For policies to be effective, a clear goal must be defined and the context in which the policies exist needs to be recognized. The question is not whether we have the tools to do the analysis but whether policy makers will listen.

[Other discussion of this paper appears on page 352.]