

An International Comparative Analysis of the Regulation in the Dairy Sector

Daniel-Mercier Gouin

Directeur, Département d'économie agroalimentaire et des sciences de la consommation,
Université Laval, Local 4418A, pavillon Paul-Comtois Québec QC G1V 0A6
Email: dmgouin@eac.ulaval.ca

■ Take Home Messages

- ▶ The performance of dairy industries regulated by quota-based supply management (Canada and France) does not compare negatively with other countries (United States, New Zealand and Australia) both in terms of consumer price trends and per capita dairy consumption levels.
- ▶ Total deregulation of the dairy sector, as in New Zealand, or partial deregulation as in the United States, appear to lead automatically to an increase in the margin of intermediaries who hold the most market power, the dairy processing or distribution sectors.
- ▶ Deregulation of the Canadian dairy sector would not offer any guarantee of benefits for consumers. On the contrary, it is more likely to have an adverse impact both on farm-gate milk prices and on farm income in Canada.
- ▶ It is highly likely that alternative dairy support programs similar to income support programs would have to be implemented and this would result in a significant increase in budgeted costs.
- ▶ The dairy supply management system protects Canadian consumers against swings in world prices that can sometimes be very brutal.
- ▶ Consequently, supply management in the dairy sector is a regulatory system that is still appropriate, at least in the Canadian context, and in the way it is applied by Canadian farmers.

■ Background

Given the push toward open markets and the reform of government intervention in agriculture, regulation of the dairy sector by supply management, as applied in Canada, is being called into question. The import barriers required to maintain an effective dairy supply management system

appear to conflict with the avowed objective of liberalizing farm product trade. However, while supply management as a tool of regulation of the dairy or other agricultural commodity sectors merits debate, the free market as the sole potential regulator of the dairy sector, and more broadly of the agricultural sector, also merits just as vigorous a debate. Following the Uruguay Round Agreement, the world's main dairy-producing developed countries felt that their respective sectors were "sensitive" enough to justify maintaining tariff barriers. In 2000, the Organization for Economic Co-Operation and Development (OECD) estimated that the tariffs applied to dairy product imports ranged from an average of 121% for cheese to 370% for butter¹ (OECD 2001, p. 223).

Therefore, without necessarily opting for a totally open market, regulatory systems applied in dairy economies of other developed countries could be a guide to developing alternatives to the system in effect in Canada. The purpose of this presentation is to analyze the performance of the respective systems in place in the dairy economies of the United States, Australia, New Zealand and France, a member of the European Union. This performance is measured mainly by analyzing data, over a twenty-year period, of farm-gate milk price trends and consumer price indices for dairy products, as well as the budgeted costs of the dairy regulatory systems in the countries under review.

■ Government Intervention In Dairy Production

Government intervention in agriculture can take several forms. Ultimately, a government could choose to allow the market alone to govern agricultural prices and thus the income of agricultural producers. This is not the most common situation in the developed countries. However, it is essentially the case in New Zealand, where government intervention programs were rapidly dismantled starting in 1984. In the case of the other developed countries, agricultural support programs are still in place, to varying degrees, and typically include three main components: price support, income support, and decoupled income support. Dairy regulation systems in the countries analyzed are closer to the first two – price support and income support. A decoupled income support system has recently been introduced in the European Union, but it is still too soon to fully measure its impact.

Current dairy regulation systems differ markedly from one country to another. Supply management has been practiced in Canada since 1970 and in Europe since 1984, but with specific backgrounds and implementation frameworks. In Canada, it is a social compromise guaranteeing farm-gate prices based on production costs in exchange for adjusting production strictly to domestic

¹ These tariffs are applied on over-quota products, that is, tariffs implemented by many countries on imports exceeding the guaranteed minimum access provided to their national market.

market needs. In the European Union, supply management was initially implemented essentially to control the budgeted costs of dairy regulation. At the outset, quotas were seen in Europe as a transitional policy leading to a less regulated market. This policy has resulted, among other things, in a decrease in, and subsequent freezing of, dairy support prices. However, while this policy was supposed to be transitional, it is still in effect, at least until 2014-2015.

Although a further decrease in dairy support prices has been announced, the drop in farm-gate revenue that might result is partially offset by decoupled income support measures. In fact, the June 2003 Luxembourg Accord redefined several major aspects of the Common Agricultural Policy by introducing a "single payment system" to replace the various existing forms of direct support. This single payment is no longer linked to the production of a specific agricultural commodity. In the dairy sector, a direct payment thus compensates for each reduction in the intervention price, a payment which is no longer linked to dairy production, but is in accordance with the quota held by a producer the year the reform was implemented, whether or not the producer continues to produce milk.

In the United States, a price support program has existed on a permanent basis since 1949. Under the Farm Bill, the method of setting the support price has changed several times, leading to a decrease between 1981 and 1989. Subsequently, this support price changed very little and has actually been frozen since 1999. As a result, it now plays a reduced role as a price floor and the volatility of dairy product prices and farm-gate prices has increased significantly in the U.S. market (Manchester and Blayney 2001, p. 14). However, since adoption of the 2002 Farm Bill, a direct subsidy program for dairy producers has been introduced (USDA 2004).

Australia is now at the end of a transitional phase that is intended to lead to total deregulation of its dairy economy. Beginning in 1986, dairy price support mechanisms were gradually dismantled and the farm-gate price of industrial milk was subjected to market conditions and thus to price fluctuations on the international market. The government then began to levy a tax on production for all milk deliveries to the domestic market. This tax was passed on to consumers through higher dairy product prices. The proceeds from this tax served to subsidize industrial milk production through a Domestic Market Support Payment. The fluid milk market continued to be regulated from the standpoint of both authorized volumes and farm-gate prices. Indeed, each State authority set a farm-gate price for fluid milk significantly higher than that paid for supply to the industrial milk market. In July 2000, Australia eliminated the last components of its traditional dairy policy, specifically, supply controls and fluid milk price support mechanisms. To facilitate the dairy sector's adjustment to deregulation, the federal government implemented a transitional dairy industry adjustment package. This program is funded by a

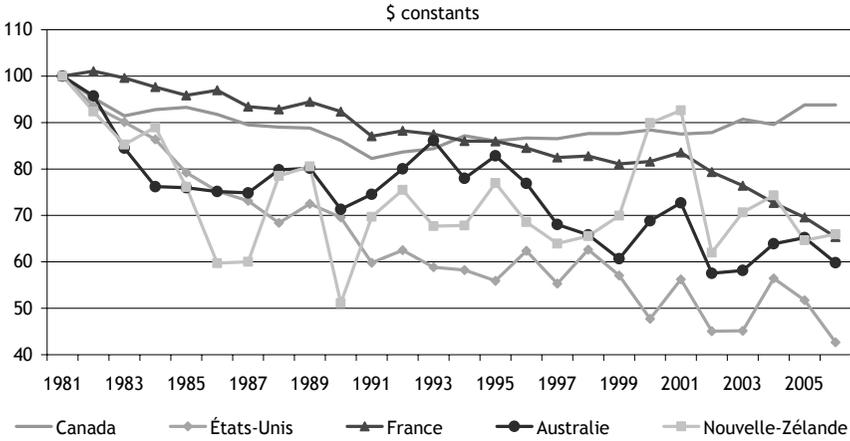
consumption tax of 11 cents levied on each litre of fresh milk sold at retail (Whetton 2000, p.5). With the sole exception of this transitional program, Australian dairy producers now operate in a completely deregulated environment. World prices are thus the principal determinants of the price of milk paid to producers.

In the mid-1980s, New Zealand deregulated its entire economy, which swept away almost all regulation of agricultural markets, along with its agricultural policy. In this wave of deregulation, dairy producers, like all of the country's other agricultural producers, were most affected by the abolition of fertilizer subsidies, the end of subsidized interest rates, and the interruption of investment development subsidies. Even before the period of deregulation, New Zealand dairy producers derived most of their revenue from the international dairy market. Indeed, nearly 90% of the country's dairy production was exported in the form of dairy products (Gouin and Jean, 1995, p.151) and this reached 95% in 2003 (Fonterra, 2004). Even though deregulation affected those specific producers who sold into the export markets, deregulation of the fluid milk sector, which accounts for only about 3% of deliveries (MAF 2003), had no significant impact on the average farm-gate price of milk in New Zealand, which was already closely tied to the international market price.

■ Comparative Analysis Of Regulatory Systems

Farm-gate Prices

First, our study examines changes in the farm-gate price rather than its relative level between countries. A study based on the price in national currencies avoids distorting the analysis by considering exchange rate fluctuations due to macroeconomic factors that have nothing to do with the dairy regulation systems. Consequently, the following figure shows changes in farm-gate prices in national currencies, expressed on the basis of an index of 100 in 1981, the first year of our study.



Note: The data for New Zealand published in the original source correspond to the year in which the dairy year ended. To be consistent with the other sources, we have placed the data in the year in which the dairy year began.

Sources: Statistics Canada, CANSIM 002-0001 and 003-0011; USDA, Agricultural Prices Summary; IDF, World Dairy Situation; MAF, SONZAF.

Figure 1. Trends in the farm-gate milk price index, by country, 1981 to 2006 (Index 100 = 1981)

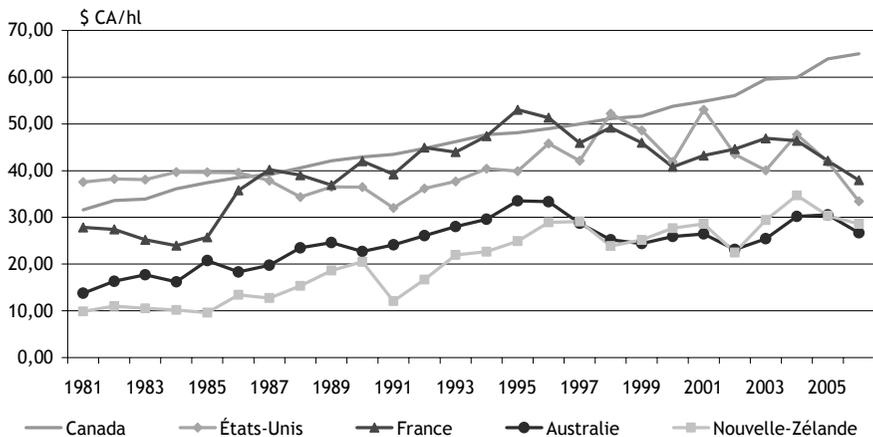
In all the countries under review, farm-gate prices decreased in real terms during the complete study period. But, until the early 2000s, the decline was less pronounced in the two countries that operate under supply management, Canada and France.

In France, the relatively adverse changes in the actual prices paid to dairy producers in recent years are no doubt due to the successive reforms of the Common Agricultural Policy, which led to a reduction of milk price supports in the European Union. On the other hand, a system of direct payments has been in place since 2004 to partially offset any losses sustained by producers from the sale of their milk on the market. In Canada, even though the farm-gate price in real terms deteriorated until 1991, it has gradually improved since then, coinciding with the reduced rate of inflation. It should also be noted that a direct producer subsidy, which had been set at \$6.03/hl in 1975, was phased out between 1993 and 2002, but was offset by an increase in the support price. This may explain the relative growth of the farm-gate price in real terms. However, the increase in the farm-gate price has continued and has been significantly higher than the overall inflation rate. These results from the renewal of the social contract that ensures farm-gate prices based on production costs.

In the three other countries, annual fluctuations in farm-gate prices are significantly more pronounced than in the countries regulated by supply

management. Since 1984, New Zealand has not had any protective measures in place to offset international market fluctuations. Farm-gate price fluctuations on the domestic market are therefore an almost direct reflection of price trends on the world market. Since the mid-1990s, with the gradual deregulation of its dairy sector, Australia appears to be experiencing the same reality. The United States recorded the steepest drop in farm-gate prices, in real terms, over the entire period. Since 2000, this price has often been less than half its 1981 level.

An analysis based solely on price trends can be misleading, since it gives no information on the absolute level of the farm-gate price in each of the countries studied. To establish this comparison, the various prices in national currencies must be converted into a common currency of comparison, in this case the Canadian dollar (see Figure 2). The variations that appear from year to year for the same country, but also between countries in each year, are caused not only by the impact of national dairy policies, but also by the annual exchange rate variations related to the macroeconomic environment. The results should therefore be interpreted with caution.



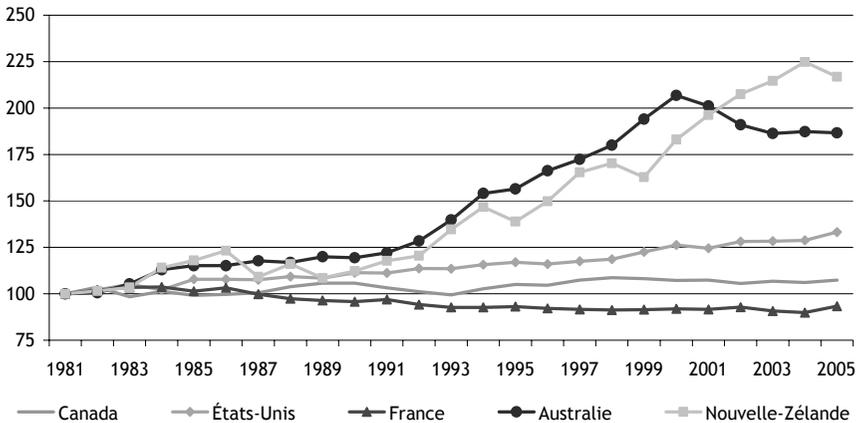
Sources: Statistics Canada, CANSIM 002-0001 and 003-0011; USDA, Agricultural Prices Summary; IDF, World Dairy Situation.

Figure 2. Farm-gate milk price trends, by country, 1981 to 2006

That being said, the data indicate that, in recent years, Canadian farm-gate prices also remained in absolute value at a level generally higher than those prevailing in the other countries under review. The farm-gate price in the United States and France, over the entire study period, sometimes equaled and even exceeded that of Canada. However, in the past few years, prices in the United States and France generally remained under \$50/hl. Australia and New Zealand were notable for their significantly lower farm-gate prices, influenced by world price fluctuations.

However, the strong appreciation of the Canadian dollar over the past three years has accentuated the difference in absolute value of farm-gate prices compared with the other countries. Thus the estimated drop in the U.S. price since 2004, expressed in Canadian dollars, overstates the actual price decline in U.S. dollars sustained by U.S. dairy producers.

Despite the farm-gate price levels in Australia and New Zealand shown in 0, producers in these countries appear to be able to obtain a return on resources they use in milk production, based on the steady production growth recorded over the entire period (see 0)².



Source : FAOSTAT.

Figure 3. Milk production trends, by country, 1981 to 2005 (Index 100 = 1981)

Naturally, changes in milk production output depend on whether or not there is a production quota policy. Thus, in Canada, milk production increased very little over the entire 1981-2005 period since it is regulated by quota. Similarly, milk production in France even declined, given that the implementation of a supply management policy in 1984 resulted in a reduction in the authorized level of production.

Dairy production has grown consistently in the United States since 1984 and has increased by about 30% over the entire period. Despite highly fluctuating and markedly declining farm-gate prices, some dairy producers in the United States considered this sector profitable enough to make the necessary

² In fact, sheep farming, which has been steadily declining since the reform of the New Zealand agricultural policy, is being replaced by milk production, which appears to provide better economic opportunities and has been growing (Gouin and Jean 1995).

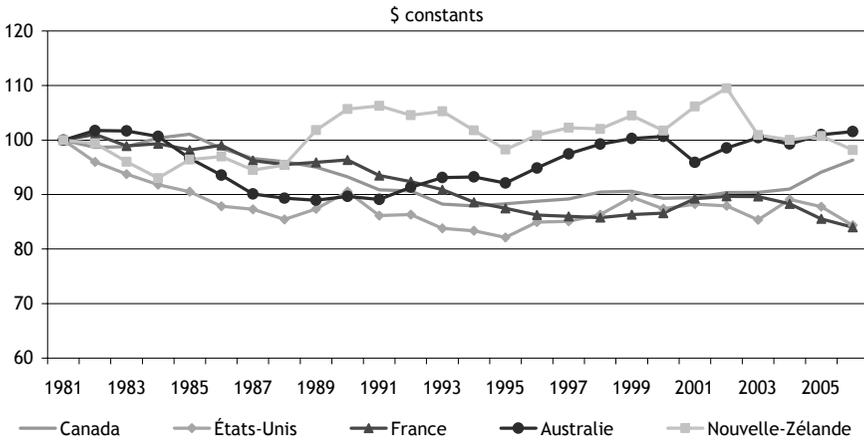
investments to increase their production. Globally, however, the production growth rate is about equal to the improvement in cow productivity allowed by genetic advances. Since production is not restricted by quota, the production growth rate was able to keep pace with increased productivity.

Over the entire period, Australia and New Zealand posted the highest milk production growth. In fact, these two countries have almost doubled their output since 1981. Thus, despite farm-gate prices subject to world market fluctuations, producers in these two countries considered their returns from dairying sufficient to increase their production. It should be pointed out, however, that New Zealand practices extensive dairy production at costs that are far lower than all the others, a production model that is virtually irreproducible in the other major dairy economies, with the possible exception of Australia. On the other hand, the production decline in Australia since 1999 is mainly due to the effects of a severe drought in that country combined with the withdrawal of several thousand producers following the reform of the dairy policy.

Consumer Prices

We have seen that farm-gate price swings vary from one regulatory system to another. Supply management provides relatively stable farm-gate prices, while regulation by world market prices, such as in New Zealand, leads to erratic farm-gate prices. We will now examine how this relative stability or instability is translated into prices paid by consumers, at the other end of the chain. We also observed that the farm-gate price level could almost double between its extremes. It is interesting to analyze whether this has a determining impact on consumer prices.

0 shows changes in the consumer prices of dairy products in the countries under review, based on the price index for all dairy products in real terms. In each country, varying trends are observed depending on the periods.



¹ For New Zealand, the Consumer Price Index for dairy products includes eggs.

Sources: Statistics Canada, CANSIM 326-0021; University of Wisconsin, Dairy Data; Eurostat; Australian Bureau of Statistics; Statistics New Zealand.

Figure 4. Trends in the Consumer Price Index of dairy products,¹ by country, in constant national currencies, 1981 to 2006 (Index 100 = 1981)

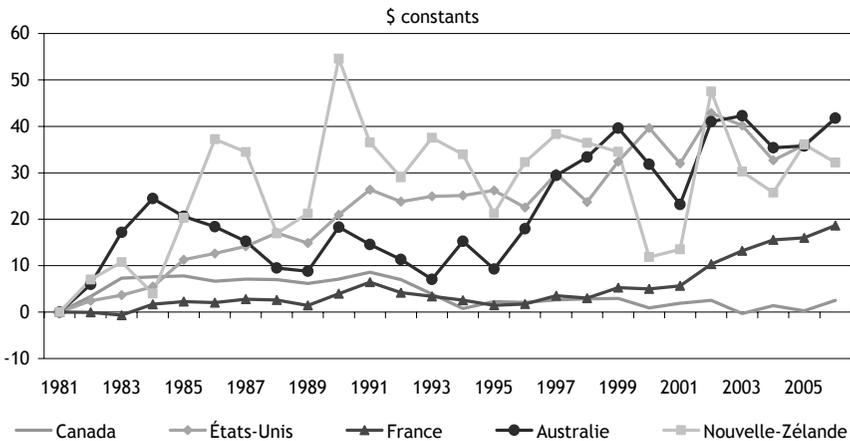
In Australia, the actual consumer prices of dairy products declined until 1991, then in 1998 returned to their 1981 level and have remained there ever since. As for New Zealand, this is the only country where the actual consumer prices of dairy products have remained generally at a higher level than at the beginning of the period under review.

In Canada, France and the United States, even though the decrease in the consumer price of dairy products, in real terms, was relatively similar between 1981 and 2003, a distinction must be made for three sub-periods where price behaviour was different. During the first half of the period under review, prices declined more rapidly in the United States than in Canada and France, while the reverse occurred between 1995 and 2004. Yet, during the latter period, the gradual abolition of the direct producer subsidy in Canada was offset by a corresponding increase in the support price. Finally, the last two years are the single exception, when an upward farm-gate price adjustment in Canada appears to have been totally reflected in the consumer price. Conversely, consumer prices in France and the United States followed the downward trend observed for farm-gate prices.

Consequently, although Canada's farm-gate prices are more favourable and stable than in the other countries, this does not translate into unfavourable consumer price trends for Canadian consumers. On the contrary, it is in the two countries moving towards deregulation, New Zealand and Australia, that consumer prices have evolved in the most unfavourable manner for consumers.

Aggregate Milk Processing and Distribution Margin

Analyzing trends in the dairy processing sector and its relative performance in the countries studied is difficult due to a lack of data. This study therefore focuses on changes in the aggregate margin between the farm-gate price of milk and the consumer price of dairy products. From this analysis, it is possible to evaluate changes in the producers' relative share and in the total share of dairy processors and food retailers, of the consumer dollar spent on dairy products. To conduct this evaluation, we will compare changes in the two price indexes (consumption and production) (Figure 5). A positive difference means that consumer prices have increased faster than the farm-gate prices and that the aggregate margin for dairy processing and distribution has increased. Conversely, a decrease in the margin means that the producer price index rose more rapidly than the consumer price index. It should be noted, however, that in the absence of data on the changes in the aggregate productivity of production, processing or distribution, such an analysis does not allow us to draw conclusions as to the changes in the profit margins of each dairy industry sub-sector.



Sources: See 0 and 0.

Figure 5. Trends in the aggregate margin of dairy processors and retailers based on the difference between the consumer price index and the farm-gate price index (Index 100 = 1981), by country, 1981 to 2006

The first obvious fact is that the countries where the regulatory system in place is based on supply management — Canada and France — are also those where the aggregate margin for processing and distribution increased the least over the entire period. In the case of France, it should also be noted that the decline in farm-gate prices since 2002 has only been partially passed on to consumers. In practice this has allowed for a marked increase in the

aggregate margin of processors and retailers, an increase unprecedented in France since 1981. In Canada, this margin has remained fairly constant since the mid-1990s.

In the United States, the farm-gate price index declined significantly over the 1981-2006 period. The consumer price index also fell, but to a much lesser degree. This means that the drop in farm-gate prices sustained by producers was not entirely passed on to consumers and that it is the processors and/or distributors who appear to be the beneficiaries. In addition, the volatility of farm-gate prices since the mid-1990s is also reflected in a level of volatility in the processing and distribution margin, but is mainly reflected in a marked margin increase between 1995 and 2002.

New Zealand processors and retailers also posted fluctuating margins, over the entire study period, as did Australian ones since the mid-1990s, when the country accelerated the process of dismantling its dairy regulation system. In Australia, this coincided with a sharp rise in the processing and distribution margin, which grew fourfold between 1995 and 1999.

It is understandable that this margin has fluctuated less regularly in these countries than elsewhere: the farm-gate price of milk in Australia and New Zealand is directly dependent on highly fluctuating international market prices and the intermediaries do not pass on all these fluctuations to their national consumers. This makes it possible to offer some price stability on domestic markets. However, consumers in these two countries did not benefit from any price decrease in real terms between 1981 and 2002, which in no way explains the price trend on the international market. In fact, it seems that the more farm-gate prices fluctuate, as in Australia, New Zealand or the United States, the more consumers will have to bear price increases, without necessarily benefiting in return from price reductions. This is called the concept of asymmetrical price transmission.

All in all, deregulation in Australia and New Zealand, or reduction in price supports in the European Union and the United States, are no guarantee that consumer prices will decline. In each case, such a situation seems to have provided an opportunity for intermediaries who hold the most market power, i.e., the dairy processing or distribution sectors, to increase their margins.

Cost of Dairy Regulation

The various dairy regulation systems analyzed use markedly different support mechanisms that vary over time. We have seen that income support through direct subsidies has been abolished in Canada while it is developing in the European Union and the United States and is a component of a policy of transition to a new regulatory system in Australia. Let us now look at which of these systems appears to be the most cost efficient for taxpayers. Our

analysis uses the data compiled by the OECD to calculate the Producer Support Estimate (PSE) and examines only the data on direct payments to producers, regardless of whether the payments were made under specific dairy programs or programs designed for all agricultural producers³. These data are strictly book data furnished by the participating countries from their national accounts and are not likely to give rise to debate. However, we do not refer to the data on market price support (MPS), which pertain to estimates produced by the OECD based on highly debatable assumptions⁴.

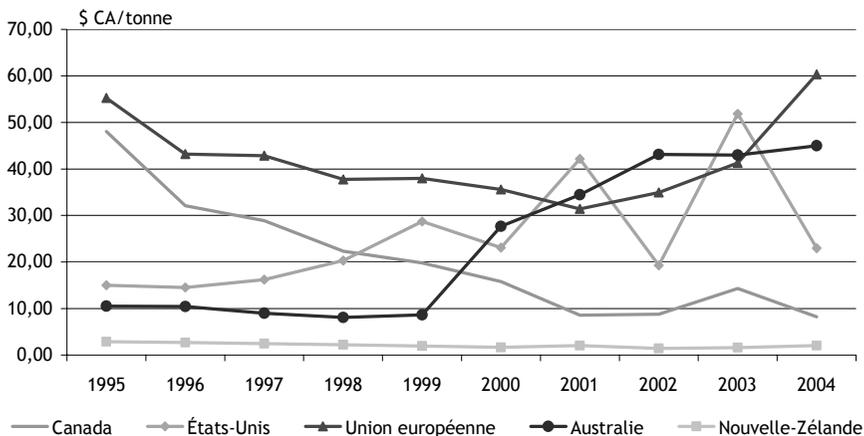
However, this method does not include a substantial proportion of budgeted expenditures in the dairy sector. For example, the OECD calculates export subsidies under Market Price Support, and more specifically, under the subcategory of transfers from taxpayers to producers. The OECD does not compile the actual budgeted expenditures, but rather the difference between the domestic market price and the border reference price on net exports. This has the effect of calculating export subsidies at zero for the United States in recent years, although the U.S. supports its exports through the Dairy Export Incentive Program (DEIP).

In Canada, New Zealand and Australia, no export subsidies are paid out of public funds. In fact, because of its regulatory system that sets production quota levels to match domestic butterfat requirements, Canada contributes very little to the supply of dairy products on the international market. In addition, the quantity it exports is predictable. In the case of New Zealand and Australia, the growth portion of their production is essentially intended for export on the international market, but based on the competitive capacity of their dairy industry, and not the paying capacity of the public treasury.

Consequently, 0 takes into account the total budget data from the OECD data base and of export subsidies by the European Union and the United States.

³ For example, in the case of the European Union, most of the payments thus calculated for 2002 pertain to payments based on input use which are largely covered by national programs not explained in the data base.

⁴ In this regard, see article by Doyon, Gouin and Paillat (2002) and discussions that ensued with the OECD (Tangermann 2003; and Doyon and Gouin 2003).



Sources: OECD data base on PSE; USDA, FAS Export Assistance; FEOGA, Financial report.

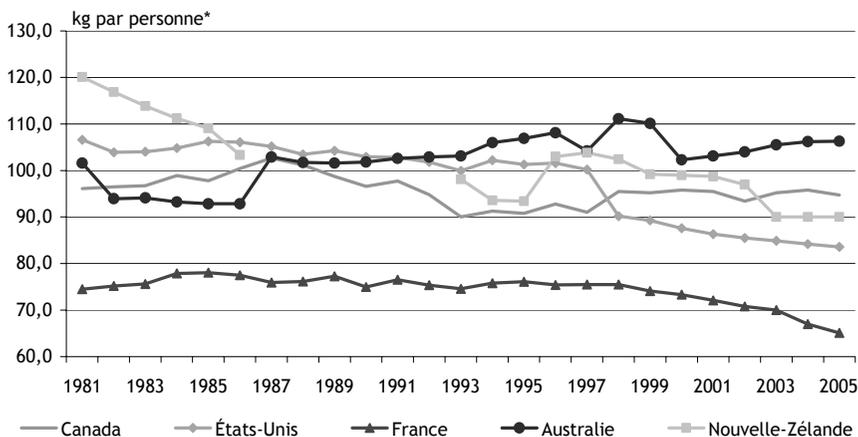
Figure 6 Trends in direct producer payments and in export subsidies, by country, 1995 to 2004

We can see that budgeted costs per tonne of milk produced are perfectly controlled and very low in New Zealand. This is not surprising because for all practical purposes New Zealand no longer has any support program for its agricultural sector. On the other hand, even though Canada is the country where dairy producers' income is the best protected, without high relative costs for consumers, budgeted costs have declined sharply with abolition of the direct producer subsidy, and have now stabilized at a level clearly lower than in the United States, the European Union and Australia. In the case of Australia, however, it should be noted that the increase in budgeted costs is recent and related to implementation of the reform. This cost increase is covered by a consumption tax of 11 AU¢/litre, scheduled to end in 2010.

In the United States and the European Union, a new trend is emerging: the introduction of direct payments to offset declining support prices or market prices, which are related. These direct payments took effect in the European Union in 2004, and led to a sharp growth in the cost of the dairy policy, which had declined significantly between 1995 and 2002. Available data do not allow an understanding of the full effect of this new orientation since direct payments have tripled from 2004 to 2006. However, in the United States, budgeted costs, including export subsidies, have generally grown since 1996 and have been very volatile since 2000. Based on the mechanics of the income support program, the support level since 2001 varies in accordance with changes in farm-gate prices which, as mentioned earlier, are highly unstable.

Dairy Product Consumption Level

One of the criticisms of the supply management system is that it appears to have a downward effect on the consumption of dairy products (Boyer and Charlebois 2007). This criticism does not stand up to analysis. An examination of data on the consumption trends of fluid milk and some dairy products in the countries under review (see Figure 7, 8 and 9) shows that New Zealand, a country with a highly deregulated agricultural sector, posted the steepest drop in consumption. It is also the only country where cheese consumption actually declined.

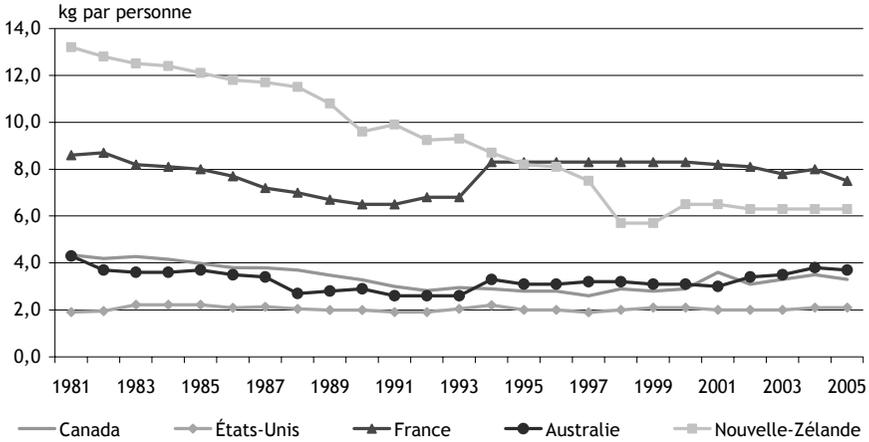


¹: There appears to have been a change in the data collection method between 1997 and 1998, particularly in the U.S. and Australia. Significant differences therefore need to be analyzed with caution.

*: Before 1994, in litre per person.

Source: ASL 2006; International Dairy Federation; CNIEL.

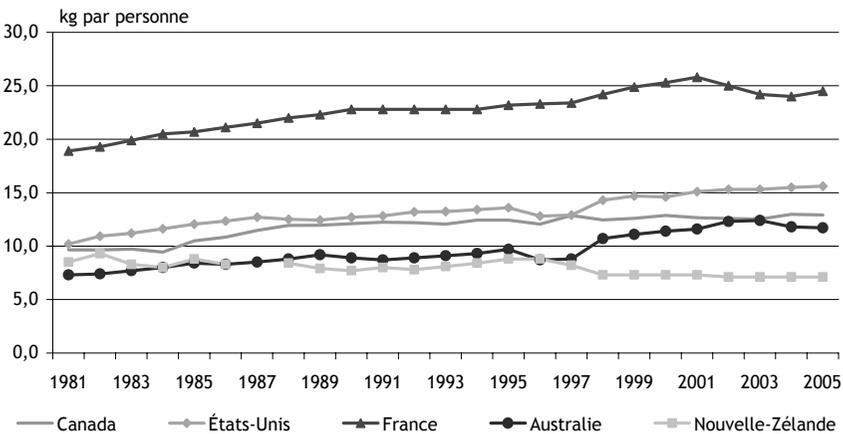
Figure 7. Trends in per capita fluid milk consumption, by country, 1981 to 2005¹



¹: There appears to have been a change in the data collection method between 1993 and 1994 in France and between 1997 and 1998 in New Zealand. Significant differences therefore need to be analysed with caution.

Source: ASL 2006; International Dairy Federation.

Figure 8. Trends in per capita butter consumption, by country, 1981 to 2005¹



Source: Statistics Canada, CANSIM 002-0011; ASL 2006; International Dairy Federation.

Figure 9. Trends in per capita cheese consumption, by country, 1981 to 2005

So, even an examination of data on a product-by-product basis does not allow us to draw clear conclusions concerning the impact of any particular

regulatory system on the level of consumption. Indeed, per capita consumption of fluid milk increased in only one country, Australia. Among the other countries, Canada posted the smallest decline. Although butter consumption levels differ between countries, higher in France and New Zealand, weaker in the United States, and average in Canada and Australia, they are now relatively stable in all countries. France boasts the highest per capita cheese consumption, while New Zealand has the lowest. Cheese consumption is growing slightly in all countries, except in New Zealand, as already mentioned.

Based on these data, it is quite clear that there is no link between the consumption level of dairy products and the regulatory system in force in the dairy sector. The claim that supply management has a negative effect on the consumption of dairy products is therefore unfounded.

■ Summary

The performance of dairy industries regulated by quota-based supply management (Canada and France) does not compare negatively with the other countries (United States, New Zealand and Australia) – quite the contrary – both in terms of consumer price trends and per capita dairy consumption levels. The dairy regulation system in Canada has also resulted in clearly declining costs to the taxpayer in the period under review, costs which are highly predictable and now stabilized at a relatively low level in relation to the other dairy economies analyzed. Only New Zealand has been able to post lower taxpayer costs.

In addition, total deregulation of the dairy sector, as in New Zealand, or partial deregulation as in the United States, appear to lead automatically to an increase in the margin of intermediaries who hold the most market power, the dairy processing or distribution sectors. Even in a dairy economy that remains under supply management, but where support prices have been reduced, as in France, the intermediaries were able to quickly increase their margin after many years of stable profit.

All in all, one might well question the objectives of a possible review of Canada's supply management system. It is quite clear that deregulation of the Canadian dairy sector would not offer any guarantee of benefits for consumers. On the contrary, any such deregulation is more likely to have an adverse impact both on farm-gate milk prices and on farm income in Canada. It is also highly likely that alternative dairy support programs similar to income support programs applied in other sectors of Canadian agriculture would have to be implemented. This would result in a significant increase in budgeted costs. Finally, the dairy supply management system, as practiced in Canada, makes only a very marginal contribution to the supply of dairy products on the international market and, therefore, to imbalance on this market, which is

mainly caused by export subsidies applied in other dairy economies.

On the other hand, it protects Canadian consumers against swings in world prices that can sometimes be very brutal. The current situation of the international dairy market clearly illustrates the price instability that characterizes it. In less than one year, the world price of milk powder multiplied by close to 2.5, rising from slightly over US\$ 2,000/t to more than US\$5,000/t between August 2006 and July 2007⁵. Consumers of certain countries that depend on the international market for their supply obviously have to foot the bill for such price fluctuations. This is not the case with Canadian consumers.

Consequently, supply management in the dairy sector is a regulatory system that is still appropriate, at least in the Canadian context, and in the way it is applied by Canadian farmers. If abolishing supply management does not benefit producers or consumers, what would justify dismantling such a system?

■ References

- Boyer M. and Charlebois S. (2007). *La gestion de l'offre des produits agricoles : un système coûteux pour les consommateurs*. Economic notes, Institut économique de Montréal, 4 p.
- Commission européenne (2003). *Reform of the CAP. Newsletter, Special Edition*, July 2003, Direction générale de l'agriculture, Bruxelles, 8 p.
- Doyon M., Gouin D.M. and Paillat N. (2002). *Analyse critique du concept d'ESP, estimation du soutien au producteur. Application au secteur laitier*. In : *Économie rurale*, November-December 2002, No. 272, pp. 74-87.
- Doyon M. and Gouin D.M. (2003). *Le concept d'ESP, une analyse qui doit demeurer critique*. In : *Économie rurale*, July-August 2003, No. 276, pp. 72-73.
- Edwards G. (2003). *The story of deregulation in the dairy industry*. In: *The Australian Journal of Agriculture and Resource Economics*, Vol. 47 no 1, pp. 75-98.
- Fonterra (2004). *New Zealand's Multinational Dairy Company*. <http://www.fonterra.com/default.jsp>.

⁵ These skyrocketing prices stem from relatively small production variations in the European Union and Australia. However, since the international market is a residual market that represents a small fraction of world milk production and dairy product consumption, these small variations at an individual country level represent significant quantities at the international market level.

- Gouin D.M. and Jean N. (1995). *L'adaptation du secteur agricole à l'abolition du soutien de l'État: le cas de la Nouvelle-Zélande*. Groupe de recherche en économie et politique agricoles (GREPA), Université Laval, Québec, 155 p.
- MAF (2003). *Dairy*. In: *Situation and Outlook for the New Zealand Agriculture and Forestry 2003*. Ministry of Agriculture and Forestry, Wellington.
- Manchester A.C. and Blayney D.P. (2001). *Milk Pricing in the United States*. Market and Trade Economics Division, Economic Research Service, USDA, Agriculture Information Bulletin No. 761, 20 p.
- OCDE (2001). *Réforme des politiques agricoles des pays : il faut aller plus loin*. Organisation de coopération et de développement économiques, Paris. <http://www.oecd.org/dataoecd/31/19/2732530.pdf>, consulted on-line, May 2004.
- Tangermann S. (2003). À propos du concept d'ESP : commentaires. In : *Économie rurale*, July-August 2003, No. 276, pp. 69-72.
- USDA (2004a). *Dairy Programs, Farm and Commodity Policy: Program Provisions*. Economic Research Service. <http://www.ers.usda.gov/Briefing/FarmPolicy/>, consulted on-line February 2004.
- Whetton S. (2000). Deregulation of the Australian Dairy Industry. In: *Economic Briefing Report – November 2000*, The South Australian Center for Economic Studies of the Adelaide and Flinders Universities. www.adelaide.edu.au/saces/publications/ba/art1nov2000.pdf, consulted on-line April 2004, 7 p.

