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Can Australia's Dairy Policy Survive Competition Policy Review?

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Introduction

Milk probably has the most highly regulated of all the world's agricultural markets. Of the major dairy countries, only New Zealand is not regulating milk prices in some way. However, many nations, including Australia, are re-examining their regulatory policies regarding milk markets. Trade agreements such as the General Agreement on Tariffs and Trade (GATT) are prompting some to move toward less regulation.

Additional factors are budgetary constraints and a wider acceptance that the distortions of government market regulations often create more problems than they solve. Most dairy price regulation in Australia is by the states. Under Australia's national competition policy program (the Hilmer Report), any state legislation viewed as being anti-competitive must be reviewed to see that it is in the public interest. Accordingly all state dairy policies will be reviewed in the next two years. Although the regulations differ by state, of particular interest to reviewers will be quotas, pooling, and farm-gate price setting. A related national policy scheduled to end in 2000 is the Domestic Market Support Levy.

This paper will discuss each of these methods of regulating dairy markets as they are used in Australia and discuss the costs and benefits of these policies conceptually to the industry and to the public.

The regulation of dairy markets has its origin in a time when farm incomes were low and when a reliable supply of high quality drinking milk was a problem. These two issues were used to justify paying farmers a higher price for drinking milk than milk used to make storable products such as cheese. At the time most rural roads were of poor quality and milk collection methods were primitive, giving few farmers access to urban markets. Few farms, stores, or homes had refrigeration, and collection and distribution methods were such that milk had a much shorter product life than it does today. Seasonal shortages of drinking milk could easily occur and milk prices could be volatile.

Today with better roads, almost continuous refrigeration of the milk from the time it leaves the cow until the consumer drinks it, and other technological advances, no Australian city need worry about adequate drinking milk at any time. Yet the policies designed to ensure its availability remain. Are they still necessary? That question will be addressed by the review of these policies.

Farm-Gate Price Regulation

All states in Australia regulate farm-gate prices for market milk. Regulation of retail prices and other aspects of liquid milk markets are being deregulated, with some states having completed deregulation and others phasing out the regulations. In those states with quotas, access to the higher priced, market-milk market is determined by the quota. In other states, all producers are assumed to serve all markets proportionately.

The farm-gate price for market milk is set by political negotiation. Milk used for UHT or flavoured milk is priced at some proportion of the market milk farm-gate price (in South Australia 75% and 67% , respectively). The price of milk used to produce manufactured products such as cheese or powdered milk is determined competitively, with both domestic and international market considerations considered. As may be seen in Table 1, the amount by which the market milk price exceeds the manufactured milk price varies by state, with the difference in 1996 as great as 36.1 cents per litre (Queensland) and as little as 15.6 cents (Victoria), with 24.7 cents per litre Commonwealth-wide. In percentage terms, the market milk price is 274% of the manufactured milk price in Western Australia, with Queensland nearly as large, and only 157% in Victoria. The ratio is 194% Commonwealth-wide. (Australian Dairy Corporation, 1996)

The basic raw material for drinking milk for consumers, therefore, costs a milk plant nearly twice as much as that same raw material would cost if purchased by a cheese plant. The market milk price does not rise or fall with market conditions, so the manufactured market must absorb the price shocks for the entire market.

Political pressure has led to an increase in the market milk price while at the same time the manufactured milk price has fallen or remained unchanged. The spread between the prices has increased, not decreased. As a result, from 1989 to 1996 the market milk price has risen by 12.8 cents per litre Commonwealth-wide

while the manufactured milk price rose 4.0 cents per litre.

A rough estimate considering only these two prices and weighting them by milk usage in each state produces an average farm milk price that differs widely between the states, with 1996 prices in Victoria, South Australia, and Tasmania of less than 29 cents per litre and prices in Western Australia, Queensland, and New South Wales over 35 cents. These differences in average farm price across states are almost all due to farm-gate price fixing, not market forces.

Pooling

Pooling is a mechanism to pay farmers in a market approximately the same price, regardless of whether their milk goes to liquid or manufactured milk markets. In order to maintain a two-tier price system, someone must be willing to serve the lower-priced market. However, if those farmers selling to the manufactured market get the lower price, then they are sacrificing their profitability in order that those farmers selling market milk may earn more. Those playing this altruistic role would soon be out of business, since they pay the same price for inputs. Instead pooling has all farmers receive an average price, where total revenues for the state are combined into a single pool and farmers are paid according to the volume delivered. Certain premiums or discounts for quality and transportation costs may be paid to individual farmers, but overall the farmers receive a price that is a weighted average of the market milk and the manufactured milk prices. The weights are the portion of milk going to each market.

If a farmer increases production, because of the rigid market milk price, all of this additional milk will go to the price-responsive manufactured milk sector. Because of the pooling, the price the farmer receives for that additional milk will be higher than its value to the market. The marginal litre would sell for the manufactured milk price but the farmer producing that last litre would receive for it the pooled price. This pooled price would decrease very slightly because of the additional litre to the manufactured milk price and all the other farmers in the pool will receive a slightly lower price than they would have otherwise, in effect subsidising the farmer that has expanded.

Under current state dairy regulations, Victoria, Tasmania, and South Australia each have state-wide pools. New South Wales, Western Australia, and Queensland have quotas instead. In these latter states, those fortunate enough to have quota may sell that amount of milk to the liquid milk market, receiving the higher price. All other milk goes to the manufactured milk market. Farmers without quota are excluded from receiving the market milk price.

Quotas

New South Wales, Queensland, and Western Australia have market milk quotas. Quotas are artificial limits on the supply of a commodity. Quotas are instituted to restrict the total amount of the product reaching the market, and in the process keep the price higher than it would be otherwise. Quotas can restrict imports, sales to a particular market, or production. Included in the quota is a method of allocating the market to the various suppliers. At the higher prices, the suppliers would prefer to supply more milk than the demanders will buy at those prices. If allowed to supply this greater amount, the prices would fall until the market would clear. In practice Australian dairy quotas are a method of allocating the higher revenues from the price discrimination to the drinking milk market.

Quotas are instituted to increase the profitability of the sellers, in this case the dairy farmers. By raising prices to a level above the cost of production, farms earn more than they would without the quotas. The

farmers sell fewer units but at a higher price, and because the demand for milk is inelastic, revenue is greater. In the short run, this can be quite effective. The higher prices are spread over millions of consumers at a low enough per capita cost that they don't object.

The problems with quotas and other forms of protection occur in the long run. Left to themselves, the farmers would prefer to increase production and sell more milk to the drinking milk market. Since the market will not need more milk at the fixed high price, farmers must be deterred from increasing production and the quota does this. The producers are making more money and this makes their productive assets more valuable. The increment to the value of these assets is directly attributable to the quota. The quota gains value until the exceptional profits attributable to the quota are entirely reflected in the prices of the quota. The wealth of the farmer is increased. If the farmer sells the quota to another farmer, the second farmer pays a price reflecting the value of the policy. Thus the second farmer has higher production costs because of the higher prices paid for the quota. This farmer's level of profitability will not be exceptional, but instead will be about the same as if the quota had never been instituted.

The only way to get this second farmer to an a higher level of profitability is to raise the drinking milk price further. This short-run action would rapidly lead to the same long-run problem that the quota had previously. Of course this second farmer has invested in the quota and if the quota disappears an economic asset is lost. Since the quotas are transferable, the price of the quota reflects the milk price differential. Tozer (1993) found that transferable quotas would make serving the two markets equivalent, net of quota rent. In fact, this has occurred to a degree in New South Wales as some farmers have chosen not to serve the quota market in all periods, instead selling their quota for some periods.

In practice, the market value of transferable quotas rises and falls with expectations about the economic life of the program. In September, 1997, quotas in New South Wales were selling for a price consistent with a three-year recoupment of the costs. In recent years, the prices have varied from a one to a five year payback. About 5 percent of quota would change hands in a typical year. Accompanying the quota in those states having quotas are legal minimum farm prices for quota milk. These are well above the price that would occur under free markets, and in fact higher than the market clearing price for the quota quantity. The present NSW quota is greater than market milk demand so the amount by which quota is underused is prorated across all producers. If market milk demand should exceed the quota then milk would be diverted from manufactured milk markets and the proceeds would be shared proportionately by quotaholders.

Quotas are often defended because they help small producers remain in business. However, evidence from Canada suggests otherwise. The rate of exit by Canadian dairy farmers has been about the same as for their U.S. counterparts, despite restrictive quotas. One reason quotas fail to protect small producers is that they often make it difficult for these producers to adopt new technology. If a farmer cannot expand production, then some productivity enhancing technology may be infeasible because economies of size cannot be realised. If all of a farmer's competitors are becoming more productive and he is not, then in he rapidly becomes uncompetitive. The dairy quotas of the European Community have this shortcoming.

One difficult issue with quotas is what to do with surplus production. By its nature, agricultural output is uncertain. Just as crop yields vary with the weather, so also do milk yields. A farmer would not want to underproduce his quota, because a valuable asset would go unused. So instead, what happens is that farmers plan to produce somewhat more than the quota, so that if production is lower than expected the quota will still be filled. However, this excess production is too valuable to discard and so a market needs to be found for it. In Australia, the surplus production goes to the manufactured milk market. If that price falls far enough, the surplus milk can be fed back to the cows or to other livestock. In any case, this non-quota milk receives a dramatically lower price than quota milk. However, the quota system encourages even high-cost

producers to produce some non-quota milk.

Other Considerations

Artificially high prices are always vulnerable to anything that causes a decrease in demand. Two causes of decreased demand for drinking milk are imports and changes in tastes and preferences. Freer trade is a particular threat to many price discrimination programs. Under GATT, greater access to most markets is required. So far most countries have resisted access for fluid milk, but once such access is given, price discrimination becomes untenable. Canadian fluid milk prices are considerably higher than U.S. prices, yet geographically most of the Canadian market would be easily reached by sellers of U.S. fluid milk, were such access allowed. The immediate result would be a decrease in the price in Canada, and a sharp drop in revenues for Canadian dairy farmers, as demand for their output fell. Given its proximity to New Zealand, which is the world's low-cost producer of milk, Australian fluid milk markets could be similarly vulnerable to imported milk.

An interesting variation on this situation is found in Australia, where UHT milk is produced with raw milk purchased at prices considerably below those paid for market milk (75% of the drinking milk price in New South Wales and South Australia). Yet the products are virtually identical. Further, UHT milk has been used as a sale item in some stores, further increasing the discount over drinking milk. Over time, the availability of a close substitute at much lower prices would decrease the demand for market milk and undermine the price support program. As a result, the present system of classified pricing of milk and quotas may be unsustainable if not reformed considerably.

One of the most difficult problems is how to end government programs. When a program has considerable benefits to some group, that group soon considers those benefits to be their property and its removal by the government to be unfair. If a farmer purchased quota in the expectation that the program would continue indefinitely, then its elimination would result in a real economic loss. Since such benefits tend to be concentrated into a few hands, each individual suffers a sizeable loss when it is eliminated.

In contrast the costs of such distortions tend to be spread thinly throughout the economy, so that each individual only bears a small cost. This means that the beneficiaries are willing to expend substantial efforts to retain a program while the losers are generally unwilling to do anything to end it. The U.S. sugar program is an extreme case, where single individuals may receive benefits of millions of dollars, yet the average consumer pays about \$6.00 U.S. more per year for their sweetened products. If a price supporting program is ended abruptly, then the capitalised benefits disappear immediately, with adverse effects on the balance sheet and financial strength of the farm. The result is that the government has difficulty ending the programs without considerable political cost.

The Domestic Market Support Levy

Most dairy price regulations are state specific. The exception is the Domestic Market Support Levy, which is an export subsidy scheme that is legal under GATT. Under the levy, drinking milk pays about 2 cents per litre into the pool and non-drinking manufactured milk for the domestic market pays about 4 cent per litre. Manufactured milk used to make exported products pays nothing. This pool is then distributed as a payment to farmers evenly for all manufactured milk, with a payment of slightly more than 2 cents per litre. The Support Levy redistributes part of domestic market revenues to subsidise the export market. Since the payment is made to all manufactured milk, it is not viewed by GATT to be an export subsidy, although

clearly it is. The net price for milk used for exports is about 4 cents per litre less than the price for milk for domestic production.

Who wins and who loses?

The net effect of these various price controls is a monetary transfer from one group to another beyond that which would occur with free domestic markets for dairy products. The most important transfer is from consumers of drinking milk to the farmers because of the classified pricing of milk according to use. This subsidy is about 25 cents per litre nationwide. A smaller subsidy of about 4 cents per litre by all domestic consumers of dairy products for foreign consumers of Australian cheese and other manufactured products comes because of the Domestic Market Support Levy. Other transfers occur because most price regulation is the result of state laws and limit interstate sale of market milk. This creates a subsidy by Victorian and Tasmanian, and to a lesser extent South Australian, dairy farmers of farmers in other states where market milk is a larger portion of milk production. National pooling would result in dramatically lower prices in the latter states and higher prices in the former.

Table 2 shows a rough estimate of the economic impacts of ending some of these regulations. These are based on a national model assuming national average prices, pooling, farm price regulation, and the domestic support subsidy. The impacts are consumer and producer surplus, which are measures of economic benefits net of costs. Background information for the model were found in Gleeson and Abdalla (1996), Drynan, et al. (1994), the *Dairy Compendium* (1996), and the *Annual Report* of the South Australia Dairy Board (1996), among others. If the Domestic Support Levy were ended domestic consumers of cheese and other manufactured dairy products would have an gain of economic surplus of \$102 million per year, while foreign consumers of these same products would be worse off by \$38 million and dairy farmers worse off by \$52 million, for a net gain to society (including foreign consumers) of \$12 million. Ending farm price regulations but keeping the support levy would benefit milk drinkers by \$415 million, while costing domestic consumers of manufactured dairy products \$81 million and foreign consumers \$74 million. Dairy farmers would be \$200 million worse off. The net effect would be a gain of \$60 million. Going to a free market in milk would benefit milk drinkers by \$462 million and domestic manufactured product consumers by \$1 million, while costing foreign consumers \$114 million and dairy farmers \$282 million.

These are large amounts. This estimates that the average Australian consumer is worse off by \$25 per year because of the milk regulations, while the average dairy farm gains \$20,000 because of the regulations. In addition, most of the benefits of the Domestic Support Levy accrue to foreign consumers, who often are excluded from calculations about the benefits and costs of programs. Without considering the losses to foreign consumers of ending milk market regulation, the societal gains are much higher. The political stakes of these decisions are high.

Concluding comments

Ultimately these market manipulations of dairy markets will end. The conditions that existed when they were established no longer exist. Advancements in transportation and refrigeration on the farm and in the home make drinking milk much more transportable and have a longer life. The much higher prices were justified to ensure a reliable supply. Since no state now uses more than 60 percent of their milk for drinking markets, even with the seasonality of production, adequate drinking milk would be available everywhere without controls. In addition to the longer life for regular drinking milk, UHT milk has a much longer life

and easier transportability, providing further protection against localised, seasonal shortages. Milk price controls have also been defended because consumers would object to price variability in this staple. I would think that many consumers would gladly trade some instability for lower prices. Dairy products are a small portion of most consumer's budgets. Given the variability of meat, fruit, and vegetable prices, I believe that the consumer's ability to manage changing prices was underestimated earlier.

How will dairy market price manipulation fare under the Hilmer recommendations for competition policy review? Ultimately that review is a political process and need not produce findings consistent with the economic criteria that the competition policy uses. However, the case to show that these anticompetitive policies are in the public interest is not strong, especially for quotas and farm-gate price setting. Since farmers in different states are treated quite differently under the policies, the argument that these measures are good for farmers is problematic. Certainly consumers of market milk are paying for these policies, and this group of families with children includes many of Australia's poorest families. The justification that these policies provide countervailing power to large processors, in a manner similar to that provided by agricultural cooperatives is not valid.

Australia's dairy price policies are not inconsistent with those in most of the world. Some form of protectionism and price manipulation to artificially support farm milk prices is nearly universal. That does not make these policies effective or fair. Furthermore, for Australia to object to trade barriers for dairy products in European and North American markets, while limiting interstate trade in market milk is logically inconsistent at best.

If the decision is made to end these policies, the question remains as to how? An abrupt end to the milk market premium would reduce farm revenues sharply, especially in those states with quotas. The net worth of these farms would drop, with concomitant problems for creditors. As a result, a phase-down of the premium is probably more feasible politically. It allows the farmers time to adjust to the lower prices. Having said this, New Zealand discontinued their price regulation abruptly and is now the world's low cost producer and the leader in dairy exports. (Australian Dairy Corporation, 1996)

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Table 1: Some Milk Price Relationships

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	Market milk price less Manufactured milk price (cents/litre)						
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
89	19.6	13.1	24.7	15.3	16.4	15.7	15.9
90	18.5	12.5	24.8	14.8	15.6	17.0	15.5
91	16.9	17.3	26.5	18.7	19.0	17.1	20.5
92	18.0	15.7	27.0	18.8	21.2	17.4	19.8
93	19.5	13.1	26.0	18.5	22.6	15.8	17.9
94	19.5	15.8	25.9	19.2	24.9	20.2	20.9
95	22.6	17.4	30.6	25.6	26.0	23.2	24.2
96	25.9	15.6	36.1	30.1	31.8	20.4	24.7
	Market milk price/Manufactured milk price (%)						
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
89	201%	156%	231%	176%	203%	173%	171%
90	187%	150%	223%	163%	176%	175%	164%
91	170%	182%	227%	178%	180%	184%	196%
92	166%	165%	221%	177%	191%	186%	183%

93	174%	146%	206%	177%	198%	166%	165%
94	171%	163%	205%	183%	212%	190%	184%
95	183%	172%	230%	222%	218%	210%	201%
96	200%	157%	270%	258%	274%	184%	194%

Production (mil. litres)							
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
96	1114	5482	751	513	342	514	8716
Liquid use (mil. litres)							
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
96	610	457	372	163	187	50	1909
Liquid share							
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
96	0.55	0.08	0.50	0.32	0.55	0.10	0.22
Estimated average farm price (cents/litre)							
Year	NSW	VIC	Qld	SA	WA	TAS	Australia
96	40.1	28.8	39.1	28.7	35.7	26.3	31.7

Source: Dairy Price Compendium, 1996 and calculations made using the data therein.

Table 2: Estimated impact of eliminating Australian milk market regulations on various groups

Regulatory Change - (Million Dollars/year)			
Group	End levy	Only levy	Free Market
Drinking Milk Consumers	0	415	462
Domestic Cheese and Manufactured Consumers	102	-81	1
Foreign Cheese and Manufactured Consumers	-38	-74	-114
Farmers	-52	-200	-282
Net Effects	12	60	67

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