PRODUCTIVITY COMMISSION

Productivity Commission Submission to the Tasmanian Dairy Industry Review

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As part of their commitments under the Competition Principles Agreement, all States and Territories are to review their regulatory arrangements for the dairy industry. Some jurisdictions have already completed reviews. Tasmania has commenced its review, to be completed by 29 May 1999.

The Commission made submissions to the New South Wales, Queensland and ACT dairy reviews (IC 1997a, b, c and PC 1998).

In the light of this input, the Tasmanian Dairy Industry Review Group wrote to the Commission requesting it to make a submission on the regulatory arrangements in Tasmania.

In responding to this request, the Commission has not sought to replicate its submissions to the previous reviews. Rather, it has drawn out matters raised in those submissions which are relevant to the Tasmanian review. As requested by the Review Group, the submission also provides estimates of assistance to the Tasmanian dairy industry.

1 The Tasmanian farm-gate regulations

Like its submissions to the other reviews, this submission is concerned primarily with the farm-gate regulation applying to market (drinking) milk.

In broad terms, this component of Tasmanian dairy industry regulation is much the same as elsewhere in Australia. The Tasmanian Dairy Industry Authority sets a minimum price to farmers for market milk and manages supply to levels consistent with demand at those prices. As in other States, the price that farmers receive for market milk is above that which would prevail in an unregulated market and also well above the price of otherwise identical milk used in manufactured dairy products. It is through this price-raising effect that the regulations assist dairy farmers.

A price pooling system is used to distribute the higher returns from market milk to dairy farmers. Farmers receive a weighted average price that reflects the relative proportions of total milk supply sold for market and manufacturing milk. Thus, all farmers benefit equally from the higher regulated prices for market milk.

Similar price pooling arrangements operate in Victoria, South Australia and North Queensland. In contrast, in New South Wales, South East and Central Queensland and Western Australia, quota arrangements determine farmers' access to the more lucrative drinking milk market. Section 3 looks at the specific efficiency implications of the price pooling arrangements.

2 Assistance to the Tasmanian dairy industry

As requested by the Review Group, the Commission has prepared estimates of the assistance afforded Tasmanian dairy farmers by the current price setting arrangements for market milk. To provide a picture of overall support for the industry, the Commission has also estimated assistance to Tasmanian dairy farmers from the Commonwealth arrangements for manufacturing milk.

The Commission has calculated four summary measures of assistance: the nominal rate of assistance, the price distortion, the producer transfer and the effective rate of assistance (see box 1).

Market milk

The assistance estimates for market milk are derived from the difference between the regulated farm-gate price and an estimated price for that milk in an unregulated market.

For the purposes of this calculation, the 'benchmark' unregulated price is set equal to the Australian average price for manufacturing milk (24.4 cents a litre in 1996-97), less an 'Australian-average' allowance of 2 cents a litre for the cost of transporting milk to processors, plus a 20 per cent loading (4.5 cents a litre) for the cost of assuring out-of-season supply. This gives a benchmark market milk price of 26.9 cents a litre in 1996-97.

In determining the regulated market milk price to farmers, the Commission again deducts a margin for transport costs. In contrast to the 'Australian-average' transport cost margin embodied in the unregulated price benchmark, this transport margin is state-specific, based on information collected by the Australian Dairy Corporation. For Tasmania, the deduction is 4.1 cents a litre.

Box 1.1 **The Commission's assistance measures**

The nominal rate of assistance: This measures the assistance to an industry's outputs. It is equal to the percentage increase in gross per unit returns attributable to that assistance.

The effective rate of assistance: This measures net assistance to an industry's value added. It is equal to the increase in unit value added, after accounting for the benefits of assistance on outputs and inputs, and the tax effect of any tariffs and other policy-induced cost imposts on inputs.

The price distortion: This measures the price-raising impact of assistance to an industry. It is equal to the increase in prices at the ex-factory or farm-gate level attributable to that assistance. (If all assistance to an industry's outputs increases prices and all production is sold domestically, then the nominal rate and the percentage price distortion will be the same.)

The producer transfer: This measures the dollar value to producers of assistance on an industry's outputs. While such transfers are not directly comparable across industries, they are an accessible indicator of the significance of government support for a particular activity.

The Commission has also deducted a further 2 cents a litre from the regulated price in lieu of the levy imposed on market milk to help fund support payments for manufacturing milk — see below. (This is in contrast to the estimates provided to the New South Wales and Queensland reviews, where no deduction for the levy was made). The transport cost and milk levy deductions give a regulated market milk price to Tasmanian farmers in 1996-97 of 39.9 cents a litre.

As is apparent from table 1, assistance to Tasmanian market milk production is several times greater than the average level of assistance available to the agricultural sector. That said, assistance is well below the national average for market milk — the estimated price premium in Tasmania is around 13 cents a litre, compared to the Australian average of about 20 cents a litre. Indeed, assistance to Tasmanian market milk production is the lowest of all the States, being marginally below that in Victoria.

Manufacturing milk

Assistance for manufacturing milk is provided through the Commonwealth market support arrangements (see IC 1997a for details). As shown in table 1, assistance to Tasmanian manufacturing milk production is virtually identical to the national average.

Table 1: Assistance to milk production in Tasmania and Australia, 1996-97

	Tasmania	*Australia*
Market milk		
– price distortion (cents/litre)	13	20
– producer transfer ($m)	7	366
– nominal rate (per cent)	39	60
– effective rate (per cent)	165	>200
Manufacturing milk[a]		
– nominal rate (per cent)	9	8
– effective rate (per cent)	23	21
All milk		
– nominal rate (per cent)	13	19
– effective rate (per cent)	35	58
Average for agriculture		
– nominal rate (per cent)	ne	3
– effective rate (per cent)	ne	10

a The nominal rate estimates for manufacturing milk are calculated by applying estimated Commonwealth market support payments to the value of manufacturing milk output. If instead, the per litre support payment was expressed as a proportion of the average manufacturing milk price (less the 2 cent a litre transport cost allowance), the resulting nominal (and hence effective) rates would be marginally higher. The Tasmanian nominal rate would be around 11 per cent and the Australian average rate around 9 per cent.

ne not estimated

Source: Commission estimates

Another way of estimating the extent of assistance to Tasmanian manufacturing milk production is to look at the dollar benefit to farmers from Commonwealth Domestic Market Support Payments. Total payments to Tasmanian farmers amounted to around $10.3 million in 1996-97. The levy on market milk, which helps to pay for the support payments, reduced this benefit to around $9.0 million, or some $11 200 a farm (LRP Tasmania 1998, p. 37).

Some caveats on the assistance estimates

The Commission stresses the need for caution in translating the price distortion estimates for market milk reported in table 1 to estimates of likely retail price falls in the event of farm-gate deregulation.

The Commission's assistance framework is designed to allow it to compare assistance relativities across industries in a consistent fashion. To facilitate such comparison, the framework embodies a range of simplifying assumptions of varying applicability to individual industries (see IC 1997a). Altering some of these assumptions could change the precise assistance estimates for certain industries.

However, such 'fine-tuning' would be unlikely to produce significant change in the extent of divergences in assistance across industries. Importantly, it is these divergences, rather than absolute levels of assistance provided to particular industries, which are an indicator of resource misallocation.

In regard to the particular estimates for the dairy industry, the allowance for assuring out-of-season supply in the Commission's deregulated price benchmark *may* be conservative. The current allowance of 4.5 cents a litre compares with recent winter incentives premiums in Tasmania of around 6.5 cents a litre (LRP Tasmania 1998, p. 49).

Of course, whether the current premium would be obtainable in a deregulated environment is debatable. For example, notwithstanding the strong seasonality in Tasmanian milk production, the Commission understands that total supplies in the low month of production still exceed market milk requirements.

In any event, even if the out-of-season allowance in the deregulated benchmark price for market milk was set equal to the current Tasmanian winter incentive premium, the price distortion estimate would fall only marginally to 11 cents a litre and the nominal rate of assistance to around 33 per cent. Significantly, this level of assistance would still be much more generous than the support provided to virtually all other activities in the economy.

A broader criticism of the Commission's assistance estimates is that its deregulated benchmark price is purely conceptual and pays no regard to real world demand and supply considerations. An argument put to the New South Wales and Queensland reviews was that the Commission's benchmark price would not sustain sufficient production to meet total demand for market milk. The implication of this argument is that the deregulated price for market milk would settle at a higher level — dictated by production costs in a particular region and the costs of transporting milk from elsewhere. In this regard, the consultants who undertook the public benefit test for the Queensland review estimated the price raising effect of the regulations in that State at 10 cents a litre in the South East region, and as little as 3.5 cents a litre in North Queensland (Economic Insights 1998, pp. 54-59). By comparison, the Commission's price distortion estimate for Queensland was around 25 cents a litre.

In its submissions to the NSW and Queensland reviews, the Commission provided a number of counter arguments to this point of view. In particular, it stressed the need to look at likely price outcomes from deregulation in the context of future production costs as well as current costs. In this regard, it pointed out that ongoing rationalisation in the industry will help to lower costs and thereby reduce likely farm-gate price levels under deregulation. Nonetheless, the Commission accepts that

its methodology led to estimates of the potential price falls from farm-gate deregulation in New South Wales and Queensland that are very much at the top of the range of likely outcomes.

In Tasmania, however, around 90 per cent of total milk production goes to manufacturing. Thus, the argument that higher returns for market milk are required to support sales of manufacturing milk carries much less weight than in New South Wales and Queensland where milk production is less heavily oriented to supply for manufacturing. Indeed, the Commission notes the reference in the Issues Paper to the finding of the Tasmanian House of Assembly Dairy Industry Select Committee that there is potential to double milk production in the State (LRP Tasmania 1998, p. 43). All of this additional, and presumably viable, production would be sold at the manufacturing milk price. In the Commission's view, the current manufacturing milk price plus a premium for assuring out-of-season supply should therefore give a reasonable indication of the likely farm-gate price for market milk in a deregulated environment.

In sum, even allowing for the caveats on the Commission's assistance estimates, there can be little dispute that Tasmanian market milk production is highly assisted. Thus, an end to the current price setting arrangements would see farm-gate prices fall considerably — quite possibly by more than 10 cents a litre. The extent to which price falls at the farm-gate would flow on to consumers is discussed below.

Finally, the Commission emphasises that the increases in farm-gate prices, and the associated income transfers to farmers, are not measures of the efficiency costs of the current controls. Indeed, the ongoing efficiency costs (see below) are only a fraction of the producer transfer estimates reported in table 1.

Flow on to retail prices

Around Australia, deregulation beyond the farm-gate has led to increases in retail milk prices. This has seen some argue that farm-gate deregulation will likewise increase, rather than lower, retail prices.

However, in the Commission's view, this argument is inappropriate as it draws a parallel between two sets of regulation with quite different objectives. The objective of post farm-gate regulation was to keep processing and retailing margins 'tight' and arguably below competitive market levels. In contrast, farm-gate regulation is explicitly designed to increase returns to farmers above competitive market levels. Hence, the same market pressures that have contributed to higher retail prices following deregulation beyond the farm-gate, would create the potential for retail price falls in the event of farm-gate deregulation.

The extent to which this potential will be realised depends on the degree of competition in the processing and retailing sectors. This issue was canvassed at length in the New South Wales and Queensland reviews and in the Commission's submissions to them. Thus, in this submission, the Commission merely draws attention to some salient findings from the consultants who undertook the public benefit test for the Queensland review:

- it is unreasonable to assume that none of the fall in farm-gate prices will be passed on to consumers;
- the scope for supermarkets to sustain margins above competitive levels for any length of time is likely to be limited; and
- while there is likely to be greater scope for the exercise of market power in the processing sector, even a monopolist processor would have a financial incentive to pass on some of the price falls to retailers/consumers (Economic Insights 1998, pp. 51-52).

Against this background, the Commission is confident that farm-gate deregulation would provide price benefits to Tasmanian milk consumers.

3 Efficiency effects of the current controls

The Commission's submissions to previous reviews discussed the claimed efficiency benefits of regulated farm-gate prices and found them to be wanting. Significantly, the Queensland review concurred that counteracting 'corrupt' world markets, and encouraging stable prices and year round milk supply are not major considerations in the public benefit test (QDLRC 1998, pp. 39-40, 147).

The Commission's submissions to the previous reviews also outlined a simple methodology for estimating the efficiency costs of farm-gate regulation. The consultants for the Queensland review used the same methodology as part of their analysis. The methodology quantifies two types of efficiency cost — a consumption efficiency cost associated with reduced milk consumption, and a production efficiency cost stemming from an inefficient expansion in total milk output. Importantly, the methodology nets out income transfers and therefore focuses on *net* efficiency costs.

The consumption efficiency costs of the Tasmanian farm-gate regulations appear to be minor. This reflects the inelastic nature of demand for drinking milk. Given a retail milk price of $1.25 a litre, and assuming a price elasticity of demand of -0.15 (IC 1991) and that the full 13 cent a litre price distortion estimated above would be passed on to consumers in the event of deregulation, then the consumption

efficiency cost of the current controls would be around $50 000 a year. If only half of the price benefit were passed on to consumers, then the consumption efficiency cost would be just $12 500 a year. (For a discount rate of 7 per cent, the present value of future annual consumption efficiency costs would be around $710 000 and $180 000 respectively).

The production efficiency costs of the farm-gate regulations in Tasmania will be proportionately higher than in those States and regions where quota arrangements determine farmers' access to the more lucrative drinking milk market. In contrast to these quota arrangements, the price pooling system operating in Tasmania increases returns on marginal milk production, thereby encouraging an inefficient expansion in output.

The economic loss from this inefficient expansion in production depends on the elasticity of milk supply and the increase in marginal returns to milk production as a result of the price pooling system.

In its submission to the Queensland review, the Commission used a supply elasticity of 1.5 to estimate the production efficiency costs of the price pooling system in North Queensland. The consultants undertaking the public benefit test argued that econometric work undertaken for the review suggested that this figure was too high, particularly for relatively small price changes. They concluded that a value of 0.9 for the elasticity of supply was more appropriate (Economic Insights 1998, p.77). However, it is not clear that this lower figure is necessarily appropriate for Tasmanian milk production. For example, the implication of the suggestion that there is potential to double Tasmanian milk production (see above) is that supply is quite elastic.

In any event, such debate is somewhat esoteric. Given that most milk produced in Tasmania goes for manufacturing, the benefit to farmers from the regulated price for market milk — expressed as a proportion of the value of total milk output — is relatively small. Hence, under any reasonable supply elasticity assumptions, the production efficiency costs of the market milk controls are also small.

Specifically, the weighted average farm-gate price for market and manufacturing milk — net of the costs of transporting milk to processors — was around 20.6 cents a litre in 1996-97. Deregulation of market milk prices and abolition of the price pooling system would see the marginal return to milk production fall to the manufactured milk price. In 1996-97, this was 18.6 cents a litre (net of the Commission's transport cost allowance), or some 2 cents a litre lower than the weighted average return. For a supply elasticity of 1.5, a 9.7 per cent (2/20.6) reduction in the marginal farm-gate price would have reduced total Tasmanian milk

supply in 1996-97 by around 77 million litres. This implies a production efficiency cost for the current arrangements of about $770 000 a year. For a supply elasticity of 0.9, the cost would be around $460 000 a year. (Using a discount rate of 7 per cent, the present value of future annual production efficiency costs would be $11 million and $6 million respectively).

As the Commission's initial submission to the New South Wales review notes (IC 1997a, p. 51), the state-based farm-gate controls may have a wider efficiency cost through their contribution to an inappropriate distribution of milk production across Australia. That is, regulated price setting, together with the restrictions on interstate trade in market milk, has resulted in each State investing in sufficient capacity to make itself self sufficient in the production of drinking milk. Yet given differences in production costs across States, it would be surprising if the most efficient outcome for Australia was for each State to meet 100 per cent of its drinking milk requirements.

However, given Tasmania's status as one of Australia's lowest cost dairy regions, it is not the Tasmanian controls as such that would be contributing to this sort of production inefficiency. In a fully deregulated market, Tasmania would almost certainly continue to be self sufficient in the production of drinking milk.

Finally, the benefit cost calculus should also take account of the costs of administering the current farm-gate pricing arrangements. Indeed, these may well be as significant as the consumption and production efficiency costs.

4 Regional and adjustment issues

Clearly, longer term efficiency benefits and costs are not the only consideration in determining whether continuation of the current arrangements is justified. Regional considerations, and the short term adjustment costs that would accompany deregulation, are also relevant.

As the Commission has noted in its previous submissions, in a broad sense, there is no net regional benefit from the current controls. That is, the benefits to Tasmanian dairy regions are matched by reduced income in other parts of Tasmania.

Of course, the regional benefits are much more concentrated than the regional costs. The current controls contribute significantly to income in dairy communities, whereas the increased cost of drinking milk is spread across the whole of the State. By way of illustration, for current market milk sales of around 50 million litres a year, a 13 cent increase in farm-gate prices equates to a benefit to dairy farmers of around $6.5 million a year. This represents an increase in average farm income of

around $8000 a year — equivalent to 17 per cent of net farm cash income and more than 90 per cent of farm business profit in 1996-97. In contrast, for a Tasmanian family of four, the increased cost of milk resulting from the controls is around $50 a year.

However, of itself, regional concentration of the benefits is not an argument for retaining the current controls. The production of virtually all goods and services is more concentrated than their consumption. Taken to its extreme, regional concentration of production would be an argument for universal support to industries, which would of course be self defeating.

Moreover, the magnitude of the benefit provided to dairy communities by the current controls will depend on the opportunities for farmers to diversify into other activities. The greater the scope for diversification, the smaller would be the longer term reduction in income in the dairy regions consequent upon farm-gate deregulation.

Similarly, the ease of transferring resources into other activities will have an impact on the short term adjustment costs that would accompany deregulation. Even though farm labour and capital displaced from dairying might be redeployed to alternative uses, inevitably this would take time. During that interim period, there may be a temporary reduction in output if resources lay idle. Clearly, the more readily resources can be shifted from dairying to other activities, the smaller would be these costs.

The Commission observes that the view that there is scope to significantly increase milk production in Tasmania implies that resources can move relatively freely between dairying and other rural activities. This in turn might suggest that the longer term regional and shorter term adjustment impacts of farm-gate deregulation may not be all that great.

Suffice it to say that there is a need for consistency in assessments of the benefits to farmers from the current controls and the likely distributional and adjustment costs in the event of deregulation. During its discussions with the New South Wales and Queensland reviews, producer interests contended that the Commission's estimates of the increases in returns to farmers from farm-gate regulation greatly overstated the true benefit, while at the same time claiming that deregulation would have significant adverse distributional consequences and be accompanied by substantial adjustment costs. Clearly, there is considerable tension in this position.

Finally, the Commission's submissions to previous reviews have commented on ways to minimise the adjustment burden in the event that State Governments decide to deregulate their dairy industries. Phasing out the current controls is an obvious

option in this regard. Those submissions also point to the role of ongoing farm rationalisation and other improvements in industry efficiency in reducing the adjustment burden on dairy farmers and their communities.

5 Concluding remarks

Setting the small, but ongoing, efficiency costs of the current regulations against the distributional outcomes and short term adjustment costs that would accompany deregulation, gives one perspective on the benefit cost test required for this review.

But the benefit cost test must also have regard to developments in the regulatory regime elsewhere. In particular, if Victoria opts to deregulate, it would be difficult for Tasmania to maintain farm-gate market milk prices at current levels.

More generally, as the Queensland Review argued, deregulation is almost certainly inevitable in the longer term (QDLRC 1998, p. ix). Therefore, irrespective of what a benefit cost test might indicate about the merits of deregulation, an important issue for this review is whether it is in Tasmania's longer term interests to start preparing for a less regulated market environment now. Being proactive will provide scope to manage the adjustment process. Under the alternative approach of holding the line on the current arrangements, the Tasmanian industry may have to cope with more rapid adjustment in the future.

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