Australian Journal of Agricultural Economics, Vol. 20, No. 1 (April 1976), pp. 44-51.

NO FEELING FOR "UDDERS"?: A CRITICAL NOTE ON THE REPORT OF THE A.C.T. MILK AUTHORITY*

ROBERT ALBON

Australian National University

Fluid milk marketing in Australia is generally associated with an administered system where free market forces are unable to operate due to public intervention. Such interference creates a situation where, as Throsby [6, p. 243] puts it, '... returns to the fluid milk sector are maintained by monopoly pricing and supply control measures which vary from State to State ...'. The Australian Capital Territory (A.C.T.) is, similarly, not immune to the effects of producer protection. Indeed, it is contended that the implementation of the proposals contained in the A.C.T. Milk Authority Report of March 1974 [3] would have the effect of institutionalizing the power of the dairy industry to act in a manner opposed to the interests of A.C.T. consumers. The basic reason why the interests of consumers are so often put second to those of suppliers is summed up by J. N. Lewis [2, p. 283]: 'A determined close-knit group with strong interests in a particular policy issue can often impose its desires upon an apathetic majority whose interests are weak and diffused'. It is proposed to develop this theme by looking at the history of milk supply in the A.C.T. as a background to an examination of the Report, an appraisal of its contents, the advocacy of an alternative (competitive) solution and an estimation of costs, to consumers, of producer protection.

Milk Supply in the A.C.T.

A history of the A.C.T. milk supply is included in the Report [3, Appendix 1]. In 1949, the local dairy men, operating as the Canberra Dairy Society Ltd., merged with the N.S.W. firm, Dairy Farmers Co-operative Milk Co. Ltd., and were granted a monopoly of milk supply in the A.C.T. until 1958. Local supplies, from an area unsuited to dairying, soon became inadequate, so that better quality milk was railed from Albury and Moss Vale to supplement low fat-content local milk. Monopoly pricing and fluctuating quality culminated in L.C. Webb being asked to conduct an enquiry [7] in 1956. Among his findings were that the price of one shilling a pint was excessive and that the public interest was inadequately safeguarded. In 1957 Public Health (Dairy) Regulations were gazetted which established powers to ensure improved quality standards. With the cessation of Dairy Farmers' monopoly, other firms showed an interest in the market and the Bega Co-operative Society was permitted to enter the market. The introduction of higher quality milk from the Bega district, led, in the short term, to a drop in retail price and the adoption, by Dairy Farmers, of payment by fat-content. The extent of competition between the two firms has been dubious. Certainly there has been no price competition. This point seems to be recognized in the Report where it is stated that 'an "open" market probably could mean lower prices' [3, p. 17].

* I am indebted to Dr. P. L. Swan and two anonymous referees for some helpful comments and suggestions. They bear no responsibility for any remaining errors.

The total output of processed milk in the A.C.T. was 5,615,557 gallons in 1972/73. Bega processed about 54 per cent of this quantity. Dairy Farmers now only procure about forty per cent of their supplies locally, the rest being trucked from the Albury, Kiewa, Tumut and Bemboka areas. In relation to milk quality, the Authority had heard claims that Bega milk was 'more creamy' and 'richer' than that of Dairy Farmers. On looking into this question [3, p. 5] the Authority found that 'the difference in composition between the milk is minimal' and although Bega milk had higher average butter-fat and solids-not-fat contents, this was not important because 'of the overall variability in composition'. A check on the tested quality of bottled milk for 1972 [3, Appendix 2A, B] reveals that the mean butter fat contents of Bega and Dairy Farmers milk were 4·19 per cent and 3·90 per cent respectively, and the mean solids-not-fat contents were 9·14 per cent and 8·91 per cent respectively. The corresponding standard deviations were 0·308, 0·214, 0·310 and 0·137, indicating that Bega milk was more variable in quality than Dairy Farmers. There does, however, seem to be consumer consciousness of a quality difference which was expressed on 'various occasions before and during the Inquiry' [3, p. 5].

The Report

In 1969/70 the Joint Committee of the A.C.T. held an enquiry into the milk industry which recommended the establishment of an Authority to examine the economics of that industry. The new Authority presented its Report in March 1974, and the scheme proposed in the Report became operative in September 1975. The Report examined the sources of supply, processing and packaging, and distribution of milk in the A.C.T. Only the first of these aspects will be examined in detail in this paper.

Three points of view had to be considered in compiling the Report—those of consumers, existing suppliers and alternative suppliers. 'The consumer viewpoint, ..., is broadly that protection for existing suppliers should be removed and Canberra's milk requirements obtained at the cheapest available prices ...' [3, p. 15]. The existing suppliers were 'anxious to retain their present position ... and oppose any downwards disturbance of the existing price structure'. [3, p. 16]. They also submitted that any price reduction 'would jeopardise all local production'. The alternative suppliers wanted access to the liquid milk market as 'a more profitable outlet for milk otherwise diverted to manufacture' [3, p. 16].

On invitation, effectively seven groups tendered proposals on the volume, quality and price of milk they would be prepared to supply. The table below gives the weekly gallonage of milk, with at least 4 per cent butter-fat, the qualifying five groups were prepared to offer, and the prices per gallon: —[1]

The Authority eliminated all the potential entrants except Murray Goulburn Co-operative Co. Ltd. The arguments used in the elimination process were (i) an alleged inability to guarantee long term supplies,

[1] The Liberal Party, in the 'Canberra Times', (8.7.74), pointed out that these proposed gallonages would more than supply the present market at a saving of $350,000 per annum. The Liberal Party's estimate is crude in that (i) it ignores market size, and (ii) neglects consumers' surplus.

TABLE 1

POTENTIAL SUPPLIER	WEEKLY GALLONAGE	PRICE PER GALLON
Murray Goulburn	30,100	40·00 c
North Eastern Dairy	21,000	41·50 c
Bemboka Co-op.	17,500	45·75 c
Haberfield's Milk	15,400	48·75 c
Inland Dairies	8,400	50·28 c
	92,400	W.A. = 43·82 c

and (ii) the inability to supervise quality standards. The first argument was used in the case of North Eastern Dairy Co Ltd., Haberfield's Milk Pty. Ltd. and Inland Dairies Pty. Ltd. The second was used in the case of Bemboka Co-operative Dairy Society Ltd. It was felt that North Eastern and Haberfield, both located in or about the Albury-Wodonga growth centre, might be constrained in their future supplies due to competing local demands. In the case of Inland Dairies, located at Tumut, it was thought that they could supply some milk (as they already do through Dairy Farmers) but not the amount they had quoted. The Authority felt that Bemboka 'would install appropriate [quality control] facilities if its access to the Canberra market was widened' [3, p. 12].

In assessing the views presented to it the Authority saw that it had two main courses open to it: (i) An 'open' market where milk 'is free to come in from any area as long as . . . (it) . . . met minimum quality standards' [3, p. 16], or (ii) '. . . a statutory marketing agency could be empowered to acquire all of the Territory's milk requirements and fix milk prices' [3, p. 17]. The second alternative was selected because, while an 'open' market 'probably could mean lower prices . . . it could also carry penalties' [3, p. 17]. These 'penalties' are (a) possible lack of supply continuity, (b) difficulties of health standards enforcement, and , (c) collusion might lead to the emergence of a private monopoly.

The marketing agency would have powers to acquire milk for the entire A.C.T. market. It would require 'the strongest possible legislative backing to at least place it on an equal footing with state authorities in the acquisition of milk' [3, p. 18]. The agency would be 'consumer orientated' in its approach and would cost about \$80,000 to \$100,000 annually (or 1·5 to 1·9 cents per gallon of milk) to run. It would purchase milk from Dairy Farmers, Bega and Murray Goulburn with which it would make agreements over five years (at least) with price escalation clauses in the contracts. The market share of each supplier (Q) would be determined by:

$$Q = E + [(Pa - Ps)/Pa]\ 100$$

where E is the supplier's existing market share, Ps is the tendered supply price and Pa is the mean of the three prices tendered. E is the existing share now, which is zero for Murray Goulburn. Given the prices quoted in the Report, Murray Goulburn would get about 14 per cent of the market and could only raise this share by tendering a relatively lower price.[2]

[2] It is to be understood that, over contract periods, Q does not feed back and become E. E is the initial (existing) share only.

The public buying agency would pass supplies on to the monopoly processor (Dairy Farmers) which would then place packaged milk into the hands of the sole distributor (Bega). The Authority had been satisfied that the two existing plants operated at a loss and accepted a submission by Dairy Farmers and Bega that the former control all processing and packaging and the latter should handle all distribution. The Authority also suggested 'that a rise in the retail price of milk will be necessary to provide for the necessary increase in margin' [3, p. 35]. The price of milk would be determined, as a minimum, by the Authority.

A further proposal is that all milk be packaged in cartons and not be branded. This decision was reached after considering all the available evidence, especially in relation to producer and distributor wishes, environmental implications and cost considerations.

Assessment of the Report

The recommendations contained in the Report seem to rest on two premises—that the long term supply potential of fluid milk will be constrained, and, that, an administered system is preferable to a competitive one. Both of these assumptions are open to considerable doubt.

The supply pessimism of the Report is possibly its most obvious feature. While it thought that Dairy Farmers had some flexibility to maintain supplies to a growing market, it felt that there may be limits imposed to Bega's long term supply potential due to the activities of the N.S.W. Dairy Industry Authority. Use was also made of the supply constraint argument in eliminating some potential suppliers. The supply pessimism of the Report would, however, seem to be more imaginary than real. In Australia, there exists a great price differential between the 'equalized' price paid to farmers for milk used in manufacturing and the fluid or city milk price. In 1972/73, while the A.C.T. processors were paying farmers 50·1 cents per gallon, the equalized price was only 16·94 cents per gallon.[3] This differential exists in a situation where only about one-quarter of Australia's total milk output is sold on fluid milk markets. It would seem apparent, that, given the opportunity, dairy farmers would actively seek access to city milk markets, rather than sell at the much lower, equalized, manufacturing price. Admittedly, there are greater costs associated with liquid milk marketing (especially in winter)[4] but 'there is evidence to suggest that these costs are covered to an excessive degree and that farmers who supply this market are in a privileged economic position'. [Schapper 4, p. 69]. Given these circumstances it is difficult to believe that farmers would be unwilling to produce more and/or divert more milk from low-priced manufactured sales. In the light of the Report's stance on supply it is interesting to

[3] The actual price paid for A. C. T. fluid milk was taken as a weighted average of the two processors' prices. The 'equalized' price was calculated from information in [1, p. 834]. The 'return to farmers' from butter sales in 1972/73 was 35·045 cents per pound or 77·099 cents per kilogram. One kilogram of butter is equivalent to 20·7027 litres or 4·55 gallons of 3·7 per cent butter-fat whole milk. Accordingly the 'equalized' price for butter is 16·94 cents per gallon.

[4] It is often argued that higher costs of winter milk justify the premium on city milk. While these costs do not justify the extent of the premium, they do suggest that the price of milk should vary seasonally. This would occur under a free market.

find the following statement: 'With the existing price differential between milk for the liquid market and milk for manufacture a consumer could ... secure supplies of milk at lower than the ruling prices for market milk. This would be particularly so if a high proportion of its milk supply was being used for lower priced manufactured goods.' [3, p. 13].

The assumption that an administered marketing arrangement is preferable to a competitive solution is hard to justify in this case. The scheme proposed in the Report is associated with considerable costs to consumers and the monopolization of all aspects of the industry. The continued protection of Dairy Farmers, for example, means that milk will still have to be taken from the high cost local producers, and those concerns, that now supply through Dairy Farmers, but wish to supply independently, at a lower price, will not be able to do so. Murray Goulburn, which has tendered a 20 per cent lower price than Dairy Farmers, would only get 14 per cent of the market. In the Report it is claimed 'that the creation of a processing and packaging monopoly would concern the Authority were it not for the belief that the disadvantages ... could be minimized with appropriate administrative controls'. [3, p. 33]. These controls include the power of the Authority to make contracts and check the accounts of the processor. But contracts will be for 'up to 10 years', and will go only to Dairy Farmers, which will become entrenched and hard to remove. A similar arrangement is proposed for the distributor, Bega.

While the arguments for an administered system are not convincing, the Authority's arguments against a competitive system are far from conclusive either. The first 'penalty' of an 'open' market relates to an alleged inability to monitor health standards. A random sampling of milk supplies backed up by the power to reject any milk not up to standard would be a sufficient safeguard. The second 'penalty' involves a possible lack of continuity of supplies. Why, it can well be asked, would a supplier jeopardise his position in a lucrative, expanding, fluid milk market by being irregular with supplies? Again, the fear of losing access to the market would be sufficient to overcome this type of problem. The third penalty deserves repeating: 'instability also might lead to collusion or the eventual emergence of a private monopoly', [3, p. 17]. If a private monopoly was to be the result, it would arise from the existence of economies of scale in processing, not 'instability'. And the situation where monopolization is possible could only arise given the artificial constraint, imposed by the Authority, that all milk that is consumed in the A.C.T., be processed and packaged in the Territory.

While the proposed A.C.T. milk marketing system will be associated with considerable costs, it is not clear who will be reaping the monopoly rents. While it might be expected that the farmers would be the beneficiaries, there is a strong possibility that the marketing authority itself would command a significant proportion of the transfers. This would result from the agency constructing a bureaucratic edifice by a process of 'empire-building'. The Authority's estimates of the costs of the agency, at \$80,000—\$100,000 annually, appear understated. The marketing authority proposes that it should (a) purchase all Canberra's milk, (b) control two monopolies, (c) have the fullest liaison with the A.C.T. Health Services on milk quality, (d) fix minimum retail prices, (e) promote milk consumption, (f) administer the vendor distribution system and (g) arrange supplies in emergency periods. Performance of all these tasks would lead to the growth of a new, and costly, bureaucracy.

Before concluding this section it is instructive to examine the packaging proposals in the Report. Cartons are recommended as the sole form of packaging despite the facts that three-quarters of the milk sold in Canberra is in bottles, 65 per cent of housewives interviewed by Australian Sales Research Bureau Pty. Ltd. 'expressed a preference for glass bottles' [3, p. 28] and bottles are less costly than cartons to the extent of 6 cents per gallon [3, p. 32]. The Authority, however, predicted 'longer term savings' in cartons, and was impressed by the preference for them by producers and distributors.

In assessing the Report there has been considerable mention of costs to consumers. Milk marketing in the A.C.T. has always been associated with producer protection, most blatantly during the 1950s and this has resulted in costs to consumers. The Report of the A.C.T. Milk Authority is a scheme which will ensure a continuation of producer protection.

Costs to Consumers

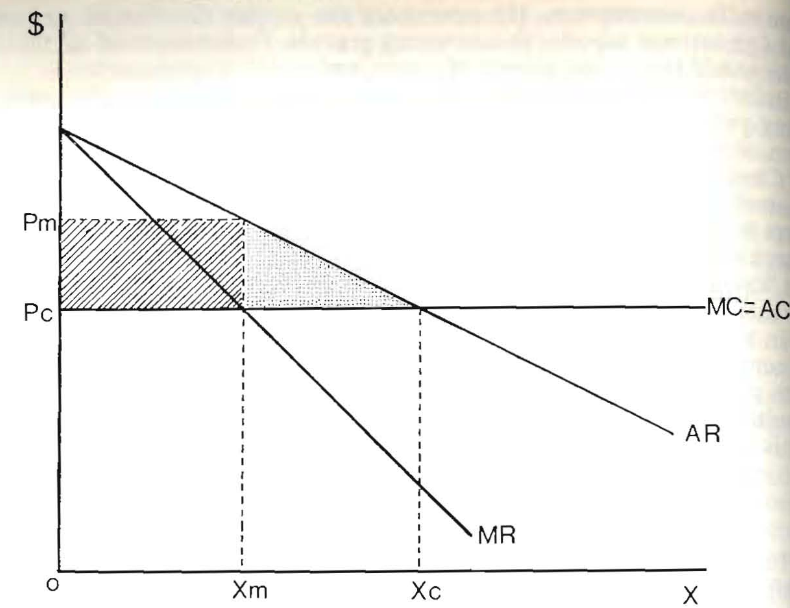
In this section some simple Marshallian concepts are used in estimating the costs of producer protection in the A.C.T. milk industry. The costs to the consumer of the existing system are estimated, as are some of those associated with the Milk Authority's proposed scheme. These estimates cover the costs incurred up to the point where bulk milk arrives at the processing plant and neglects the substantial costs beyond that stage. These latter costs are mainly associated with the lack of competition between retailers and vendors. Their neglect here does not imply that they are unimportant.

The costs of the present system comprise two parts: (i) monopoly rents received by protected suppliers, and (ii) the deadweight loss in consumers' surplus as indicated by the Marshallian measure. These ideas are clarified by Figure 1.[5] The curve AR represents the demand for milk, Pm is the existing supply price inducing consumption of Xm, Pc is the competitive supply price and Xc competitive consumption. The rectangular cross-hatched area of the figure represents monopoly rents, while the dotted triangular area represents the absolute 'loss in consumers' surplus as a result of reduced consumption due to monopoly restriction. The estimated value of the transfer of surplus from consumers to producers in 1972/73 was

$$(50 \cdot 1 - 43 \cdot 8) \times 4,686,423 = \$295,244.$$

where 50·1 cents was the actual price paid, 43·8 cents the weighted average tendered price by the alternative suppliers, and 4,686,423 gallons, of milk were sold in the A.C.T. in that year. The other cost to consumers, the deadweight loss in consumers' surplus, was calculated

[5] Figure 1 assumes no economies or diseconomies of scale (i.e. average cost, AC, equals marginal cost, MC) and similar cost conditions under monopoly and competition. The transfer costs would, of course, be higher if the AC curve sloped upwards—the rational monopolist would use least-cost supplies first.



as $4,600.[6] Adding this to the transfer cost, the total cost, to the consumer, of producer protection in 1972/73 was around $300,000. This is a cost of $1·84 for each of the 163,200 Territorians in existence in that year.

Will the proposed scheme advanced by the A.C.T. Milk Authority help reduce these costs? On the basis of the above calculations, the admission of Murray Goulburn to 14 per cent of the market in 1972/73 would have reduced the costs, to consumers, of bulk milk procurement, by about $75,000. However, this would have been substantially outweighed by (i) the cost of operating the proposed agency, estimated at $80,000—$100,000 annually, but which will probably cost much more, and, (ii) the costs associated with the complete monopolization of processing and distribution.

Concluding Comments

An economist advocating a competitive solution to industry problems is usually criticized for not specifically outlining the consequences of allowing market forces to operate unhindered. This he obviously cannot do, except in the broadest possible terms. Given the information in the A.C.T. Milk Authority's Report, however, it seems a competitive fluid milk market in Canberra would result in lower milk prices and

[6] Two assumptions were made in estimating this figure. Firstly, a constant absolute mark-up was assumed to exist under both acquisition schemes. Secondly, the price elasticity of demand was assumed to be $-0·5$. This was based on J. Street's [5, p. 111] calculated range of $-0·47$ to $-0·58$. Given these assumptions above, moving from a monopolistic to a competitive system would reduce the retail price by 6 per cent, which implies a percentage change in quantity demand of 3 per cent (about 145,000 gallons). To get the deadweight loss, the change in quantity is multiplied by the absolute price change (6·3 cents per gallon) and this quantity is divided by two.

elimination of monopoly rents, and would dispense with the need for a costly, unnecessary authority. Indeed, it seems that the Authority and the two existing supplying co-operatives are very much like the disgruntled dairy maid—that is, they have no feeling for 'udders'.

References

[1] Australian Bureau of Statistics, *Year Book of Australia*, No. 59, 1973 (Canberra, 1974).
[2] Lewis, J. N. 'Milking the Australian Economy' in Throsby, C. D. (ed.), *Agricultural Policy* (Pelican, 1972), pp. 282-296.
[3] Milk Authority of the A.C.T., *Report of the Inquiry into the Milk Industry in the A.C.T.* (Australian Govt. Publishing Service, Canberra, March 1974).
[4] Schapper, H. P., 'Dairy Policy for Australia', *Australian Journal of Agricultural Economics*, Vol. 5, No. 1, September 1961, pp. 67-79.
[5] Street, J. A., 'Demand for Milk', *Review of Marketing and Agricultural Economics*, Vol. 42, No. 2, June 1974, pp. 100-113.
[6] Throsby, C. D. (ed.) *Agricultural Policy*, (Pelican, 1972).
[7] Webb, L. C., 'Enquiry into A.C.T. Milk Supplies', (Canberra, Dept. of the Interior, 1956).