Wales. Thus, there is evidence indicating that the BAE estimate of income transfer at 40c a dozen of eggs is conservative.

It is important to note that, in spite of the differences between the approaches taken by Alston and the BAE, the policy implications of Alston's findings are not contradictory to those put forward by the BAE. As newer analytical approaches are conceived and better quality data become available, it is likely that estimates will be revised. But those estimates are likely only to support the basic thrust of the policy guidelines given in the BAE study. The paper by Alston is a good example of that. If this is the likely outcome, then a case may exist in future publicly funded research for devoting more research resources to obtaining better quality data and for developing economically more efficient policy alternatives than for refining the estimates based on currently available data.

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Consequences of Deregulation in Victorian Egg Industry: a reply

Julian M. Alston*

I have claimed (Alston 1986) that the BAE (1983) made two conceptual errors when estimating the effects of egg industry regulations. Trewin and Bhati (1986) disagree and defend the method used by the BAE, primarily on the grounds that data limitations prevented them from using the type of approach that I have advocated. This disagreement has persisted through several rounds of correspondence and a seminar I gave on the topic at the BAE. I will now use a simplified model to attempt, once more, to clarify why I believe the BAE approach is wrong and why data problems do not constitute an adequate defence for using it.

To focus on the issue, let us make the following simplifying assumptions: (a) all eggs are consumed domestically as shell eggs so that the equalisation arrangements and hen levies are irrelevant; (b) yields are constant so that eggs are produced in fixed proportion to the number of hens; (c) there are no supply distortions due to quotas so that regulated costs (excluding quota rents) are equal to unregulated costs for any given quantity of eggs; (d) there is no black market or non-commercial production; and (e) the farm to retail marketing margin is constant, independent of the quantity produced.

Under these assumptions, hen quotas operate exactly like perfectly transferable egg quotas. In this world the retail price of eggs is equal to the price at the farm gate plus the farm to retail marketing margin, and the farm-gate price of eggs is equal to unregulated marginal costs of producing the quota quantity plus quota rents.

The correct approach to estimate the effects of quotas is to eliminate the quota rents by equating unregulated supply and

* Department of Agriculture and Rural Affairs. Victoria.

demand. This could be done at retail, wholesale, or the farm gate. It doesn't matter which market level is chosen but it does matter that one is. The BAE equated *retail* demand with *farm level* supply (implicitly including quota rents as a component of costs by using the farm price of eggs as a point on the supply curve). Thus the BAE mixed two market levels and used an inappropriate representation of unregulated supply. The result is that instead of estimating the effects of eliminating quota rents (*i.e.* eliminating quotas) the BAE estimated the effects of eliminating the marketing margin (*i.e.* eliminating the middleman) while, by my interpretation, retaining the quotas.

Under the assumptions used here, quota rents correctly measure the gross transfer from consumers to producers due to the quota system. Using the BAE's method, that transfer would be estimated as the farm-to-retail marketing margin scaled down by the farmer's share of the consumers' egg dollar. There is no basis in theory or data for expecting to find a one-to-one correspondence between quota rents and the product of the marketing margin and the farm gate price divided by the retail price. Similarly, there is no reason to expect to find any correspondence between the BAE estimates of social costs and the magnitudes of interest. Without more detailed information, the relationships between the BAE estimates and the true income transfers and social costs is not known, but there is no particular reason to expect them to be even of similar orders of magnitude.

It turns out that the BAE estimates are of similar orders of magnitude to opinions expressed by some industry "experts" and to some estimates derived formally by better methods. This outcome does not in any way justify the method used by the BAE; nor does it justify using the estimates in policy discussions as if they were obtained by rigorous analysis well based in economic theory.

Perhaps it is the case that the available data are not good enough to permit accurate estimation of the effects of the egg industry regulations. The qualitative effects of the regulations are fairly well understood and for many purposes that qualitative understanding is sufficient. The BAE study has provided a comprehensive accounting of the institutional arrangements and is well worthwhile for this alone. The fact that the empirical estimates are flawed does not detract from that contribution but it does mean that further work is necessary to estimate the effects of the egg marketing arrangements.

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