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AN APPRAISAL OF A BUFFER FUND SCHEME FOR BEEF: REPLY

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I am indebted to Bain for revealing some deficiencies of my recent paper. The comments by Bain [1] are considered in this reply in terms of their likely effects on the main conclusions of my analysis. By this means it should be possible to provide further evidence on the efficacy of the policy outlined in [3].

There appear to be some nine points of criticism made by Bain [1]. They can be listed as follows:

- (a) assumed foreign elasticities of demand;
- (b) assumption of variable domestic demand elasticity;
- (c) treatment of producers' response to the policy;
- (d) imperfect arbitrage between domestic and export markets;
- (e) little benefits to some foreign consumers;
- (f) distribution of benefits and costs of the scheme;
- (g) unworkability of a disposal scheme;
- (h) irrelevance of foreign consumer surplus concept; and
- (i) incomplete reporting of gross revenue effects between 1973/74 and 1976/77.

The issue which it is intended to address is: how do these comments affect the main conclusions reached? The conclusions were that the policy should enhance stability of producers' revenue through time with a small cost to producers, but that the probable effect on revenue in periods of low beef prices would be small.

Points (c), (d), (e), (g) and (h) are essentially qualifications to the generality of the analysis. While they do provide further information, only (c) might affect the main conclusions substantially. The response of producers to the scheme is obviously an important influence, but it is also extremely difficult to handle. If producers respond directly to price plus levy repayment received, then the amount of beef supplied in low price periods, for example, would be expected to be higher with the policy than without it. In this case, the supply induced by the policy would have the effect of reducing prices, and hence there would be a self-defeating mechanism. If, however, there are dynamic inventory effects, as seems to have been the case from 1973 to 1977, then the response of beef producers to the policy may have a further stabilizing effect. Here, the producer tends to run down cattle numbers in periods of depressed prices, and tends to build them up when buoyant market conditions and expectancy of high prices prevail. If this is the underlying behaviour of producers, then greater price stability, induced by the policy, would result in smaller desired changes in beef cattle inventories and so greater stability in market supplies. Hence,

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the supply response to the policy would further sustain the stability initially introduced by it. Given such opposing considerations it is difficult to see what kind of supply response can reasonably be incorporated into the model.

Point (f) is a valid criticism which results from model simplification in the original analysis. It does not affect the main results, but does substantially influence any comments on distribution of benefits and costs of the scheme.

Criticisms (a), (b) and (i) are those that, if valid, would seem to have a significant effect on the main conclusions.

The opinion put forward by Bain is that the price elasticity of foreign demand for beef at high prices approaches infinity. This is a contentious issue requiring further study. Nevertheless, whether this, or the figure of -2.0, used in [3], is the upper limit on the foreign elasticity does not appreciably affect the conclusions reached. This is because, given realistic values of the domestic price elasticity of demand¹, the more elastic is the foreign curve, the greater will be the amount of stability introduced by the policy. Thus, if comment (a) is accepted, it tends to reinforce the original conclusions.

Bain's contention that the major conclusions in the study depend on the acceptance of a variable domestic elasticity hypothesis (point (b)) is invalid. By observing Table 2 [3, p. 59], it can be seen that this is not the case, because both the best and worst revenue ranges occur with constant domestic price elasticities of demand between high and low price periods.

The distorted view referred to in comment (i) occurs because of the previously discussed dynamic inventory effects which appeared to be operating during the period 1973/74 to 1976/77. However, to set the record straight, the mean difference in annual gross revenue between high and low price periods without the policy was \$52.1 million. With the policy operating, the result obtained showed that the annual gross revenue in the low price period was higher than in the high price period by \$47.1 million.

In summary, it would seem that the original conclusions are not significantly altered by the comments from Bain [1]. Several of the issues have been defined more precisely, and areas where further information is required have been highlighted. Perhaps the most important aspects requiring further study concern the relationship between auction and retail markets, the response that can be expected from producers to the introduction of this type of policy, and the distributional consequences of the policy.

References

- [1] Bain, R. A., 'An Appraisal of a Buffer Fund Scheme for Beef: Comment', *Australian Journal of Agricultural Economics*, this issue.
- [2] Griffith, G. R., 'Sydney Meat Market Margins — An Econometric Analysis', *Review of Marketing and Agricultural Economics*, 42(4): 223-39, 1974.
- [3] Parton, K. A., 'An Appraisal of a Buffer Fund Scheme for Beef', *Australian Journal of Agricultural Economics*, 22(1): 54-66, 1978.

¹ The conclusion has been observed for a range of domestic price elasticities of demand between 0.0 and -5.0.