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Forum

Frontiers in Agricultural Policy Research

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It has been suggested in the past that agricultural economists have had a limited input to the agricultural policy making process because of their preoccupation with issues of economic efficiency. The contrary hypothesis that the contribution of agricultural economists to the policy debate is hampered as much by our limited understanding of human behaviour and the lack of relevant data as it is by any preoccupation with efficiency is advanced in this paper. This notion is illustrated with reference to commodity stabilisation policy, the role of expectations in economic models, the economics of regulation and issues associated with the competitiveness of the rural sector. In discussing these issues, an attempt is made to outline areas where research is needed in order that agricultural economists can further the policy debate.

Introduction

Criticism of economists for not dealing with problems of relevance is common, even from among the ranks of economists themselves. In the presidential address to the Royal Economic Society in 1971, Phelps Brown (1972, pp.6-7) drew attention to what he saw as:

“... the divergence between the increasing power of economists to elaborate trains of subtle and rigorous reasoning and build complex models, on the one hand, and on the other the slow advance in their power to diagnose and prescribe for the problems of our day.”

Morgenstern (1972) expressed similar views and suggested that the popular economics textbooks from which much teaching is done leave the impression that there are few, if any, unresolved theoretical problems in economics¹.

Perhaps there are fewer criticisms of agricultural economists. Although Leontief (1971, p.5) was troubled by the progress being made by economists, he was more sanguine about the advances made by agricultural economists. With regard to their influence on agricultural policy, Edwards and Watson (1978, pp.193-4) suggested that the advice of agricultural economists has been reflected in price policy only after considerable time has passed. Standen (1983, p.97) claimed that the apparent failure of policy makers to accept fully the advice of agricultural economists is the result of ‘the preoccupation of economists with allocative efficiency and a neglect of the other dimensions and particular features of the decision framework/environment of policy makers and policy-making groups’.

There appear to be grounds for concern about whether economists, or, more particularly, agricultural economists in this case, are getting their message across. The aim here is not to attempt to advocate ways of opening up the communication channels between agricultural economists and the so-called policy makers². Instead, I wish to pose the following questions: (i) where are the gaps in our knowledge which limit our ability to provide sound policy advice on problems of real world importance? and (ii) what are the promising new approaches and areas of research that need to be examined?

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¹ Anderson (1982, p.95) raises a related concern about agricultural economics curricula.

² For a discussion of the extension role of agricultural economists see Ryan (1985).

I wish to advance the hypothesis that our contribution to the policy debate is hampered as much by our limited understanding of human behaviour and the lack of relevant data as it is by our alleged preoccupation with allocative efficiency³. I would like to illustrate this point with reference to four areas in which I believe agricultural economists can make important contributions during the next decade. The areas are as follows: (i) commodity stabilisation policy; (ii) the role of expectations; (iii) the economics of regulation; and (iv) intersectoral competition and the competitiveness of the rural sector. I have included these areas under the broad heading of 'agricultural policy research' because they are of direct relevance to the analysis of the effects of current agricultural policies and to the formulation of new policies.

In putting forward the above hypothesis, I have no desire to denigrate the contribution made to date by agricultural economists and econometricians to the advance of knowledge. In the past decade, the changes in computer technology and the availability of advanced econometric techniques in general software packages have made it possible for agricultural economists to become involved in the solution of a wide range of complex problems (for illustration, see Rausser 1982).

Issues in Stabilisation Policy

Stabilisation has been a major theme in Australian agricultural policy since the 1920s. In recent years, there has been a move away from the more traditional stabilisation arrangements, such as the wheat stabilisation schemes that operated for three decades up until 1978, to underwriting schemes (for a discussion of the evolution of Australian price policy, see Stoeckel 1984, pp.8-9). Despite these changes, the wool reserve price scheme has remained basically unchanged for over a decade. However, there have been some concerns expressed about the cost of stockholding, particularly when the level of stocks is high, as it was during 1984.

Some form of intervention to stabilise prices may be justified on the grounds that there is an incomplete set of risk or insurance

markets. In such a situation, it is not possible to insure against all risks for all possible states of nature. Under such circumstances, both producers and consumers may make incorrect decisions about production and consumption because they are forced to make decisions based on an incomplete set of prices. Any competitive market equilibrium established under these conditions is likely to be Pareto inefficient (for a discussion, see Newbery and Stiglitz 1981, pp.207-37).

If the degree of risk aversion varies between agents, there will be an incentive for the establishment of institutions which allow risks to be shared or to be borne by those better able to do so. However, some insurance markets may not be established or may fail because of problems of moral hazard or adverse selection. Having said that there may be good theoretical grounds for intervention to reduce risk by, for example, stabilising prices or incomes, it still remains to be seen whether the rather blunt policy instruments which are commonly used confer greater benefits than costs on society at large.

It could be argued that agricultural producers have displayed a 'revealed preference' for price stabilisation because of their willingness to pay, either directly or indirectly, for such schemes. For example, wool growers contribute to the support of the wool reserve price scheme through a levy. In the case of other schemes, growers' contributions have been less direct. For example, there is substantial evidence that the wheat stabilisation arrangements which were in operation from 1948 to 1978 were of considerable but perhaps largely unforeseen cost to growers in terms of the loss of producer surplus (Myers, Piggott and MacAulay 1985). Even if growers are willing to pay what is equivalent to an insurance premium for such schemes, it is relevant to ask whether there is a more cost effective way of reducing the effects of risk.

To determine whether the benefits of a particular price stabilisation scheme are greater than the costs, it is first necessary to establish a framework within which such an assessment can be made. Estimates of the behavioural parameters in the system must then

³ For a closely related view see Hardaker (1985, p.11).

be obtained. In attempting to assess the desirability of stabilising agricultural commodity prices using buffer stock schemes, Newbery and Stiglitz (1981) extended the traditional economic surplus framework to take account of the benefits from a reduction in risk explicitly.

To use the Newbery and Stiglitz (1981) methodology effectively it is necessary to have estimates of a number of basic market parameters such as elasticities of supply and demand and a measure of the degree of agents' risk aversion. Although studies containing estimates of elasticities of demand and supply for agricultural products are commonplace, less attention has been paid to the determination of appropriate functional forms (for a review of some of the research in the field, see Wohlgenant 1984; Chalfant 1984). It was recognised early in the debate on hidden gains and losses from buffer stock schemes that the form of the demand function was crucial in determining the outcome (for elaboration, see Hinchy and Fisher 1985). Very few attempts have been made to use flexible functional forms in the empirical assessment of stabilisation schemes (for an exception, see Just and Hallam 1982). Some authors, such as Campbell, Gardiner and Haszler (1980), have attempted to justify their choice of functional form on theoretical grounds. However, most estimates of demand and supply elasticities which are available have been derived using functions which are either linear or linear in the logarithms. There is clearly scope for further research in this area.

The risk benefits from stabilisation (Newbery and Stiglitz 1981, p.93) depend, among other things, on the degree of risk aversion of agents. Leaving aside the problem of assessing the total benefits to society which arises from the need to aggregate over individual utility functions, there is the question of determining just how risk averse farmers are. Binswanger (1980), using experimental data from rural India, suggested that, in general, farmers are only mildly risk averse. As Hamal and Anderson (1982, p.220) pointed out, the evidence at hand is consistent with the notion that farmers are risk averse but the limited number of studies available contain some rather diverse estimates (see,

for example, Bond and Wonder 1980). It is often not possible to draw general inferences from studies in this field because of the tendency to report results without supporting information on income or wealth levels. Some summary measures, such as the coefficient of absolute risk aversion, are not dimensionless numbers and it is necessary to have additional data to enable proper interpretation of the results. There are serious difficulties in determining the attitudes to risk of Australian farmers using either an experimental method such as that employed by Binswanger (1980) or an interview technique such as that outlined by Anderson, Dillon and Hardaker (1977, pp.75-6). There is therefore a place for an innovative study from which growers' attitudes to risk can be inferred from their observed behaviour in a risky decision making environment.

Perhaps one of the most difficult things to accomplish in research in the area of stabilisation policy will be to properly account for the effect of any scheme on existing market institutions and vice versa. For example, the existence of an active futures market for a commodity for which prices are stabilised is likely to seriously complicate the analysis. Newbery and Stiglitz (1981, pp.190-1) showed that under some conditions farmers may prefer a futures market to a price stabilisation scheme. In addition, the existence of a buffer stock scheme will almost certainly lead to the substitution of institutional stocks for private stocks. This is likely to have little consequence for the global expected gains from a given level of stabilisation, assuming that both groups are equally efficient in the storage operation. However, there is a danger of underestimating the level of stocks required by the authority to achieve a given reduction in price variability if this effect is ignored.

To model the effects of a stabilisation scheme properly, it is necessary to recognise that growers are likely to respond to the scheme by changing supply. Most of the econometric models of supply response which include risk variables are *ad hoc* in nature (see, for example, Just 1974; Traill 1978; Brennan 1982). There is a need for such models to be derived from first principles using the theory of decision making under risk. Perhaps a useful starting point would be an attempt to

integrate the mathematical programming and econometric literature on the subject. In addition to the problem of accounting for the effects of a reduction in risk, it is also necessary to model expectations. The question of the role of expectations in such a model is dealt with in the following section.

The Role of Expectations

The view taken of how expectations are formed has important implications for economic policy. Many agricultural economists, particularly those interested in supply response analysis, have readily accepted that expectations are important. Much use has been made of models which are consistent with the adaptive expectations/partial adjustment hypothesis. There are few studies in which attempts have been made to determine directly how farmers' expectations are formed (for a review, see Munro and Fisher 1982). However, there is some evidence that estimates of supply response elasticities are fairly insensitive to the choice of proxy variable used to represent expected prices (Fisher and Munro 1983).

While supply response elasticity estimates may be insensitive to assumptions about expectations, the simulated effects of policies are not. If it is assumed that expectations are rational (Muth 1961) then the implication is that only unanticipated changes in policy can cause economic variables to deviate from their long-term equilibrium path. With this view of the world, it is argued that it pays agents to predict the effects of policy and, if government policies have a regular component, to use this in forming future expectations.

Muth (1961, p.316) suggested that since expectations are 'informed predictions of future events, [they] are essentially the same as the predictions of the relevant economic theory'. Muth (1961, p.318) further observed that if the predictions from economic theory are much better than the predictions made by decision makers there will be an incentive for economists to sell their forecasts. One of the

often heard criticisms of the rational expectations hypothesis is that agents cannot hope to assess all of the available information and to understand the complexity of a modern economy. This criticism has much less force when it is recognised that it is often possible to purchase forecasts and advice.

In discussing the formation of expectations, it is sometimes suggested that more emphasis should be placed on studying the behaviour of individuals from the point of view of a psychologist. While such studies are important, there may be other approaches which will yield a higher pay-off. What is required is a hypothesis about the behaviour of the typical agent, more so than the behaviour of particular individuals. The argument is equivalent to that advanced by Hicks (1956, p.55) in a discussion of the theory of demand:

"The statistical information on consumers' behaviour, which is available to us, always relates to the behaviour of groups of individuals — such, for instance, as the consumers of a particular commodity in a particular region. It is always material of this character which we have to test; and indeed it is material of this kind which we want to test, for the preference hypothesis only requires a *prima facie* plausibility when it is applied to a statistical average. To assume that the representative consumer acts like an ideal consumer is a hypothesis worth testing; to assume that an actual person, the Mr. Brown or Mr. Jones who lives around the corner, does in fact act in such a way, does not deserve a moment's consideration."

The implication is that rather than surveying individuals it may be more efficient to infer expectations from observed market behaviour. Examples of attempts to draw inferences about expectations in the context of macroeconomic problems are reasonably common (see Kantor 1979, pp.1431-3). Such studies are not so common in the agricultural economics literature and Newbery and Stiglitz (1981, p.153) point out that it may be rather difficult to interpret the evidence. They give the following example. If farmers are risk averse, they will supply less than if they are risk neutral. If they fail to recognise any significant negative correlation between their

output and price, they will over supply⁴. Unless independent evidence is available about farmers' degree of risk aversion, it will not be possible to determine whether farmers are rational but risk averse or whether they are less risk averse and not rational. It may be possible to overcome this problem to some extent by the combination of cross-sectional and time series survey data. Such data contain more information than time series of quantity supplied and prices and it may, therefore, be possible to avoid the identification problem outlined by Newbery and Stiglitz.

At present the evidence in support of the rational expectations hypothesis is somewhat mixed. There is a good deal of support of the hypothesis in the efficient markets literature. Proof that information is used efficiently in the formation of market prices provides some evidence of the validity of the rational expectations hypothesis (Kantor 1979, p.1430). Goss (1980, pp.217-20) and Giles and Goss (1981) discussed some of the evidence in the case of agricultural markets. They also advance some reasons why inferior forward pricing performance may be observed in some markets but state that such observations are not necessarily consistent with rejection of market efficiency because, among other things, agents may not be risk neutral. (For a discussion of some of these issues with respect to foreign exchange markets, see Hansen and Hodrick 1980.)

Some attempts have been made to validate the rational expectations hypothesis with econometric models of agricultural markets (see, for example, Goodwin and Sheffrin 1982; Shonkwiler and Emerson 1982; Fisher 1983). These studies may be criticised on the grounds that the statistical tests performed are tests of the joint hypothesis that both the model specification and rational expectations are valid. This is a rapidly changing area in econometrics and, although significant problems exist in some areas (Wegge and Feldman 1983), there is now a statistic available to test the rational expectations hypothesis *per se* (Startz 1983). There may be large gains to be made by deriving models of supply and demand from the solution of stochastic optimisation problems

(see Eckstein 1984) rather than adapting an *ad hoc* approach to the construction of econometric models which has been common to date.

Uncertainty about the way expectations are formed has important implications for policy and policy research. In the case of stabilisation policy, for example, Scandizzo, Hazell and Anderson (1983) showed that the estimated gains from stabilisation are sensitive to assumptions about the way in which expectations are formed. It is important to distinguish between the gains from reducing the losses due to incorrect forecasting and other benefits from stabilisation such as its effects on risk reduction.

If there are large gains arising from the use of improved information then it may be more efficient to provide the information directly rather than attempt to compensate for bad forecasting by agents by the establishment of a stabilisation scheme. If information has a public-good element then it follows that the market will not supply the optimal amount of it. There may therefore be a case for governments to supply additional information or to ensure that futures markets, for example, operate effectively. However, care should be taken to assess carefully whether the benefits from an attempt to improve market information outweigh the costs. Newbery and Stiglitz (1981, pp.144-8) present an example in which the gains from improved information makes producers better off, consumers worse off and there is little net gain in welfare. In other words, there may be strong distributional effects from such policies. The nature of the distributional effects will depend on assumptions about how expectations are formed.

The assumption about how expectations are formed is also important for other policy research. It is well known, for example, that, given the assumption of rational expectations, a change in announced policy will

⁴ This is not necessarily inconsistent with particular farmers being unable to influence price. For example, in a good season the output from a particular farm may be high and the price low not because individual farm output is high but because total output is high because of the good weather (Newbery and Stiglitz 1981, p.146).

lead to a change in the underlying parameters of an econometric model being used to simulate the effect of the policy change (for a discussion, see Fisher 1982). If the rational expectations hypothesis is a reasonable model of behaviour, it follows that use of the traditional simulation approach to the assessment of the effects of new policies may give seriously misleading results. It is therefore important that further effort be devoted to establishing whether the rational expectations hypothesis is in fact a reasonable model of the behaviour of the typical agent.

The Economics of Regulation

A large proportion of the literature in agricultural economics has dealt in one way or another with the effects of regulation, particularly in marketing. Marketing boards have been the focus of much of the discussion because of their prevalence in Australia and because of the association of boards with price stabilisation and equalisation schemes⁵.

There have been calls for many years for the deregulation of some agricultural markets (see, for example, Campbell 1977). In some cases, operational inefficiencies have been identified and some of the gains from deregulation estimated (see BAE 1983*b*, pp.146-52). While studies of the operational efficiency of marketing boards or statutory marketing arrangements are important, they have been dealt with in detail elsewhere and are therefore not mentioned further.

A more relevant question in the present context is why there is not less regulation in agriculture. Sieper (1982, pp.5-6) suggested that much agricultural policy and its attendant regulation is the outcome of successful attempts by private interest groups to use the coercive power of the state to shift the distribution of income in their favour. At least on the surface however it appears that one of the interest groups, namely farmers, who have been involved in promoting regulation, may be losing in some cases as a result (see BAE 1983*b*). In other cases, the benefits to producers are apparently small while there are significant costs to domestic consumers (BAE 1985). Such situations are unlikely to arise

because of lack of information on the part of interest groups. In recent years there has been considerable public debate about the cost of regulation in various industries. Such debate has been stimulated by the public enquiries held by the Industries Assistance Commission (IAC).

The apparent lack of concern about regulation in some industries may be a reflection of the attitude to risk in the community. Pincus and Withers (1983, p.50) cited the thalidomide tragedy and suggested that regulation was introduced in order to help prevent the cost of such errors falling unevenly on particular individuals rather than as a result of a 'Dispassionate economic analysis'. In other words, they suggested that the 'distributive consequences of markets' are often important targets for regulators. An alternative explanation is that the expected utility hypothesis may not be a good representation of behaviour and that individuals are oversensitive to a change in the probability of a small probability event (for a general discussion of apparent weaknesses of the expected utility hypothesis, see Machina 1982). There may be room for the study of some health and quarantine regulations from this point of view. As mentioned earlier there is a need for further research on decision making under risk. The results of such research can have applications in a broad range of fields.

McCormick, Shughart and Tollison (1984) suggested that there might be a lack of interest in deregulation, not because the potential beneficiaries are large in number, heterogeneous and face high costs of organisation, but because the economic benefits are small. The authors presented the following argument in support of their case. In conventional analysis of the introduction of monopoly control, the loss of consumer surplus is divided between a deadweight loss (the welfare triangle) and a transfer rectangle (Pincus and Withers 1983, p.17). It has been argued that the rents that result from regulation, that is, the transfer rectangle, are perfectly competed away in the efforts to obtain regulation. That is, the expected profits from

⁵ See Vinning (1980) for a list of the statutory marketing authorities operating in Australia as at that date.

the monopoly control are zero. If it is assumed that all rent-seeking expenditures are made prior to the establishment of the monopoly, the costs of regulation are effectively sunk. These costs cannot be recovered by deregulation. In other words, the economy shifts to a lower production possibility frontier as a result of regulation and cannot be returned to its original competitive output level by deregulation. If a periodic review is held then a proportion of these costs can be recovered by deregulation. McCormick *et al.* (1984, p.1077) also argued that some of the welfare triangle may be lost and conclude that '...with perfect dissipation of monopoly rents, the gross gain to the economy from deregulation is less than the area of the original deadweight cost triangle'.

The validity of the above argument depends crucially on whether the monopoly, once established, is durable and on the assumption that the monopoly profits are completely dissipated. For a large industry, which is subject to regular reviews, there may be substantial gains to be had from deregulation. In this case, it can be argued that it is possible to recover the present value of all future resources as yet unspent on rent seeking. The existence of regular reviews by the Industries Assistance Commission of many of the regulations which impinge on Australian agriculture is consistent with the notion that there are gains to be had from deregulation.

Competitiveness of the Rural Sector

In recent years, agricultural economists have shown increased interest in the effects on the rural sector of policies and events external to agriculture. Much of the emphasis has been on intersectoral competition (Gregory 1976; Stoeckel 1979) and the case for tariff compensation (Lloyd 1975; Warr 1978, 1979; Harris 1979) but recently increasing importance has been placed on the effects of macroeconomic factors on agriculture (Freebairn 1981; Bond, Vlastuin, Crowley and Demura 1984).

The effects of differential rates of protection between industries within agriculture and between agriculture and the rest of the economy are well documented⁶. The case for

tariff compensation has been widely discussed but the practical difficulties in obtaining the information necessary to determine the appropriate level of assistance for particular industries are likely to be insurmountable (Lloyd 1975, pp.149-50)⁷. On a more general level, the Bureau of Agricultural Economics (BAE) has used the tariff compensation argument as a basis for recommending to the Industries Assistance Commission that the level of assistance to already lightly assisted industries should be maintained (see, for example, Rose, Moir, Farquharson and Vanzetti 1984; BAE 1983b). However, there is room for debate about the actual rates of assistance to agriculture because the effects of cross-subsidisation in the provision of facilities such as roads and electricity are rarely taken into account (Kolsen 1983). Given the tendency for agricultural economists to rely on the tariff compensation argument when tendering policy advice and the uncertainty about actual levels of assistance, there appears to be a need for further research following Kolsen (1983). In addition, more effort could be directed towards determining the most effective ways of delivering assistance following the work of Parish and McLaren (1982).

The case for tariff compensation on efficiency grounds is not straightforward (Lloyd 1975, p.151). Any additional assistance paid to farmers would have to be financed either by additional taxation, which itself may be distortionary, or by diverting funds from other public sector uses. Rose *et al.* (1984, pp.24-7) cited evidence of a marginal efficiency cost of raising additional revenue from income taxation of around 23 per cent. Such costs should not be ignored. However, there is a significant degree of uncertainty about the size of the efficiency cost of raising taxation revenue and there is a need for further research in this field.

Maintenance of Australia's comparative advantage in broadacre agriculture depends to some extent on government policy.

⁶ For a review of the issues in protection policy see P. Lloyd (1978).

⁷ For a strategy aimed at circumventing these information problems see A. Lloyd (1978).

Policies which discriminate in favour of import competing or service industries are likely to have a detrimental effect on export oriented industries. Changes in monetary policy, with consequent effects on interest rates can have effects on agriculture both directly and indirectly as a result of changes in the exchange rate. The long-term viability of agriculture is also dependent on the ability of farmers to adjust to changing circumstances. Farmers' ability to offset the effects of declining terms of trade is dependent on their adoption of new technology and on capturing the benefits from economies of size. There is some evidence that some gains in productivity have been achieved at the expense of input deferral (Lawrence and McKay 1980). Input deferral may occur in response to changes in seasonal conditions and may be short term in nature. On the other hand, it may reflect a movement of capital out of agriculture in response to low rates of return in the sector. A good understanding of capital formation in agriculture is important in helping to determine farmers' ability to respond to change. Despite its importance, the study of the determinants of farm investment has received scant attention from Australian agricultural economists.

Agricultural production is dependent on the quality of the natural resource input as well as its quantity. Blyth and Kirby (1984) have suggested that government policies on land tenure, among other things, may have a significant effect on the rate of land degradation. Agricultural economists can contribute to the conservation debate by providing an economic assessment of the expected benefits and costs of land degradation. There is room for economists to contribute more to the debate on the applicability of private versus social time preference rates in such assessments (Smith 1983, p.91). The question of so-called intergenerational equity also deserves some consideration.

Concluding Comments

There has been no attempt in this paper to provide an exhaustive coverage of all of the interesting issues in agricultural policy

research. Instead I have concentrated on several areas where I believe that useful work can be done, at both an applied and theoretical level, which will contribute to the solution of policy problems that are likely to recur over the coming decade.

If the paper contains a basic theme, it is one regarding market intervention. In many instances a *prima facie* case can be established for intervention, in one way or another, to theoretically achieve an increase in national welfare. For example, much of Australian agricultural policy is concerned either directly or indirectly with stabilisation. Even with rational expectations a competitive market equilibrium is not Pareto efficient unless there is a complete set of risk markets or all individuals are risk neutral. If these conditions do not apply then there is a good case for at least considering some form of stabilisation scheme. Unfortunately, it is not always clear that a given form of market intervention will increase national welfare. As Lipsey and Lancaster (1956) pointed out, in a general equilibrium system in which one of the Pareto optimal conditions cannot be attained, a Pareto constrained (second-best) optimum can be achieved only by departing from all other Pareto optima. However, the direction and extent of departure from existing conditions required to increase national welfare is usually not clear. The implication is that our chances of designing policies that will improve welfare will only be increased by improving our understanding of the way the economy works.

Agricultural economists have an important role to play in providing policy advice. As mentioned above, it has been argued by others that the failure of policy makers to accept fully the advice of agricultural economists is partly a function of the apparent preoccupation of economists with questions of efficiency. I have argued indirectly that the willingness of policy makers to accept the advice of economists is, in part, a function of the predictive power of economic theory. The persuasiveness of economists is directly related to their stock of knowledge about the underlying behavioural parameters of the economy and the power of economic models to predict the outcomes of changes in policy. Although there will continue to be criticism

of the assumptions underlying the competitive model, use of the model can lead to helpful insights. However, there is a need to go beyond that model to further analyse the effects of risk, the way in which expectations are formed and how agents learn the parameters of the system.

Apart from the provision of advice directly, agricultural economists can make a valuable contribution to the policy debate by providing empirical estimates of some of the consequences of policy. For example, debate on Australian egg industry policy was stimulated by the release of an estimate that the income transfer from consumers to producers as a result of market regulations was of the order of 40c a dozen eggs (BAE 1983a, p.74). Information of this type is used in the bargaining process that results in agricultural policy.

I have outlined a wide range of problems that I believe are worthy of research effort. Some of these problems are theoretical in nature and are probably thought of traditionally as the preserve of academic economists. However, there seems to have been a shift in emphasis in many Australian university departments of agricultural economics in recent years from the study of Australian agricultural policy problems towards the study of problems in developing economies. There are important problems to be solved in development economics. However, I have outlined a number of major areas where I believe that the potential pay-offs from research of direct relevance to issues in Australian agricultural policy are high and given the problems facing agriculture there is likely to be a strong demand for agricultural policy analysts in Australia in the coming decade.

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