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ON WHY RATES OF ASSISTANCE DIFFER BETWEEN AUSTRALIA'S RURAL INDUSTRIES*

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An economic theory of politics is applied to the question of why there are large differences in effective rates of assistance to Australia's rural industries. It is suggested that a major part of the explanation is the different incentives faced by industry lobby groups to demand assistance and by the government to supply assistance. Various determinants of the incentives to demand and supply assistance are hypothesized, and these hypotheses are tested against the existing pattern of rural assistance. The evidence generally supports the hypotheses, and suggests some policy changes to reduce existing government distortions.

Why do some industries receive more government assistance than others? Economic reasons may justify some assistance differences, but most economists would agree that the bulk of our assistance policies lead to inefficient resource use (Bhagwati, 1971; Lloyd, 1974). The aim of this paper is to see how well one can explain these differences by starting with the assumption that the present policy mix is largely a function of two sets of factors: those affecting vested interest groups' incentives to demand assistance, and those affecting the government's incentives to supply assistance (Breton, 1974). Any change in industry assistance can then be thought of as requiring a change in one or more of these demand or supply factors. The paper begins with a brief sketch of the role of interest groups in policy-making. Then follows a discussion of some of the factors that economic theory suggests determine the demand for and supply of assistance. An attempt is made to see how well these factors can explain the very considerable differences in assistance to various Australian rural industries for which sufficient data are available. The evidence is generally consistent with the theory and prompts some suggestions as to what might be done to reduce government-imposed distortions.

The Role of Interest Groups in Policy-Making

With the political process involving considerable uncertainty, vested interest groups play an important role in a democracy by supplying politicians with policy proposals (and associated propaganda to influence voters), with information on the extent of their members' support for various policies, and with campaign contributions.[1] Groups

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[1] For a comprehensive discussion of vested interest or pressure groups in general in Australia, see Mathews (1976). Rural pressure groups in particular are discussed by Campbell (1966) and Chislett (1967). The interest group approach to analysing assistance policies has already been used successfully to explain manufacturing assistance in Australia and North America (Anderson, 1978; Caves, 1976; Pincus, 1975).

presumably invest in such activities up to the point where the marginal cost of further lobbying equals the marginal gain from influencing policies in their favour. Producer groups are likely to influence assistance policies much more than consumers-cum-taxpayers, because the benefits from assistance to a group of producers tend to be highly concentrated whereas the costs to each consumer or taxpayer are so small that, given the free-rider problem of collective action, it would be uneconomic for individuals to become informed, organize and contribute financially towards countervailing consumer pressure groups. Consumer interests are, of course, defended by groups such as the IAC and university economists, but to the extent that producers maintain a net influence on politicians—and that extent is usually considerable, partly because bureaucrats and academics have little incentive to provide information on, and influence, the views of the electorate—one would expect assistance policies to be adopted even though the economic benefit to the nation of each policy on its own may well be negative.

This would not be much of a problem, in a world of flexible exchange rates, if each industry received the same effective rate of assistance (adjusted where necessary for economically justifiable differences). The net result would simply be a revaluation of the nation's currency from its free trade rate of exchange, although there would be some reallocation of consumer spending and some loss to society in the form of lobbying expenses and the costs of administering the assistance schemes.

In practice, however, there are very large differences in rates of industry assistance. While many factors may be contributing to these differences, perhaps the most obvious can be categorized as those affecting either the various producer groups' incentives to seek assistance or the government's incentives to provide assistance to the various industries. These two sets of factors are discussed in turn.

Determinants of the Demand for and Supply of Assistance

Demand factors

The demand for assistance is affected by factors determining both the benefits from a favourable assistance change (or loss avoided by preventing an unfavourable change) and the costs of lobbying. An obvious starting point on the benefits side is to examine the effects of assistance on income distribution. There are, of course, many ways to analyse the distributional effects of assistance changes, depending on the assumptions one is prepared to tolerate. Trade theorists, following Stolper and Samuelson (1941), have tended to concentrate on the long-run general equilibrium effects of protection on factor incomes. These effects, however, suggest results which are incompatible with the actual behaviour of interest groups: the Stolper-Samuelson relationship suggests that, in a two-factor world, one factor will gain but the other will lose from protection of an industry, yet Magee (1976) and others have found cases (in the manufacturing sector) where both labour and management lobby for protection. Such behaviour *is* predicted, on the other hand, by a model of the type developed by Jones (1971, 1975), Mayer (1974) and Mussa (1974), in which capital is assumed industry-specific and labour perfectly mobile in the short

run. This supports the intuitive notion that, in an environment of frequent elections, interest groups discount heavily the long-run effects and are more concerned with the immediate effects of changes in assistance policies. An important implication of the Jones-type model is that returns to an industry's labour and capital are raised (lowered) more from an assistance increase (decrease), the higher is labour's share of value-added and the smaller the value-added share of output. Indeed, the Appendix shows that this result holds even when the restrictive factor mobility assumptions made by Jones are relaxed, so long as labour continues to be more mobile than capital in the short run (a likely situation, given that capital is defined to include land and improvements). Thus one would expect the effective and nominal rates of assistance to be higher in the more labour-intensive industries especially those that rely heavily on farm family labour, as well as in the relatively low value-added industries.

The demand for assistance to an industry also depends on the lobbying strength of input suppliers and output-using industries. These latter industries are not indifferent to the rate of assistance to the former industry, nor to the type of assistance instrument used by that industry. Clearly, an input supplier would most prefer farmers to be assisted by a bounty on the use of the input he supplies, for example. The eventual policy outcome thus depends to some extent on the relative strengths of groups in all of these associated industries. And it may also depend on how important the industry is to a State government, for the latter may be so dependent on the industry's political support that it too lends weight to the industry's demand for Federal government assistance.

What factors determine a group's costs of lobbying? One major factor relates to the free-rider problem of collective action. Olson (1965) pointed out that the free-rider problem seriously undermines the incentive for a rational, self-interested individual to contribute towards his interest group's seeking of an assistance policy which, if adopted, would benefit that individual regardless of whether he contributed. Unless a group has some purpose for forming other than to lobby, it is less likely to receive support from potential members, the larger the number of individuals involved. Thus one might expect an industry's effective rate of assistance to be greater, the smaller the number of firms in the industry.

A number of qualifications need to be made, however. Chamberlin (1974) pointed out that, while the *degree* of free-riding may well be greater in industries with many firms, the *total* lobbying contribution from such industries may still be larger than from industries with only a few firms. This would reduce, and may even reverse, the expected negative correlation between rate of assistance and number of firms in an industry.

The second qualification is that one would expect to find mainly larger firms represented in an industry's lobby group, because for small firms the cost of belonging may exceed the benefit they expect from the group's activities. The expected benefits to larger firms, on the other hand, may be so great in absolute terms that it pays them to bear most or all of the costs of lobbying, even though part of the benefits

from their efforts would be shared by smaller firms.[2] This suggests the rate of assistance to an industry would tend to be greater, the more positively skewed the distribution of output among firms. It also suggests, incidently, that such lobbies are likely to push for assistance policies that benefit producers at least in proportion to output—even though the economic difficulties of small firms may be used to justify the need for assistance.

Thirdly, it is possible that an industry has formed a well-organized group for reasons other than, or in addition to, lobbying. One of the more common reasons for farmers getting together is to form a marketing and/or processing co-operative; another is to establish a statutory marketing board. When such organizations already exist, the industry's costs of organizing a lobby will be much reduced and so one would expect such industries to receive more assistance than otherwise.

Supply factors

Recall that this paper is concerned with explaining the persistence of assistance policies which cannot be justified on national economic efficiency grounds. Presumably, these distortionary assistance policies continue to be supplied partly because the benefits to the government from doing so exceed the costs. As mentioned earlier, the benefits include policy proposals and political party contributions from the industry concerned as well as information on, and propaganda to influence, how various proposed policies would affect voting patterns, especially of the industry's members. The government's costs include the loss of votes and financial support from consumers-cum-taxpayers and from members of other industries who are affected adversely by the policy.

To begin with, consider a declining industry. If such an industry were allowed to decline, then the government's campaign contributions from that industry would also decline. Thus, even if the government was unconcerned about the welfare of those affected adversely by the decline, it would tend to assist declining industries that were significant contributors to the party's funds.[3] Such assistance could then be rationalized to the public as being a social welfare measure (Corden, 1974, pp. 107-12)—especially if rapid change itself is seen

[2] This is not to say that small firms would not be at least nominal members of their industry group, for membership may entitle them to some private benefits such as discounts on merchandise, journal subscriptions, or whatever. Indeed, such benefits may be subsidized by large firms in an attempt to boost membership numbers. These numbers could then be used in lobbying as apparent evidence of wide industry support for any policy being sought by the group. In addition, even a small membership fee from a large number of firms can amount to a sizeable lobbying budget.

[3] Politically inactive declining industries that have not contributed to campaigns, on the other hand, are more likely to be left to decline, as witnessed by the gradual disappearance of corner grocery stores, for example. Peltzman (1976, pp. 222-26) has explained this bias in long-standing assistance to declining industries by use of a formal economic model of government price regulation. This bias is reinforced by the fact that, in an environment where real wages are increasing relative to returns to physical capital, it is the labour-intensive industries that are under more pressure to decline, and we have seen above that labour-intensive industries benefit more from a given change in assistance.

as undesirable, in which case more efficient adjustment policies would appear less preferable to policies which are believed to slow the pace of structural change.

A second factor affecting the government's incentive to provide assistance is whether or not an assistance policy requires an explicit government outlay. Tariff protection raises government revenue whereas export subsidies reduce treasury funds. Also, tariffs—unlike subsidies—are covert in that they are not open to annual budget scrutiny. For these reasons, one would expect an assistance bias towards import-competing industries relative to export industries. Similar reasons also lead one to expect an assistance bias towards those export industries for which the covert instrument of high home consumption pricing can be used in place of an explicit subsidy, that is, towards industries for which (a) domestic demand is inelastic, (b) the domestic market absorbs a substantial proportion of domestic production, and (c) there are few enough buyers and sellers to ensure that farmers cannot undercut the marketing authorities' high domestic prices. Thus, one would expect a higher effective rate of assistance in import-competing industries, and in export industries in which high home consumption prices can be maintained, than in other export industries, *ceteris paribus*.

Thirdly, the more marginal the electorates in which an industry is located, the more incentive the government has to assist that industry, other things being equal. Thus, geographically-concentrated industries which may directly employ only a handful of people need not necessarily be assisted lightly, especially since the possibility of 'log-rolling' amongst politicians helps to offset the disadvantage of supplying few votes (Buchanan and Tullock, 1962, Ch. 10). Being geographically concentrated also makes it cheaper for producers to organize a lobby group (corner grocery stores providing an example of the converse), and being small ensures that assistance to such an industry will have little effect on, and hence will stimulate little opposition from, others.

These, then, are some of the factors which theory suggests could affect an industry's effective rate of assistance. To summarize, it is suggested that, other things being equal, an industry is likely to be assisted more, (a) the more labour intensive, and especially the more farm family labour intensive, it is, (b) the smaller the value-added share of output, (c) the more lobbying support (or the less opposition) the industry gets from associated industries and State governments, (d) the fewer farmers in the industry, (e) the more positively skewed the distribution of output among farms, (f) the more it is organized for reasons other than lobbying, (g) the more the industry is declining, (h) the more covert, and the less government outlay is involved in, the assistance instrument available, and (i) the more marginal the electorates in which the industry is located.

One would ideally like to test these hypotheses empirically, but comparable data are not available for enough rural industries to make a statistical analysis worthwhile. However, in the next section a qualitative attempt is made to explain differences in existing rates of assistance to a number of industries for which data are available.

A Review of Some Evidence

Table 1 summarizes available estimates of rates of assistance to a number of Australian rural industries for various years, while Table 2 brings together some pertinent characteristics of these industries. The index used in Table 2 to show the distribution of output among firms in an industry is the percentage of farms with turnovers of $100,000 or more in 1975/76. Two different indexes of industry decline are shown, namely, the percentage changes over the last decade in (a) the number of holdings in the industry and (b) the share of rural output contributed by the industry.

Using these tables, each industry is briefly discussed in turn, and the findings are then summarized to see how well the factors suggested above on theoretical grounds are able to explain assistance differences between industries. Consider first the cereal/livestock industries, which need to be looked at together because their production processes are so interrelated.

Cereal livestock industries

Traditionally, Australia's wool, meat and cereal industries have received little government assistance compared with many other rural (and manufacturing) industries. Apart from the wheat stabilization scheme, the bulk of assistance has come from measures which apply to rural industries generally, notably fertilizer bounties and rural tax concessions.

As the data in Table 2 show, these industries are relatively capital-intensive and have a relatively large share of output going to primary factors, so one would expect producers in these industries to benefit less from a given assistance increase than producers in other industries. Table 2 also shows they are not declining industries on average and hence have relatively less 'need' for assistance (except during short-term crises, as with wool in 1970). But perhaps the major factor explaining their lack of assistance is the large number of producers involved. Firstly, this makes for a serious free-rider problem in getting to lobby with one voice.[4] Secondly, together with the high degree of transformation between these export industries (Vincent, Dixon and Powell, 1977), it means that assistance via a subsidy to any one industry's product requires a substantial government payment, unlike, say, tariff assistance to manufacturing industries. The cost of subsidies would be especially high in the case of meat and wool which are less amenable than wheat to high domestic pricing arrangements: there is much more atomistic competition among domestic meat buyers, compared with wheat buyers, and the textile lobby would be too strong to enable domestic wool prices to be kept above export levels. In contrast, the bread manufacturers' and flour millers' lobbies have been less opposed to higher domestic wheat prices (which they can pass on to consumers to a large extent), *provided* those prices

[4] On the problem of disunity among Australian farmers and graziers, see Campbell (1966, 1971), Chislett (1967) and Harman and Smith (1967). The group most able to overcome this problem has been the Australian Wheatgrowers' Federation, and Smith and Weller (1976) have attributed this fact to the exceptional leadership of Mr T. C. Stott.

TABLE 1

Estimated Rates of Assistance to Various Australian Rural Industries

	1967/68	1968/69	1969/70	1970/71	1971/72	1972/73	1973/74	1974/75	1975/76
Effective Assistance									
Sheep	7	5	8	11					
Beef cattle					4				
Wheat			14	19	21	7	—11	—8	—4
Dairying									
Fluid milk						239			
Other		74			46	30	89		
Eggs		180	104						
Apples and pears									
Tas.					23	18	174		
W.A.					11	9	52		
Other					—9	—7	—7		
Nominal Assistance									
Tobacco	68	73	71	69	67	63			

Sources: BAE (1975a, d); IAC (1974, 1976b, 1978); Motha and Plunkett (1974).

TABLE 2

Some Characteristics of Various Australian Rural Industries, circa early 1970s

Industry	Effective rate of assistance	Total labour intensity[a]	Farm family labour intensity[b]	Value-added share of output	Number of commercial holdings, 1975/76	Percentage of farms with turnover of $100,000 or more	Percentage change in number of holdings, 1965/66 to 1975/76	Percentage change in share of value of rural output, 1965/66 to 1975/76
Cereal/livestock	low	0·45	0·25	0·55	109,000	6	5	14
Dairying								
Fluid milk	v.high	0·63	0·49	0·48	8,400	<1	−45	−23
Other	high	0·60	0·53	0·54	18,300		−75	
Eggs	v.high	0·68	0·47	0·19	1,400	27	−75	8
Apples and pears								
Tas. and W.A.	high	0·74	0·35	0·38	700	3	−50	−14
Other	v.low	0·67	0·29	0·40	1,600			
Tobacco	high	0·71	0·44	0·56	1,000	5	4	2

[a] Share of value-added attributable to farm family and hired labour, that is, $1 - \theta_K$.

[b] Share of value-added attributable to operator and family labour, θ_L. In the case of tobacco, sharefarming is widespread and so the sharefarmer's labour share is included with the owner's.

Sources: ABS (1976a, b, c), BAE (1974, 1975b, c, 1976a, b), IAC (1976b), Table 1 above.

are stable (IAC, 1978, ps. A10, A22). But even the wheat industry has not been greatly assisted compared with some other rural industries, nor compared with the predominantly import-competing manufacturing industries which received, on average, effective assistance at a rate of 35 per cent in 1971/72 and 27 per cent in 1973/74 after the 25 per cent across-the-board tariff cut (IAC, 1976a, p. 78).

Dairying

The Australian dairy industry has—like its counterpart in other developed countries—received massive government assistance over the years. Despite the recent removal of butter and cheese bounties, the industry continues to be protected significantly, particularly via high domestic product (especially milk) prices. Certainly it is a labour-intensive industry which has been declining rapidly but these factors alone are insufficient to explain its lobbying strength, because it still has a large number of producers and so should suffer from the free-rider problem of collective action.

Probably a key to its lobbying success is that the industry is characterized by producer co-operatives which process and market much of the industry's products: in 1976, four-fifths of butter and by-products factories were owned by producer co-operatives, and they produced 85 per cent of Australian butter (BAE, 1977a). This fact means, firstly, that dairymen are well organized into lobbying groups and, secondly, that they have an additional vested interest in the survival of the industry in the form of investments in their local dairy factory. These groups dominate a number of electorates in each State. In addition, since dairying is a low-skill occupation which produces a steady income each month, it has in the past attracted many small farmers who have few off-farm job opportunities and who, with declining export markets and rising non-farm incomes, now constitute a poverty problem. This fact has been used continually as a justification for assistance, even though more efficient means of coping with the low-income problem exist.

A number of reasons might be suggested to explain why the fluid milk sector is assisted relatively more than the rest of the dairy industry. Firstly, fluid milk farms are slightly more labour-intensive and have a smaller value-added share, so they would benefit relatively more from price supports. Secondly, being fewer in number and more geographically concentrated around urban centres, they can more readily organize delegations to influence policy makers. Thirdly, and perhaps most importantly, no government outlay is required to keep domestic milk prices high: the Milk Board's prices are sustainable by strict quotas on production. Moreover, the price elasticity of demand for fluid milk is probably considerably lower than for other dairy products, so allowing relatively higher benefits for this sector from raising domestic prices.

Eggs

Commercial egg producers in Australia have benefited from extremely high rates of assistance for a long time, primarily through home consumption pricing arrangements which keep domestic prices well above

export levels without drawing the attention of consumers or parliament. These arrangements are sustained via hen quotas and monopolistic marketing by State marketing boards (whose actions are co-ordinated by the Australian Egg Board).

The industry has certainly seen a substantial drop in the number of egg farms in recent years, mainly of smallholders who cannot compete with large firms enjoying economies of size: the average flock size has increased almost five-fold over the last decade, while the total number of leviable hens has risen only about 20 per cent (BAE, 1977b, p. 13). But there are two much more important characteristics of the industry which help to explain its continued substantial protection. The first is the drastic drop in producers' net incomes which would follow a price drop, due partly to the highly labour-intensive nature of the production process but mainly to the very low share of output attributable to primary factors. Secondly, a very high proportion of egg producers have gross receipts exceeding $100,000: in 1975/76, for example, more than a quarter of Australia's egg farms grossed $100,000 or more, whereas the proportion for all rural industries taken together was little more than one in twenty. Since almost all revenue on egg farms comes from the sale of eggs, these high-turnover farms have a very strong incentive to ensure present quota arrangements continue to keep up domestic prices. This is especially so since many of the large farms are owned by a handful of politically well-organized milling companies that prepare feedmixes.[5]

Apples and pears

Apple and pear growers had received relatively little specific government assistance until 1968. Then, for a variety of reasons, export markets became increasingly unprofitable. This, together with the quarantine regulations which restrict interstate sales, severely strained the adjustment ability of apple and pear growers in the export States of Tasmania and Western Australia, to the point where some government assistance seemed essential to avoid severe hardship for growers and ancilliary service industries.[6] Direct price support for exports has been provided via a so-called Stabilization Scheme, presumably because the Scheme helps disguise the nature and amount of support granted. Certainly taxpayers would not tolerate a *direct* government payment of $14,000 per farm, which is the amount Tasmanian apple and pear producers received in 1973/74 to boost their net farm incomes to $6,000 (IAC, 1976b, p. 134).

The labour-intensity and value-added share parameters of Table 2 suggest that growers producing in other than the export States would benefit only slightly less from price supports than export producers, but they have not received anything other than adjustment assistance. This may be partly because the industry does not dominate the economy of non-exporting States as it does in Tasmania, and also

[5] Feed accounts for about 60 per cent of intermediate input costs in egg production and so absorbs about half the value of egg output.

[6] Adjustment has been especially difficult because two-thirds of growers in Tasmania (the major exporting State) are over 45 years old and more than 40 per cent of them have no secondary education, making off-farm employment difficult to find, especially during the current recession.

because producers in these States have less 'need' for support because the domestic market is not shrinking as is the export market, especially as each State receives very considerable protection by way of quarantine regulations which restrict interstate sales.

Tobacco

Tobacco growing is one of Australia's few import-competing rural industries. It enjoys substantial import protection via an import duty of close to 100 per cent, or about 80 per cent if local manufacturers use (as they do) at least half domestic tobacco in their products. To offset the oligopolistic purchasing power of cigarette manufacturers, each of the three producing States has formed a Tobacco Leaf Marketing Board, through which all domestic production is auctioned to manufacturers.[7] These bodies provide an organizational structure which makes for low lobbying costs for growers.

The lobbying strength of producers is no doubt enhanced because the industry employs large numbers of unskilled workers (mainly as share-farmers), so that a protection reduction would cause considerable unemployment in the electorates in which tobacco is grown—especially as two-thirds of people working on tobacco farms have no secondary education (BAE, 1976b, p. 10). Because the industry is so labour-intensive, net farm income is more elastic to a change in effective assistance to this industry than to any other listed in Table 2. Thus, despite the fact that the industry is not facing problems of decline—in fact, production quotas were introduced in 1965 to prevent newcomers expanding output—we are likely to see continued strong pressure from growers for the retention of existing protection arrangements, especially now that quotas have, according to an estimate by the BAE (1976b, p. 47), doubled the value of tobacco land with quotas such that their removal would reduce the average holder's wealth by $27,000.

A summary of the above evidence

What can be gleaned from this brief examination of levels of assistance to a few rural industries? The more assisted industries, and even the more assisted sectors within industries, tend to be more labour intensive and have a lower value-added share of output and hence would benefit more from a given rate of assistance change. The only notable exception is the presently-unassisted domestic sector of the apple and pear industry but a probable explanation is that this sector enjoys considerable protection in each State via quarantine regulations and so has little need to spend resources seeking government assistance.

The large number of producers in the cereal/livestock industries is probably a key explanation for why these industries have received little assistance. While the other industries have smaller but still very considerable numbers of producers, they all have grower organizations for marketing purposes. Growers are thus able to lobby for assistance,

[7] Tobacco products manufacturers have been able to obtain sufficient protection for their products to more than offset the high price for leaf: their effective rate of assistance in 1973/74 has been estimated to be 24 per cent (IAC, 1976a, p. 63). Presumably, manufacturers find it cheaper to lobby for product protection than against leaf protection.

via these organizations, at much lower cost than would be the case without ready-made groups.

Detailed data on the distribution of output among firms are not readily available, but those that are available suggest that a major reason for high egg prices may be that there are a few very large producers whose incentive to retain legislation is very strong because their returns would be affected by tens of thousands of dollars per farm if domestic prices fell to import parity levels.

Most rural industries face structural adjustment pressures to reduce the number of workers and increase the size of operations to ensure that remaining producers receive returns commensurate with off-farm incomes. The declining export markets for dairy products, eggs, and apples and pears have put especially strong pressures on these industries—a factor which undoubtedly helped them in arguing for assistance, just as it helped wool producers seek (temporary) assistance in 1970.

No doubt one could think of numerous other factors affecting an industry's lobbying power, not least of which may be non-economic factors such as the dynamism and lobbying skills of a group's leadership. But overall it would seem that, taken together, the evidence is not inconsistent with the theory. In the absence of any better explanation, it is useful to consider some policy implications which follow from the above analysis.

Policy Implications

As pointed out at the beginning of the paper, the welfare loss from inefficient resource use due to government-imposed distortions is greater the larger the differences in effective rates of assistance between industries, especially within sectors such as agriculture where factor substitution possibilities are greatest. Does this imply that we should be indifferent between raising assistance to lightly-assisted industries and lowering assistance to heavily-assisted industries? The above analysis lends support to the notion that the latter strategy is preferable: if we adopted the former strategy without changing the political power of interest groups—and assuming lobbyists understand the basic principle that relative effective rates of assistance are what matter—we would simply find the presently more-assisted groups seeking extra assistance to offset the adverse effects on them of any assistance boost to lightly-assisted industries.[8] This would compound the problems of eventually reducing all levels of assistance, assuming policy changes continue to be piecemeal, for the value of new assistance would soon be incorporated into the price of the industry's fixed assets so that any subsequent (industry-specific, as distinct from across-the-board) reduction would hurt the industry's new entrants.

What then, can be done to reduce existing (especially high) rates of assistance? This question itself is worthy of careful review but, in the light of the above analysis, a few comments can be made. Ideally,

[8] This argument is in addition to the many other theoretical reasons why compensating assistance is not desirable. See, for example, Peter Lloyd (1975) and Warr (1978), as well as countervailing views by Harris (1975), Alan Lloyd (1978) and others.

of course, one would like to see implemented a fixed timetable of gradual, across-the-board reductions in effective rates of assistance to all industries. For decades such a programme has been argued for, but with little effect—and perhaps the above analysis helps to explain why. If instead we accept that some piecemeal government intervention is simply a regrettable inevitability in a democracy, and concentrate on looking for more politically-feasible ways to reduce the demand for and supply of assistance, we may be able to make more impact on policy.

It is apparent that the expected net returns from seeking assistance are presently much higher for many industries than from the alternative of adjustment to deteriorating market conditions. Protected factor owners would face substantial losses in the short run following an assistance cut, and the losses from a given assistance cut of, say, 10 percentage points—let alone a proportional across-the-board cut—would tend to be greatest for the most-assisted industries. Until such time as the costs of adjustment are lowered very considerably relative to the costs of lobbying successfully, assistance-seeking will continue to be chosen as the loss-minimizing strategy for industries in trouble, especially while we have a government that is prepared to accept 'need' as a justification for maintaining or increasing assistance. To ensure that adjustment is the more attractive, we need (a) a firm stand by government that long-run 'need' is, at most, a sufficient justification for once-only adjustment assistance but not for indefinite protection of the status quo, (b) a growing and fully-employed economy to reduce the hardship involved in finding alternative jobs and investment opportunities for those in declining industries, (c) better education opportunities in rural areas so that, at least in the future, potential off-farm migrants have better urban employment prospects[9], (d) a much more substantial adjustment assistance programme aimed specifically at encouraging resources to move out of declining industries, available to all industries facing structural adjustment pressures for whatever reason, and administratively simple so as to avoid long delays in processing applications, and (e) an associated public relations effort to convince taxpayers that once-only adjustment 'handouts' are far less costly than continued annual assistance to prop up declining industries. Economists as a pressure group have an important role to play in educating policy makers, the media and the public of the worth of such a programme.

While the IAC performs a very necessary role in publishing detailed reports for each reference, and while some of the report summaries tend to receive reasonable media coverage when released, one wonders if much more extensive publicity should not be sought. The man-in-the-street is unlikely ever to buy and read any of the reports, so reliance tends to be on the media. Yet the media are not always able to provide timely publicity of IAC findings. Perhaps what is needed is an expanded publicity group within the IAC to provide the media with timely information, although no doubt this idea would not be popular with politicians. Government underwriting of such a production

[9] See the references cited in Schultz (1975) for evidence that more-educated farmers tend to be more willing and able to adjust to changing market circumstances,

could be justified easily on the economic grounds that the social returns from a better-informed citizenry are much higher than private returns.

Finally, a more fundamental change, which could reduce the imbalance of power among sectional interests, would be to reduce the extent of political contributions and/or require political parties to disclose details of all sources of party contributions. The recent experience with these measures in Western Europe and North America has not, of course, been without problems, but a careful study of that experience may yield important insights into how these measures might reduce the present lopsidedness of interest-group pressures on the government.

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APPENDIX

Consider a competitive industry using α_K, α_L, α_{LH} and α_i units of capital (defined to include land), non-hired labour, hired labour and intermediate input I_i ($i=1, \ldots, m$) to produce a unit of output. Zero-profit equilibrium requires that

(1) $$\alpha_K r+\alpha_L w+\alpha_{LH} w_H+\Sigma_i \alpha_i q_i=p$$

where r and w are the returns to farm-family capital and labour, w_H is the award wage for hired farm labour, and q_i and p are the domestic prices of intermediate input I_i and the industry's product. The effects on farm income of a small change in assistance to this industry can be shown by first differentiating (1) and expressing percentage changes by $\hat{}$ to get

(2) $$\gamma_K \hat{r}+\gamma_L \hat{w}+\gamma_{LH} \hat{w}_H+\Sigma_i \gamma_i \hat{q}_i=\hat{p}$$

where the γ's represent distributive shares of the factors and intermediate inputs in the value of output, so that $\gamma_K+\gamma_L+\gamma_{LH}+\Sigma_i \gamma_i$ sums to unity.[10]

Dividing all terms in (2) by the share of value of output going to primary factors, V, where $V = 1 - \Sigma_i \gamma_i$, and defining θ_K, θ_L and $\theta_{LH}(= 1-\theta_K-\theta_L)$ as the share of value-added going to capital, non-hired labour and hired labour, one obtains

(3) $$\theta_K \hat{r}+\theta_L \hat{w}+\theta_{LH} \hat{w}_H = (\hat{p}-\Sigma_i \gamma_i \hat{q}_i)/V = \hat{p}_v$$

where the right-hand side of (3) is the proportional change in the industry's value-added price due to a change in the effective rate of assistance. Suppose the award wage for hired farm labour is determined by non-farm wages, which are assumed constant. Then $\hat{w}_H = 0$. Suppose, too, that farm factor supply curves have constant elasticities, that is, $K = c_K r^{e_K}$, and $L = c_L w^{e_L}$, where the cs are constants and the es are the supply elasticities. When differentiated, these can be written as

(4) $$\hat{K} = e_K \hat{r}$$

(5) $$\hat{L} = e_L \hat{w}.$$

Assuming the production function is separable between primary farm factors on the one hand and hired labour and intermediate inputs on the other, the link between the change in the demand for farm factors and the change in farm factor rewards is provided by the definition of the elasticity of factor substitution, σ:

(6) $$\hat{K}-\hat{L}=\sigma(\hat{w}-\hat{r})$$

By equating the difference in farm factor demand changes from (6) with the difference in farm factor supply changes from (4) and (5), and substituting (along with $\hat{w}_H = 0$) into (3), one obtains

(7) $$Er \equiv \hat{r}/\hat{p}_v=(\sigma+e_L)/[(\sigma+e_L)\theta_K+(\sigma+e_K)\theta_L]$$

(8) $$Ew \equiv \hat{w}/\hat{p}_v=(\sigma+e_K)/[(\sigma+e_L)\theta_K+(\sigma+e_K)\theta_L].$$

Since net farm income is given by $y = rK+wL$, where K and L are the amounts of capital and labour supplied by the farmer and his family, it follows from differentiation that

(9) $$\hat{y}/\hat{p}_v=[(\hat{r}+\hat{K})\theta_K+(\hat{w}+\hat{L})\theta_L]/\hat{p}_v.$$

By making use of expressions (4), (5), (7) and (8), expression (9) can be rewritten as

(10) $$\hat{y}/\hat{p}_v = \frac{(1+e_K)(\sigma+e_L)\theta_K+(1+e_L)(\sigma+e_K)\theta_L}{(\sigma+e_L)\theta_K+(\sigma+e_K)\theta_L},$$

which is the elasticity of net farm income with respect to a change in the industry's value-added price. It follows from (3) that the partial elasticities with respect to a change in the industry's product price, or an input price, are obtained simply by dividing expression (10) by V, or $-V/\gamma_i$, respectively. Thus the smaller is V, the value-added share of output, the larger the change in net farm income following a produet or input price change. Also note that the partial derivatives of expression (10) with respect to θ_K and θ_L are $-a\theta_L$ and $a\theta_K$ respectively, where

$$a = (\sigma+e_K)(\sigma+e_L)(e_L-e_K)/[(\sigma+e_L)\theta_K+(\sigma+e_K)\theta_L]^2 > 0 \text{ if } e_L > e_K.$$

Hence net farm income would be affected more from an assistance change, the smaller is θ_K and the larger is θ_L, that is, the more labour intensive, and especially farm family labour intensive, is the industry (assuming $e_L > e_K$).

[10]Since the competitive producer takes factor and input prices as given, and varies the α levels so as to set the derivative of costs equal to zero, it follows that

$$\gamma_K \hat{\alpha}_K+\gamma_L \hat{\alpha}_L+\gamma_{LH} \hat{\alpha}_{LH}+\Sigma_i \gamma_i \hat{\alpha}_i=0.$$