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THE AUSTRALIAN JOURNAL OF AGRICULTURAL ECONOMICS

VOL. 13

JUNE 1969

NO. 1

SOME THOUGHTS ON THE ROLE OF THE AGRICULTURAL ECONOMICS PROFESSION IN AUSTRALIA*

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Does the seemingly disproportionate growth in Australia of agricultural economics, relative to other branches of applied economics, represent a misallocation of educational and research resources? Probably not, since (i) it may be better—because of the existence of increasing returns—to concentrate one's limited resources of economist brain-power in a few fields than to spread them widely; and (ii) the growth of agricultural economics has helped to correct certain weaknesses—particularly in micro-economics and econometrics—in the Australian economics profession as a whole. However, it is suggested that in the future agricultural economists might apply their skills increasingly to non-agricultural problems.

Members of this Society should contemplate the present state of the agricultural economics discipline and profession in Australia with pride and gratification. Our subject is firmly established as an academic discipline, at least at the better universities. Graduates in agricultural economics are being turned out in substantial and increasing numbers and are finding ready acceptance by public and private employers. Post-graduate studies are also flourishing. A good deal of financial support for research is forthcoming, both from government and industry, and the research output from universities and government agencies is very respectable. We manage—providentially, as their editors will tell you—to produce three journals of decent standard. The standard of public discussion of agricultural policy matters is higher than that in most other fields. There is a cohesiveness and esprit de corps within the ranks of our profession which has been fostered in no small measure by our series of highly successful annual conferences.

The state of agricultural economics is in marked contrast to that of other fields of applied economics in Australia. No other group of applied economists is even remotely comparable to us in numbers, output, or professional organization. According to one presumably neutral observer, 'the literature of agricultural economics is, along with that of wages

* Presidential Address to the Thirteenth Annual Conference of the Australian Agricultural Economics Society, Brisbane, February, 1969.

policy, the most impressive branch of Australian economics . . .¹ While we have come to take this state of affairs for granted, the uninvolved observer would doubtless find it most peculiar. Why, he might ask, is there such a concentration of work in a sector which accounts for only 13 per cent of GNP and employs less than 10 per cent of the work force? Why are some relatively trivial problems receiving a good deal of attention from economists, while other major policy areas are receiving none or only intermittent attention? Our hypothetical observer might reflect that we are putting an awful lot of egg-heads in one basket and come to the conclusion that we are over-investing, at least in a relative, if not in an absolute sense, in agricultural economics training and research. If, over the last twenty years or so, an omniscient being armed with some appropriate social welfare function had allocated brainpower and supporting resources in applied economic research in such a way as to maximize net social pay-off, the resulting allocation would, it may be supposed, differ substantially from that which actually did emerge from the hodge-podge of political, bureaucratic and personal decisions which presently determine the outcome. It might also seem obvious that in an ideal allocation substantially fewer resources would have gone to agricultural economics and substantially more to other fields. But let me now cast some doubts on this presumption.

My first doubt has to do with the nature of the production function for research. In thinking of an ideal allocation of research resources among competing fields, we tend to think in terms of an allocation in which marginal social benefits are equalized as between fields. But this rule is appropriate only if we are working in the zone of diminishing returns in all of the relevant research production functions—an assumption which is dubious, especially if resources are few and fields of specialization are many. It seems more plausible to assume that research input in a particular field gives rise to increasing returns over a substantial initial range of input. Increasing returns are likely to arise from several sources. The more workers there are in a field, the greater are the opportunities for specialization in subject matter, technique, and, indeed, in quality of research. Certain investments, such as in the collection and collation of data, are justifiable only if research is undertaken on sufficiently large a scale. Opportunities for productive interaction, such as when one man's work provides the foundation or points the way for another's—or, indeed, provokes his ire or indignation—increase multiplicatively, not additively, as the number of researchers rises. Furthermore, there is safety in numbers, and some pooling of risk: error is more likely to be detected, exposed and corrected.

I am sure that a plausible case could be made out along these lines for unbalanced growth in the realm of intellectual development. The case is I think strengthened by the observation that Australian academic economists, whose work presumably reflects their own free choices as to subject matter, have not diffused their energies over a wide range of topics, but, as Corden has documented, have tended to concentrate on a few fields, particularly wages policy and balance of payments problems.²

¹ W. M. Corden, 'Australian Economic Policy Discussion in the Post-War Period: A Survey', *American Economic Review*, LVIII: 3, part 2 (June, 1968, Supplement), p. 120. The latter part of the quoted sentence, in which Corden qualifies his praise, is given below. See page 4.

² *Ibid.*, p. 89.

If the argument is accepted, it follows that the seemingly disproportionate concentration of resources in agricultural economics research and training does not, in itself, constitute *prima facie* evidence of a mis-allocation of research resources from a national point of view. Of course the question remains as to whether, of the various fields into which resources could have been channelled, agricultural economics was a wise choice. I can't pretend to be able to answer this question. However, I do wish to mention one consideration which, at an abstract level of argument would be irrelevant, but which, as a matter of historical accident, is very relevant.

Agricultural economics is a branch of applied economics, and its practitioners are agricultural *economists*, not economical agriculturalists. Nevertheless, the agricultural economist tends to be a particular sort of economist, with specific traits distinguishable from his counterparts in general economics. It so happens that the strengths and weaknesses of Australian agricultural economists and those of Australian general economists were, and are, highly complementary, so that the economics profession *as a whole* has been greatly strengthened through the growth of its agricultural sector. The differences between the two groups derive partly from the differing problems with which each is typically concerned, but mainly from the historical accident that whereas the intellectual homeland of most Australian economists is Great Britain, agricultural economics is largely an American importation.

Agricultural economists are generally reasonably well trained and interested in price and allocation theory, but not particularly concerned with income and employment theory. This emphasis is of course entirely appropriate given the problems with which they are typically concerned. General economists, at least as a group, need to strike a more nearly equal balance between micro- and macro-theory—though there are those, like George Stigler, who argue that at least 90 per cent of economic policy issues are essentially problems of micro-economics.³ But whatever the proper relative emphasis is, I think it undeniable that in the general economic field in Australia the pendulum had swung much too far to the macro-side, and that research and teaching in micro-economics had reached a pretty sorry state. Harry Johnson's criticism of British economics is, I think, very applicable to Australian economics as well:

It is . . . arguable that British economics has suffered from basking too long in the reflected glory of Keynes' great intellectual achievement, in two major ways. First, economics theorizing, research, and policy discussion in this country have been excessively concerned with macro-economic problems—theoretical models of economic growth, empirical studies of general price and wage-level behaviour, prescriptions for speeding growth without encountering balance-of-payments problems—to the neglect of the micro-economic problems of efficient resource allocation whose solutions are likely over the long run to be more important to the achievement of a highly productive and rapidly growing economy. Second, Keynes' phenomenal success in overthrowing orthodoxy in one major area has fostered among many British economists the conviction that orthodox theory is wrong in every

³ George J. Stigler, *The Intellectual and the Market Place*, (New York: The Free Press, 1963), pp. 80-81.

other context—which was certainly not Keynes' view—and the belief that if one is only clever enough in disputing orthodoxy one can come up with a similarly revolutionary advance in economic knowledge—which overlooks the fact that Keynes evolved the *General Theory* after many years of immersion in and contribution to the orthodox tradition in monetary theory. The unfortunate result of this attitude is that, instead of the tools of theory being improved by experience in using them, they tend to become rusty from disuse; and it becomes more important to be unorthodox than to be right, which is the antithesis of scientific criteria of judgement. Meanwhile, of course, traditional economics has not stood still, but has evolved more sophisticated and useful concepts for the analysis and investigation of contemporary economic phenomena.⁴

In the light of the last part of this indictment, Corden's statement that Australian agricultural economics is more impressive 'for its usefulness and technical competence than for its originality'⁵ might almost be taken as a compliment!

A second characteristic of agricultural economics has been its relatively heavy emphasis on econometric research and mathematical techniques of analysis. In noting this fact, Corden explained it by reference to the American training of agricultural economists, and to the greater availability of statistical material relating to the agricultural sector of the economy.⁶ This second point strikes me as being somewhat dubious, as being more of a comfortable rationalization than an explanation—if only because I have yet to meet the dedicated econometrician who is seriously fazed by a lack of data. But whatever the explanation, agricultural economists have made a disproportionately large contribution to research and to teaching in econometrics and in managerial science, and the effect on Australian economics has been salutary.

While our proficiency and preoccupation with price and allocation theory and quantitative research are the two principal contributions which we have made to the Australian economics profession, there are two other traits of agricultural economists, which, while being less distinctive, are nevertheless worthy of mention. One is the willingness of agricultural economists to take part in the public debate of policy issues—to give evidence before committees, to address meetings, to write popular articles or even letters to the newspapers, and, in general to play the intellectual's role of social critic. Now it might be argued that the high degree of government involvement in agriculture and the considerable amount of lay debate of agricultural policy issues by interested parties offers us greater opportunities for this sort of activity than exist in other fields of applied economics. Perhaps so; but, on the other side it could be pointed out that a disproportionately large number of our members are in government employment and hence precluded from adopting too critical a stance on public issues. A more subtle assessment might be to the effect that our willingness to pontificate on policy matters betrays our acceptance of a naive productivity ethic, a lack of awareness of the subtleties of modern welfare economics, and a propensity to take

⁴ Harry G. Johnson, 'The Economic Approach to Social Questions', *Economica*, XXXV: 137 (February, 1968), p. 2.

⁵ Corden, *op. cit.*, p. 120.

⁶ *Ibid.*, p. 121.

our subject and ourselves too seriously. Doubtless there is something in this criticism, but for my part I would prefer to err on the side of excessive involvement rather than excessive caution, to embrace a rough-and-ready productivity ethic than the 'elegant nihilism' of modern welfare economics, and to regard our profession's involvement in public debate as one of its strengths, rather than as a weakness.

The last distinctive feature of agricultural economics to which I wish to draw attention is its concern with the human agent. The close identity of firm and family in agriculture, concern with the income problem in agriculture and with rural-urban migration, awareness of the importance of the managerial factor in explaining production performance, and of technical advances and their adoption in explaining agricultural growth—all of these preoccupations of agricultural economists exemplify our concern with human beings, their skills, knowledge, and incentives. It is no accident that the man who reintroduced the concept of human capital into economics in recent years, and showed its power and usefulness, was a distinguished agricultural economist, T. W. Schultz.

To sum up: I would argue that it is probably good policy for a country having limited resources of economist brain power to concentrate them in a few areas of specialization rather than to spread them over many fields; also, that, partly fortuitously, the growth of the particular speciality called agricultural economics has helped to correct certain deficiencies in the training, interests and outlook of the economics profession as a whole. I find these conclusions rather comforting. However, it does seem to me that the growth of agricultural economics in this country has reached the stage where the more significant economies of scale and of specialization have been attained, and, in the future, one could hope to see members of our profession, including our newer graduates, applying their skills to problems of national importance, or of theoretical interest, be they in the agricultural or other fields. Good fences may make good neighbours, but we also know that excessive fragmentation of holdings results in low labour productivity.

It would seem to me to be in the national interest if some of our more high-powered managerial scientists were to move from university departments of farm management into the Department of Defence; if cost-benefit experts were to scrutinize the decisions of the biggest irrigation authorities of them all, our metropolitan water boards; if more attention were to be paid to the price of oil and gas, even at the expense of less being paid to the price of wheat; if a Bureau of Urban Economics were to poach some staff from the B.A.E.; and if those concerning themselves with problems of wheat- and meat-grading were to widen their interest to encompass the whole field of consumer protection and education.

Agricultural economists could well contribute more than they have done to the study of our immigration programme. In view of its important economic and social consequences, immigration has been subject to surprisingly little economic analysis.⁷ Corden suggests that this is because 'the motives for encouraging large-scale immigration have been largely non-economic and not disputed. In view of the wide consensus on the subject, discussion about the economic gains and losses would have been of little practical significance.'⁸ Acceptable though this may be as an

⁷ It is true that a number of excellent studies have appeared, but these have been isolated events and not part of a vigorous and growing literature.

⁸ *Ibid.*, p. 117.

explanation, it is hardly acceptable as an excuse for the neglect of 'immigration economics'. A Davidsonian demythicization of this subject would, I believe, be highly worthwhile. Even if our immigration programme in broad outline is immutable, its scale and details are not, and economic analysis can help improve its effectiveness.

There is, of course, also the problem of immigration and emigration of highly-skilled people: the so-called brain drain and brain gain. Australia's role in the international circulation of human capital seems to be largely uncharted. We know, for example, that French brains stay at home because they are well-paid, enjoy high status, and are repelled by the vulgarity of Americans; that brains from the under-developed world flow to the old imperial centres and to the United States; that Britain exports doctors to the United States and replaces them with imports from Pakistan and India; that the flow of brains from Latin America to the United States is positively correlated with political upheavals in the exporting countries; that Canada conducts an extensive entrepot trade in brains, importing in large volume from Europe and Asia and exporting, also in large volume, to the United States; and that New Zealand is losing its brains at a positively alarming rate. But no one, to my knowledge, has risked any dubious generalization, such as those I have just mentioned, regarding Australia. The situation is undoubtedly complex: it is clear that we export dentists to the United Kingdom and teachers to Canada; we fill or over-fill our personnel quotas in international organizations; a study of a few years ago showed that 20 per cent of Australian Ph.D.'s in science are permanently employed overseas;⁹ but on the other hand our universities are net gainers of staff from overseas.

The brain drain is an emotional topic—a favourite of headline-seeking vice chancellors. It may well have received more popular attention than it deserves, but this may be a good reason for casting a cold analytical eye upon it. Moreover, as the real cost of international travel continues to fall, the very imperfect international market for the services of highly-skilled people will become less imperfect—unless, of course, additional artificial barriers to migration are raised. Increasingly, countries will be unable to allow salaries and working conditions of skilled people to lag too far behind the market leaders without suffering adverse consequences. Also, the brain drain is likely to manifest itself among successively less-exalted categories of manpower: a significant loss of Australian school teachers is a recent phenomenon. Educational authorities and other employers may have to re-examine their traditional policy of recruiting their employees young, subsidizing their training, and recouping this cost through the payment of low salaries and the imposition of onerous conditions of service.

As a final suggestion for future research, let me note that for me one of the more exciting recent developments in economic theory has been in the field of non-market decision-making, that is, in the study of the workings of political and bureaucratic organizations. This is not interdisciplinary work—on the whole I subscribe to the doctrine of anti-interdisciplinary work; rather is it the use of the tools of economic analysis for unfamiliar purposes—or, if you prefer, a take-over bid by economists for a share of political science. Australian agriculture is well sup-

⁹ P. N. G. Armstrong, S. C. Hill and I. G. Ross, 'Australian Ph.D. Graduates in Science and Applied Science', *Vestes*, VIII: 4, (December, 1965), pp. 246-249.

plied with marketing boards and similar authorities, and it would be an advance if normative analyses of their economic performance were supplemented by positive studies which sought to explain why they perform the way they do.