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THE RURAL DEVELOPMENT OF NORTHERN AUSTRALIA

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There has recently been a marked resurgence of interest in the development of Northern Australia comparable to that which occurred towards the end of World War II. The events of the past three months suggest that the development of this part of the continent may become an increasingly important political issue. The pressures for the development of this area are such that the economic realities of the situation unfortunately tend to be largely disregarded.

Even the Forster Committee, appointed as it was to survey the prospects of promoting agricultural settlement in the Northern Territory "on an economic basis" saw fit in its report explicitly to reject conventional economic criteria in making its recommendations.¹ The Committee further refused to face up to what I would submit is probably the most important consideration in determining the economics of northern development—whether investment in other parts of the Australian continent would not bring greater benefit to the nation than equivalent investment in the North. It was the Committee's view that it was not its function to answer this question, but rather the Government's.² But given that the crux of the economic problem is the allocation of scarce resources, it would seem to me that any consideration of northern development "on an economic basis" must comprehend interregional comparisons.

In this paper, I propose to discuss some of the broader economic issues which must arise in any consideration of the rural development of Northern Australia. Even if the economic issues are likely in the end to be overshadowed by political factors, I believe nevertheless that these questions should be raised if only to point to the likely costs of developing the northern areas for what are essentially non-economic reasons.

I shall approach these questions from the standpoint of governmental intervention in northern development. I shall discuss first the justifications offered for accelerating the agricultural development of the North, and then consider the form and likely consequences of such intervention.

Why Develop the Rural Industries in Northern Australia ?

What motivates Australians to want to hasten the development of the North is of course imperfectly revealed. General arguments for regional development are often inseparable from those directed primarily at the rural side. Strategic or defence reasons stemming from World War II experiences undoubtedly are important,³ though one wonders often whether the proponents of this point of view have fully adjusted their thinking to the post-Sputnik nuclear age.

1. Commonwealth of Australia, Department of Territories, *Prospects of Agriculture in the Northern Territory* (Canberra: Government Printer, 1961), pp. 9-10. (Hereinafter referred to as the Forster Committee Report.) Although frequent references are made to the report of this Committee, this paper does not purport to be a review of that document.

2. *Ibid.*, p. 209.

3. Cf. Northern Australia Development Committee, *Report on the Development of Northern Australia* (Canberra, 1947) (mimeographed), p. 2.

Also the urge to develop the country which has long been an essential trait of the Australian national character is still a force in political thinking about the North. Closer settlement based on the concept of the "home maintenance area" remains (as it does in the southern States) the standard political prescription for accomplishing the desired rural development despite substantial evidence that such concepts are in need of radical overhaul in the economic circumstances of today.

Associated with this national urge to develop the continent and sometimes almost indistinguishable from it, are two other points of view. One, which I am apt to describe as the pioneering approach, is characterized by a belief that it is in some sense sinful not to utilize land for productive purposes and that public investment decisions should simply be made on the basis of their potentialities for utilizing to the limit the physical resources available.⁴ This approach may have been satisfactory in the last century, but it is no longer applicable in the latter half of the twentieth century. There is ample evidence that the relative importance of natural resources as a determinant of economic development is less in the more advanced economies and tends to decline as an economy progresses.⁵ Because of the changed economic circumstances of the country and of the rural industries, it is absurd to make invidious comparisons between early Australian rural settlement and the situation in Northern Australia today.⁶ The problems of settlement today are more complex and more difficult.

A modern-day version of this thesis propounded by some agronomists is to the effect that research activities should be intensified in an effort to allow land to be used productively almost irrespective of the costs such use entails. It is frequently very difficult to convince people dedicated to this point of view that markets are important; that manpower and more especially capital are the scarce factors, not land; and that gross returns per acre are not a satisfactory indicator of the economic productivity of land.⁷

Another variant of the compulsive urge to develop the North at all costs stems from the comparison of the relative degree to which different countries are endowed with natural resources, coupled often with a comparison of relative population densities.⁸ To those who believe that failure to utilize resources is apt to stimulate aggression by less well-endowed powers, this statistical exercise has clearcut implications for a country like Australia with a low overall man-land ratio. Other students of these statistics talk instead of "the inescapable moral obligations of

4. Similar false economy is frequently evidenced about the water resources of the North. Most of these claims of water wastage have stemmed from the statement attributed to Christian and Beale that "In the Northern Territory and the Kimberleys more water flows into the sea than flows in all the rivers of N.S.W., Victoria and South Australia".

5. For a recent survey of the role of natural resources in economic development, see J. J. Spengler (ed.), *Natural Resources and Economic Growth* (Washington: Resources for the Future Inc., 1961).

6. Cf. C. S. Christian, "The Future Revolution in Agriculture in Northern Australia", *The Australian Journal of Science*, Vol. 22, No. 4 (October 1959), p. 146.

7. For an extreme example of this kind, see J. J. Basinski, "Irrigation Possibilities in Central Australia", *Proceedings of Northern Territory Scientific Liaison Conference* (Melbourne, 1961) (mimeographed), Vol. I.

8. In most discussions of this matter the extent of the areas of relatively undeveloped land in South-East Asia, the region with which comparisons are most frequently made, is usually not revealed, attention being directed instead to the population statistics. For instance, while 68 per cent of available land on Java and Madura is cultivated, only 4 per cent is cultivated elsewhere in Indonesia. Overall about 12 per cent of the land in that country is under cultivation, in tree crops or under permanent pasture. In most other South-East Asian countries land of this description represents less than 20 per cent of the land area.

the nation to utilize to the full all parts of the continent that are capable of human exploitation”⁹ or describe land utilization on an extensive basis as “an embarrassment in the field of international politics”.¹⁰

The premier economic argument for northern rural development is that based on estimates of Australia’s long-term balance-of-payments situation. But, however great the country’s need to tap fresh sources of foreign exchange, it does not, in itself, justify indiscriminate rural development in all parts of the continent. The North’s contribution to improving Australia’s export potential might more rationally lie in the exploitation of oil and mineral resources rather than land resources. Efforts to expand rural exports might more properly be directed to other parts of the continent.

To a more minor extent, the North’s contribution to the balance-of-payments problem is said to lie in the increased production of import-saving crops. But usually it turns out that the commodities concerned (e.g. peanuts, cotton and tobacco) are already the subject of subsidy programmes or home consumption price schemes and, on present evidence, production of these commodities in the North does not appear to be as economic as in existing producing areas in Australia. But, say the enthusiasts for northern rural development, the comparative disadvantage of Northern Australia relative to overseas competitors and other Australian producing areas will be short-lived.¹¹ Their optimism is based on three grounds.

First, it is argued that technological developments will so enhance the productivity of North Australian lands that they will become competitive with rival producing areas. This seems to me to imply a strange notion of technological stagnation in other producing areas which is incompatible with reality. In fact, given the nature of the physical environment in Northern Australia and the industries concerned, it is quite possible that productivity may rise faster in the more southern producing areas than in Northern Australia. With the technical assistance being showered on underdeveloped tropical countries today by U.N. agencies and other sponsors, it seems to me also possible that the tables may well be reversed in an international context—that the rate of increase in productivity in competing countries (e.g. Nigeria) may exceed that in Northern Australia.

The second alleged ground for optimism is that, as economic growth proceeds in the underdeveloped countries, the peoples of those countries will demand higher living standards and that as a consequence there will be an upward pressure on costs and perhaps on commodity prices.¹² When one takes into account possible concurrent technological improvements and the seemingly inevitable tendency of costs of rural production to rise in this country, it would seem to me rather unwise to attempt to accelerate the rate of rural development of the North in anticipation of such an eventuality occurring.

In the third place, it is believed that the economic as opposed to the physical disadvantages of rural production in the North are transitory and will disappear as development proceeds.¹³ I return to this question later.

The more specific arguments for the rural development of Northern Australia are based on demand considerations. There is some examina-

9. M. S. Brown in a paper on population presented to the Symposium on the Development of Northern Australia, University of New South Wales, December, 1961.

10. Christian, *op. cit.*, p. 146.

11. These arguments are also applied, on occasions, to commodities which do not come in the import-saving category.

12. Forster Committee Report, p. 99.

13. Christian, *op. cit.*, p. 146.

tion of potential commercial markets, but more usually there is an indiscriminate espousal of the cause of the Neo-Malthusians. "Population pressure in regions to the near north of Australia and the need for food supplies for the projected world population increase in the next 25 years make it essential that Australia should define its development policy relating to this [northern] area", says the Forster Committee.¹⁴ But, again, why, in the face of recent evidence of rural productivity increases,¹⁵ should we be pessimistic about the ability of rural technological developments to keep pace with world population increases? Is it wise to base an extensive investment programme on such a premise? Further, the contribution of Northern Australia to the world's food supply is likely to be of marginal significance.

Reference to the South-East Asian area itself raises grave doubts about the imminence of food shortages. Generally speaking, food production is increasing substantially faster than population in this area. As the Forster Committee itself points out, somewhat inconsistently, the rate of growth of world rice production (excluding that of Mainland China) was double the rate of increase in population in the ten-year period ending 1958-59.¹⁶

More specific analysis of the scope for commercial market development is centred mainly on the possible expansion of existing markets. In the case of rice, the main source of comfort is the fact that potential Australian exports would be small relative to world trade in rice.¹⁷ On the other hand, the possibility of a substantial expansion in the demand for beef in Asian markets seems to be based on the anticipated increase in the aggregate demand for food, without any regard to the relatively high income elasticity of demand for meat.¹⁸ When the likely growth of effective demand seems inadequate to the production potential, reference is made to the possible inauguration of large-scale surplus disposal programmes as a means of providing a market for the food products stemming from rural developments in the north,¹⁹ even though the commodities which are likely to be produced there are not particularly suited to such programmes.

On a wider plane, the intensity of the drive for self-sufficiency in food-stuffs among the underdeveloped countries and the associated gradual narrowing of world trade in agricultural products, should cause any government to hesitate to inaugurate a large-scale rural development plan based on a pious hope that these trends may be reversed. Nurske in his 1959 Wicksell lectures has drawn attention to the possibility that while a country may enjoy a high "established" comparative advantage in the existing export sectors, its "incremental" comparative advantage in these lines may be low.²⁰ The fact that export trade in agricultural products was the "engine of growth" (to use Sir Dennis Robertson's

14. Forster Committee Report, p. 9. See also *ibid.*, p. 110 and Christian, *op. cit.*, p. 146.

15. E.g., Food and Agriculture Organization, *The State of Food and Agriculture, 1960* (Rome, 1960), pp. 12-15.

16. Forster Committee Report, p. 85. The information was drawn originally from the *FAO Monthly Bulletin of Agricultural Economics and Statistics*, Vol. IX, No. 3 (March 1960). See also FAO, *The State of Food and Agriculture 1960*, p. 14.

17. Forster Committee Report, p. 85.

18. Optimistic Australian assessments of the potential market for meat in Asia contrast rather sharply with that of George Mehren. See his "Economic and Legal Problems Involved in Exporting Red Meats, Poultry and Dairy Products to Pacific Rim Countries", *Technical Papers of the First Pacific Rim Food Conference* (Honolulu, 1960), pp. 171-193.

19. Forster Committee Report, p. 10.

20. R. Nurske, *Patterns of Trade and Development* (Stockholm, 1959), p. 36.

term) in Southern Australia in the nineteenth century does not mean that we should pin our hopes on a similar process of development in Northern Australia in the latter half of the twentieth century.

Looking at the problem solely from the standpoint of the demand for farm products, the appropriate course of action, given such an uncertain future for world agricultural trade, might be to treat the potential crop-producing lands of the North as a contingency reserve to be tapped, if and when the increased world demand for food and fibres makes their utilization an economic proposition. The existing rural industries might be allowed to develop along traditional lines, but any accelerated intensive settlement deferred until the need is evident. Personally I am disposed to believe that physical scientists underestimate the speed with which agricultural resources can be brought into use, if the necessary technical knowledge is available and the necessary incentives are there. This assumes of course that the sole motivation for increasing rural production is to satisfy a demand for food and that such considerations as increasing the rural population in the area through closer settlement are unimportant.

Economic Criteria for the Stimulus of Growth by Governments

In considering the question of governmental intervention in Northern development, it is important to remember that a certain amount of economic growth has already occurred in this region and that some industries have demonstrated their ability to become established and to survive without significant public aid.

Broadly speaking there are five principal ways by which economic growth within a region may be stimulated. These are

- (1) expanded demand outside the region for products produced within the region;
- (2) expanded demand within the region for the products of the region;
- (3) discovery of previously unknown resources which can be economically exploited;
- (4) technological change which enhances the comparative advantage of the region relative to other areas in the production of various goods; and
- (5) purposeful capital investment in the region from outside.

The first two categories represent growth in response to the operation of the market mechanism though this may also influence private activity in the field of exploration and research. The growth in the Northern Territory brought about by the increased demand for uranium oxide after the war would be an example of the first kind of stimulus. The development of vegetable growing in the Territory and the re-establishment of abattoirs in Darwin in response to the increased local population are examples of the second. The third category might be illustrated by the recent discovery of further rich iron ore deposits in Western Australia, the bauxite deposits at Weipa, or the anticipated discovery of oil. The results of agricultural and livestock research such as the introduction of Santa Gertrudis cattle are clear examples of the fourth category.

Investment in exploration and research is clearly one way by which the government may attempt to stimulate growth in an area such as the Northern Territory, though, as was pointed out earlier, there is no presumption that such investment will necessarily result in the achievement of advantage over competing suppliers. Public investment can also be used in an endeavour to enhance the demand for the products of the region outside the region. But it is the fifth category involving purposeful large-scale capital investment from outside the region in an attempt to accelerate growth with which I am mainly concerned in this paper.

What can be said from an economic standpoint about the avenues of public investment most likely to be conducive to sustained economic growth? The short answer is that public investment should be directed towards influencing the supply functions of factors for which demand is highly responsive to secularly rising income. These “will consist of productive factors for which demand will be relatively elastic both with respect to price and income, and favourably influenced by changing technology and tastes”.²¹ Of course growth may come from increases in population as well as from rising standards of living but the income factor is probably the more important in the long run.

These criteria are clearly relevant to the promotion of development in a region relative to the economy of which it is a constituent part, but they also have relevance in an international context. The difficulty about North Australian development is that it will probably be orientated for the most part to external rather than internal markets. Insofar as the coveted markets are situated in countries where lower national incomes per caput prevail, the relevant elasticities may be higher initially, but, by the same token, the elasticities may decline significantly with the passage of time.

The prospects for sustained economic growth on the basis of the products of agriculture (and even mining) are not bright. In the absence of opportunities for the development of secondary industries, investment in tourist promotion, such as has been initiated during the past twelve months, is likely to have more of the magic multiplier qualities for which the protagonists of northern development are looking. Within the agricultural field, the application of the abovementioned criteria would suggest that the beef and horticultural industries may be safer propositions in the long-term than either the sugar or the rice industry.

A region whose economic activities centre around primary production, unless it has extraordinary comparative advantages relative to other areas, is likely to lag behind more diversified regions in the process of economic growth. I see no evidence to suggest that the experience of Northern Australia is going to be very different to that of comparable regions in other developed economies. It needs to be recognized that the failure of this area to keep pace with the development of other parts of the Commonwealth may be due to fundamental economic forces and not to political neglect. The chances are that so long as Northern Australia is dependent on the products of mining and agriculture for its growth the divergence between the rate of growth of this region and that of Southern Australia may increase rather than grow less. Other economically advanced countries have these areas of slow growth—Canada has its northern areas, the United States its inter-mountain region.²² The advent of the nuclear age with its premium on industrial dispersion has in recent times enhanced the growth prospects of the latter region, but in neither country is the illusion that uniform development in all regions is an economic or indeed a political necessity, as widespread as in this country.²³

21. J. V. Krutilla, “Criteria for Evaluating Regional Development Programs”, *American Economic Review*, Vol. XLV, No. 2 (May 1955), p. 127.

22. Schultz pointed out in 1953 that the rate of economic growth of the western interior of the United States had lagged behind other parts of the nation despite a long-continued public policy favourable to the western development and despite highly favourable terms of trade. See T. W. Schultz, “The Economic Development of our Western Interior”, *Journal of Farm Economics*, Vol. XXXV, No. 5 (December 1953), p. 708.

23. Cf. *ibid.*, and Dominion of Canada, Royal Commission on Canada’s Economic Prospects, *Final Report* (Ottawa: Queen’s Printer, 1958), pp. 165-66.

The agricultural development of Northern Australia, it should be noted, is a vastly different proposition to rural development schemes in less developed countries. In the majority of cases in the underdeveloped countries agricultural development enables underemployed labour and other resources to be put to work in the national interest. By contrast, agricultural development undertaken in a normally fully-employed economy like the Australian economy, necessitates the diversion of resources from other nationally important tasks to the project in question. Consideration of the relative scarcity of different resources and their opportunity cost is basic to any sensible discussion of rural development.

The Consequences of Government Intervention

Let us now consider what government investment in the rural development of the North is likely to achieve. This brings us to the doctrine of the “vicious circle” which appears to play a dominant role in the thinking of the Forster Committee. There are quite a few vicious circles mentioned in its report.²⁴ The Committee explains that its recommended measures “are designed to break the vicious circle of there being no industry because there are no facilities, and there being no facilities because there is no industry. If the north is to develop, this circle must be broken by someone and, if the Government considers the north should be developed, it seems to us to be a proper function of Government at this stage to break it.”²⁵

The constantly recurring theme of the “vicious circle” seems to be an umbrella for a lot of confused thinking. Looking through the various references to it, it would appear to me that the Committee had in mind at least four different notions: (1) the necessity to develop the social overhead capital of the region; (2) the possible secondary effects of any development undertaken; (3) the possible realization of substantial external economies of scale consequent upon growth and (4) the need for protection to industries during their period of establishment—essentially the “infant industry” argument. In addition, the doctrine of the vicious circle seems to imply a particular view of the role of government in agricultural development. We might consider briefly the relevance of each of these to the Northern Australian situation.

The need for governments to develop the social overhead capital or infra-structure of a country or region is well-recognized in the literature on economic growth. In particular the role of the railways in opening new territories in the nineteenth century is often cited. In line with this philosophy, a start on the construction of a railway from Port Augusta to Darwin was begun, but never completed. Today, on the Darwin-Larrimah sector, one train per week operates in either direction. The contribution of this railway to the economic development of the region would not seem to be significant.²⁶ Plainly with the development of road and air transportation, private enterprise is not so dependent on public transport facilities as was true in an earlier period. But still, the case for development of a road network ample to the needs of developing industries is substantial.

The case for public intervention in the creation of processing plants (e.g. abattoirs) or service industries (e.g. fertilizer plants) is very different. Clearly the justification for such facilities ultimately lies in the demand

24. Forster Committee Report, *op. cit.*, pp. 55, 137 and 143.

25. *Ibid.*, p. 209.

26. People in the Northern Territory tend to oppose any suggestion that the rail link with the South should be completed, not so much on economic grounds, but on the grounds that it would hinder the development of a politically independent entity in the North.

for the final product. It is therefore not telling the whole story to say that the cattlegrower will not expand his production because there are no export killing works to kill his cattle and that the works operator will not erect works because there are not enough cattle available to justify it.²⁷ There is plenty of evidence suggesting that private enterprise will build facilities of this kind, if there are reasonable market prospects for the product in question. If private enterprise is unwilling, it seems to me that Government should tread very warily in embarking on such ventures. Equally the Government needs to be circumspect about fostering the building of superphosphate plants when the demand is insufficient to justify commercial production.²⁸ It is true that some of the underdeveloped countries are going much further in the area of public management than was customary in earlier Western development.²⁹ But the reasons for national ownership of production and processing facilities in those cases would appear to be substantially different from those advanced in respect of Northern Australia.

In attempting to justify public investment in areas such as Northern Australia, considerable stress is usually also placed on the secondary or indirect benefits which are likely to flow from such projects. Thus it is argued that closer settlement would give rise to service industries in adjacent towns and this would stimulate local population growth and employment. There has, of course, been quite a deal of controversy about the validity of this argument in recent years.³⁰ However, it seems to be generally accepted now that while a particular region will undoubtedly derive secondary benefits from public investment, from a national point of view the secondary benefits of development projects can for the most part be neglected. This is because from a national standpoint the secondary benefits which are induced by expenditure on a developmental project tend to be of much the same magnitude regardless of the location and to some extent the nature of the project.³¹ Consequently, so far as rural development projects are concerned, it is mainly the direct primary benefits which have any economic relevance in national investment planning. If development in a particular region is at the expense of another region what may happen is simply the transfer of the regional location of complementary industries.

This is not to say that the government may not be disposed to give some additional weight to the secondary benefits of investment from the standpoint of local regional growth to the extent that it is impressed by the strategic and other non-economic arguments for the development of the North. My point is simply that from a national point of view the economic basis of such an argument is, at the very least, questionable.

The allied question of the importance of external economies of scale as a justification for public investment is far from clear cut. Much of what has been written on this subject has reference to the underdeveloped areas. The same type of reasoning is not necessarily applicable to an undeveloped area in an advanced economy. As Margolis has pointed

27. Forster Committee Report, *op. cit.*, p. 55.

28. Cf. *ibid.*, p. 137.

29. For a discussion of these trends, see E. S. Mason, *Economic Planning in Underdeveloped Areas* (New York: Fordham University Press, 1958).

30. E.g., J. M. Clark, M. M. Kelso and E. Grant, *Secondary or Indirect Benefits of Water Use Projects* (Report of Panel of Consultants to the U.S. Bureau of Reclamation) (Washington, 1952) and R. N. McKean, *Efficiency in Government through Systems Analysis* (New York: John Wiley and Sons, 1958), pp. 151-67.

31. As was pointed out earlier, rural settlement would not seem to have as great a leverage effect as other types of economic activity. Moreover it would not appear to be a very promising basis for self-perpetuating growth.

out “ care must be taken that the claimed external economies do not degenerate into an equivalence with some sort of ‘ snowballing ’ effect. If the ‘ snowball ’ effects do involve opportunity costs, if they use factors which have alternative uses, the benefits of the external economies are likely to be overstated ”.³² The probable extent of genuine external economies can only be ascertained by a specific examination of the special conditions in the North which would give rise to such economies. The likelihood of substantial external economies being achieved in Northern Australia cannot be presumed, just because it is a relatively undeveloped area.

Finally, the Forster Committee envisages government intervention in the form of subsidies to various industries, on the presumption that their costs will eventually fall and the subsidy will no longer be necessary. Broadly speaking, the justification of public assistance to “ infant industries ” on the ground of delayed profitability hinges basically on three factors, internal economies of scale, complementarities and technological and organizational progress.³³ The last category clearly has more reference to underdeveloped economies than to Northern Australia. The Forster Committee claims, I believe unjustifiably, that the present cost of superphosphate would not be economically borne by any industry and that there are not enough farmers because phosphate is so expensive.³⁴ It is difficult to understand how superphosphate can be the *sine qua non* of agricultural development in the North, but nevertheless the committee asserts that “ the price of phosphate fertilizers must be brought more into line with those in other parts of Australia . . . ” and goes on to state that “ it is a common State function to encourage, by different means, agricultural production in areas suffering from disabilities ”.³⁵

But why should the price of superphosphate be uniform or nearly so at all the major parts of Australia as the Committee’s discussion seems to imply ? If the general principle cited is to be applied consistently, why should not farmers in the more remote areas of all parts of the Commonwealth receive subsidies covering their inward and outward freight charges ? The whole basis of comparative advantage and of economic production hinges on the existence of “ disabilities ”, some physical in nature, some economic in nature. It is unreasonable to expect that even in the longer run all the economic disabilities will disappear—that the disadvantages relative to other parts of Australia are temporary.³⁶

While government assistance in a genuine “ infant industry ” case might well be justified, it should be ascertained that the specific disability is genuinely temporary. Many of the disadvantages of which the Forster Committee talks, would seem to me to be permanent features of the economic environment of the Northern Territory. It would be absurd

32. Julius Margolis, “ Secondary Benefits, External Economies and the Justification of Public Investment ”, *Review of Economics and Statistics*, Vol. XXXIX, No. 3 (August 1957), p. 289. Moreover, opportunities for realization of external economies are very limited when investment is directed predominantly to primary production for export. See H. S. Ellis, “ Accelerated Investment as a Force in Economic Development ”, *Quarterly Journal of Economics*, Vol. LXXII, No. 4 (November 1958), pp. 491-92.

33. I take the same position as Fellner that the justification for government intervention based on the possibility of external economies should be distinguished from infant-industry arguments. See W. Fellner, “ Individual Investment Projects in Growing Economies ” in M.I.T. Center for International Studies, *Investment Criteria and Economic Growth* (London: Asia Publishing House, 1961), p. 144.

34. Forster Committee Report, *op. cit.*, pp. 209 and 137.

35. *Ibid.*, pp. 137-38.

36. Christian, *op. cit.*, p. 146.

for the Government to attempt to remove them by subsidy. If it did, the Committee's "vicious circles" might be transformed into "vicious drains" on the public purse.

Concluding Comments

It should not be concluded from what I have written that I despair of the development of Northern Australia. I have been distressed in recent times by the spurious nature of some of the economic arguments advanced for rural development in the North and by some of the specific proposals put forward. My purpose in this paper has been to attempt to provoke a wider discussion of some of the fundamental economic issues.

Northern Australia has developed and will continue to develop whether the Government attempts accelerated rural development or not. To an economist, the idea of further development of the cattle industry—the industry which above all else has shown its ability to survive in this area—must loom large. Apart from that, the continued development of the mineral resources of the North would seem likely to generate more growth for a given investment and have probably greater export potential than large-scale agricultural settlement. The land resources of the North are there to be used more intensively, if and when the world needs them, but it would seem prudent to wait till we have clearer indications that this is so than we have at the moment.

For rational decision-making on government investment in national development, there is a great need for much clearer indications of the comparative rate of return likely to be obtained from public investment in various parts of Australia than is at present available. Though the risks and uncertainties associated with northern projects are probably greater than for southern ones, there is no reason to presume that results of any serious studies undertaken would necessarily be prejudicial to North Australian development.

In making decisions on public expenditure for development, it is clearly not possible to put major reliance on analytical techniques, as opposed to intuition, judgment and experience. Nevertheless substantial progress is being made towards clarifying the economic criteria relevant to such decisions.³⁷ The intrusion of political considerations does not eliminate the necessity of economic calculation in planning development. With the limited resources of capital and manpower at our disposal in this country, we ought at least to endeavour to be clear about those things about which it is possible to be clear.

37. See, in particular, the recent excellent review by Otto Eckstein, "A Summary of the Theory of Public Expenditure Criteria", in National Bureau of Economic Research, *Public Finances: Needs, Sources and Utilization* (Princeton: Princeton University Press, 1961), pp. 439-94.