

Regional Development in Ireland: Problems of Goal Formulation and Objective Specification

PATRICK N. O'FARRELL

THE establishment of a consistent set of goals and objectives is fundamental to the planning process since planning is concerned with attempting to realise predetermined results. Although specification of objectives is a component part of all planning on any spatial scale, as well as for the firm, surprisingly little attention has been paid to their identification and formulation. Setting objectives is especially complex for there are no analytical techniques which permit consistent quantitative correlation and comparison between the many different elements and qualitative aspects which should be considered.¹ Until such methods are developed, understanding the dynamics of the region must be achieved by partial statistical sub-systems analysis, logical arguments, experience and continuous observation. Efficient planning at any level requires a clear statement of goals, but a multitude of decisions must be effected in order to reach that stage.

Firstly, what should constitute the social and economic goals and objectives of regional policy? How should these goals be operationalised: as personal *per capita* income or as increase in *per capita* income arising; as *per capita* consumption or gross regional product; as unemployment, emigration, under-employment or degree of overcrowding? What relative weights should be attached to different goals? To what extent is society willing to tolerate regional welfare differentials? When do the latter become excessive and require concerted action by the central authorities? Should *per capita* welfare levels be equal in all regions or, if equity is not the goal, what degree of convergence should be aimed for? To what extent, if any, does a regional convergence policy conflict with the national aim of maximising the economic growth rate in order to achieve the widely accepted goal of full employment by 1981? What is meant by equilibrium growth throughout the country, or "balanced regional development" as some refer to it? At what

1. M. C. Branch and I. M. Robinson, "Goals and Objectives in Civil Comprehensive Planning", *Town Planning Review*, Vol. 38, 1967-68, p. 266.

spatial scale should welfare differentials become the object of policy—at planning region level, county level, urban and rural district level or some combination of areal scales? Is there a measure of agreement as to the socio-economic objectives towards which our national policies should be directed or are various groups in society in basic disagreement?

This paper will address itself to these issues, which are not merely academic questions, since the formulation of a consistent set of social and economic objectives at national and regional level will greatly assist the efficiency of public and private bodies in striving to achieve them. If one asked the heads of Government departments and public companies to state their objectives *vis-à-vis* regional development one would probably receive some strongly conflicting answers. A vague and ambiguous policy, without clearly defined objectives, can result in much development capital being spent on programmes and projects which are not in sympathy with the State's objectives. This serves to underline the need for deriving a conceptual framework to embrace the complete range of goals if the level of efficiency in the decision-making process is to be raised and the overall performance of the economy improved by ensuring that public and private investment policies are in harmony with those goals. Murray alluded to these problems in 1966 when he stressed "the need to define objectives more clearly, to distinguish the relative importance to be attached to economic and social objectives, to ensure that activities and financial results are related to objectives and to make certain that the community receives, directly or indirectly, an adequate return on capital invested".² He also realised that "some progress has been made in defining our national economic objectives, . . . but . . . a clear statement of economic and social priorities is particularly essential . . . we must ensure that resources are allocated amongst competing demands as to achieve maximum and consistent economic objectives".³

The Third Programme Regional Objectives: a Review

In Ireland, as in many other countries, there still exists a gulf between current regional policies and regional planning as an integral component of a national programme for social and economic development. Four stages may be distinguished in the development of regional policy in Ireland. The first stage was marked by the introduction of a regional industrial grants policy for the undeveloped areas in 1952. The second phase was initiated under the Local Government (Planning and Development) Act, 1963, which required all counties, county boroughs, municipal boroughs and urban districts to draw up development plans. Later the country was divided into nine planning regions and teams of consultants were engaged to prepare development plans for the Dublin and Limerick regions. The third stage is the integration of regional plans within the constraints of national aims. This has largely been achieved by the Buchanan

2. C. H. Murray, "National and Physical Planning", *Administration*, Vol. 14, No. 3, 1966, p. 203.

3. *Ibid.*, p. 203.

Report (whose terms of reference included the whole country) which has presented approximations of employment and population growth by regions forecast to materialise in the long term under alternative industrial location strategies.⁴ It does not constitute a fully integrated regional policy, for this fourth stage requires: (i) disaggregation of the national programme targets on a regional basis, so that the proportion of GNP to be generated in each region is made explicit, together with detailed sectoral growth rates for each region; (ii) projections of employment change by sector and regional population and emigration forecasts; and (iii) projections of the level of public and private investment, consumer expenditure, savings and capital flows. Eventually, regional accounts will facilitate an evaluation of the impact throughout the regional system of national fiscal or monetary policy changes. A regional accounting framework needs to have a general equilibrium character in order to monitor the interaction between national, regional and inter-regional activities.⁵ At the moment sufficient information for the construction of operationally useful accounts does not exist. Many of the data are expensive to obtain and a substantial proportion is impossible to quantify without new data-collecting organisations. In the meantime broad sectoral growth targets, predictions of sectoral employment shifts, population migration and investment forecasts could be introduced.⁶ A regionalised programme will appear as a summing up of sectoral growth rates in the national programme across the planning regions. This will mask a significant step forward since regional development will then be regarded, not as a social and political necessity, but as a fundamental part of the strategy for economic growth.

In Ireland, the lack of a regional framework with specific quantitative targets has been a severe hindrance to rational physical and economic planning. The local planning authorities have had to make their own assumptions concerning future demographic and economic trends in their areas and draw up detailed physical plans in relation to these assumptions. There is every likelihood that their assumptions will differ from those of the national planners when they develop sets of realistic regional targets. Therefore the local physical plans, as they have been based on different assumptions, will have to be modified accordingly. Rational regional plans and physical plans at local level must be based upon a flow of data from the central authorities, on growth rates in employment and output for different sectors, population change and distribution, location of new investment, forecasts of growth in demand for housing, inter- and intra-regional traffic flow, retail space, industrial sites, recreational facilities, schools, etc. The consequences of drawing up a regional development plan with no predetermined regional growth targets may be illustrated by referring to the contrasting recommendations

4. *Regional Studies in Ireland*. Colin Buchanan and Partners in Association with Economic Consultants Ltd., Dublin, 1968.

5. H. W. Richardson, *Regional Economics*. London, 1969, p. 232.

6. FitzGerald has recommended that the Government should aim to secure a full-scale regional breakdown of the Fourth Programme; see Garret FitzGerald, *Planning in Ireland*. Dublin and London, 1968, p. 219.

put forward for the Limerick region by Lichfield and Associates in the Advisory Outline Plan on the one hand, and by the Buchanan Report, on the other.⁷ The population of the Limerick-Shannon area is expected to expand to 96,000 by 1986 according to the Lichfield Plan, whereas the Buchanan Report forecasts a population of 175,000 by the same date. The vast disparity between the two projections reflects the differing assumptions made about future employment and population growth. In the Lichfield Plan the figures were arrived at on the basis of a pro-rata distribution between regions of the Second Economic Programme population targets for the country as a whole. The Buchanan forecasts are based on the premise that the full employment objective will only be attainable through concentration of investment at growth poles and this will not result in equality of regional population growth rates. Assuming that the Buchanan policy is accepted, many of the detailed proposals and strategies recommended by Lichfield become null and void. It is difficult to avoid the conclusion that some degree of mistiming has occurred involving a wastage of public money and that in future the preparation of regional development and physical plans and local authority physical plans should post-date the establishment of a set of regional growth targets. As in all planning in a democracy a certain degree of flexibility should be built into the various regional growth targets. They should be specified as the basic minimum goals for a particular programme since, for example, the magnitude of the industrial base is so small in some regions that setting rigid targets that are not precisely realised might result in frustration and apathy and endanger the success of the development programme.

During the course of the Third Programme the economy is projected to expand at the rate of 4 per cent per annum between 1969-72. This overall growth rate is composed of one of 6.5 per cent per annum for industry, 2 per cent per annum for agriculture, fishing and forestry (1.3 per cent for agriculture) and 3.3 per cent per annum for services.⁸ The Programme envisages a net increase in total employment of 16,000—a loss of 36,000 agricultural jobs being more than offset by rises of 31,000 in industry and 21,000 in the rest of the economy.⁹ As mentioned above no regional transformation of these targets has been undertaken so that there is no forecast available, for example, on the spatial distribution of the 36,000 agricultural jobs that will disappear by 1972, or the regional pattern of the 52,000 new jobs that will be generated in the rest of the economy over the same period. Hence we know nothing of the inter-regional and intra-regional migration flows that will be necessary to equilibrate spatially the supply and demand schedules for labour. The Buchanan Report, as already indicated, has presented what, because of the time scale involved, are largely conjectural estimates of long term sectoral employment trends at regional level. This plan,

7. *Report and Advisory Outline Plan for the Limerick Region*. Dublin, Stationery Office, 1967, and *Regional Studies in Ireland*.

8. *Third Programme. Economic and Social Development, 1969-72*. (Prl. 431), Dublin, Stationery Office, March, 1969, p. 26.

9. *Ibid.*, p. 26.

if accepted, could form a broad framework within which it would be necessary to disaggregate regionally the principal targets of the short term national programmes and also continually to modify and revise the long term projections in the light of contemporary trends.

A major social objective enunciated in the Third Programme is "an equitable sharing of economic progress, both among individuals and regions".¹⁰ Such a statement may be criticised for excessive vagueness. Does an "equitable sharing of economic progress" imply equal growth rates of regional personal *per capita* incomes (in which case the absolute gap in regional *per capita* incomes would still increase) or does it envisage an equalisation of regional personal *per capita* incomes? It could imply equal regional *per capita* private and public investment. The Programme also refers to the need for "regional development policies to ensure that the benefits of economic growth are spread throughout the country and that the potential of different areas to contribute to national growth is exploited".¹¹ Again such a statement is too ambiguous and qualitative to be of any real significance. Furthermore, the basic aim of the regional development programme based on growth centres is viewed as an attempt to "increase substantially the number of jobs available in the country, so reducing emigration, helping to correct the internal imbalance of population and hastening progress towards the objective of full employment".¹² Unfortunately, the term "internal imbalance of population" is not defined and therefore it will not be possible to assess the degree of success recorded in striving to achieve this goal.

The Third Programme outlines the need for regional policies to lay particular emphasis on the West.¹³ The principal approach to the problems of this area—and to rural development generally—is the same as in the Second Programme. The aims are, first, "to ensure the most intensive use of land within the limits set by market possibilities so that the maximum number of people can be retained in agriculture, consistent with social and economic progress; second, to create viable family farm units in small farm areas with minimum disturbance of the population; and third, to ensure, as far as practicable, that those who leave agriculture have adequate employment opportunities in other sectors of the economy".¹⁴ This statement illustrates the problems of multiple-objectives; each individual objective is qualified by constraints which are necessary when more than one objective, which is not totally complementary with the others, constitutes the objective function. However, it is legitimate to ask the meaning of retaining the maximum number of people in agriculture "consistent with social and economic progress". Does it imply retaining the maximum number of people in this sector consistent with maximising national growth of output *per capita*, or

10. *Third Programme*, *op. cit.*, p. 16.

11. *Third Programme*, *op. cit.*, p. 160.

12. *Ibid.*, p. 165.

13. *Ibid.*, p. 165.

14. *Second Programme for Economic Expansion*. Part II, Dublin, Stationery Office, 1964, p. 102, and *Third Programme*, *op. cit.*, p. 168.

does it envisage planning to release agricultural labour consistent with the rate of increase of jobs in the industrial and service sectors? Thus, as in the case of almost all the regional planning objectives of the Third Programme, there is a frustrating lack of clarity and precision in this statement.¹⁵ Such a lack of clearly defined objectives may reflect the wide conflict of views held in Ireland on the relative weights to be attached to each objective and such aims might constitute the higher level goal complex for rural development; but more specific objectives, the progress towards the achievement of which can be measured, are an essential prerequisite of an efficient, integrated and realistic planning programme. National planners have an exceedingly difficult task to perform, for they must guide the economy to a higher level of performance within constraints set by key variables such as supply of capital for investment, external balance of payments, private and public consumption, inflation and unemployment. But the location of investment projects and the spatial dimension of economic growth throughout the country are variables that should belong to this set¹⁶ and should consequently be subject to explicit policy determination.

Goals and Objectives

The lack of clearly specified regional planning objectives in Ireland, as in many other countries, makes systematic discussion of regional problems a difficult task. The ambiguity of the Third Programme's regional objectives has already been referred to and may partly explain why the debate throughout the country on the relative significance of different goals is more notable for its emotion and obvious concern than for its clarity. Yet the formulation of goals and objectives is of paramount importance since numerous decisions and courses of action follow from them, until such time as they are reviewed and modified. It is important to be aware that objectives are essentially conditional and dynamic and the priority given to them may be expected to change through time.¹⁷

A goal may be defined as an end towards which a planned course of action is directed—a desirable aspiration; usually they are generated within the political system. They are intentions or desires, general by nature, whose attainment is so distant that they cannot be programmed as part of a plan. Difficult or impossible to quantify they constitute ideals towards which planning objectives are oriented. It is then the task of various planning organisations to transform these goals into objectives—quantitative targets capable of observation, measurement, analysis and achievement—to be realized within a specified time horizon. Quantification is essential in order to evaluate the progress towards, or retrogression from, the attainment of an objective under certain strategies. Friedmann has suggested that

15. The author wishes to point out that the criticisms of the Third Programme's regional planning objectives should not be interpreted as applying to the Programme as a whole.

16. J. Friedmann, *Regional Development Policy: a Case Study of Venezuela*. Cambridge, Mass., and London, 1966, p. 46.

17. H. S. Perloff, "Key Features of Regional Planning", *Journal of the American Institute of Planners*, Vol. XXXIV, May 1968, p. 154.

the major goal of regional policy should be the "achievement of that spatial structure of the national economy which, at any point in time, is optimal for attaining an efficient path of transformation".¹⁸ Kruczala has stated that "there is one, overall, regional planning objective which should be universally accepted: the pursuit of optimal living conditions within the regional society".¹⁹ This according to Kruczala should provide a framework for all other objectives. While few would dispute Kruczala's view, many would argue over the definition of "optimal living conditions". As individuals vary widely in their value-judgements it is not surprising that they differ in the degree of importance they attach to different policy objectives and strategies.²⁰ The goals of Friedmann and Kruczala could be operationalised into such long-range intentions as a regional economy providing full employment, equal opportunity for all, elimination of depressed areas or the provision of convenient retail centres within the region. These statements do not provide an adequate basis for designing a plan until they are transformed into one or more variables that are amenable to measurement. Goals, however, must be sufficiently broad to encompass a range of social and economic aims; to stimulate the politicians and the community and further, to infuse the planning effort with a sense of purpose.²¹

Qualitative and Quantitative Objectives

One of the most intractable problems faced by planners is that of comparing qualitative and quantitative objectives and attempting to incorporate them into the same objective complex. It can be argued that to some extent the distinction is artificial: Ackoff has stated that "any qualified property is potentially capable of being expressed quantitatively in terms of a range along a scale".²² Many social concepts originated as non-quantitative impressions (e.g. poverty, educational status, level of living) but their full significance can only be appreciated if they are given quantitative expression in terms of degree of poverty, level of educational attainment, or a numerical value for the level of living. The quality

18. J. Friedmann, "Regional Economic Policy for Developing Areas", *Papers of the Regional Science Association*, Vol. 11, 1963, p. 53.

19. J. Kruczala, "The Attempt to Formulate the Theoretical Base of Regional Science", *Papers of the Regional Science Association*, Vol. 10, 1963 (European Congress, Zurich, 1962), pp. 48-49.

20. The questions as to who decides upon the priorities to be assigned to different objectives, upon whose values they are to be based and who is to benefit are of fundamental importance in a democratic society composed of a multitude of groups with different values. In practice the views of professional social scientists, politicians, community leaders and pressure groups such as industry, trade unions, farmers and employers weigh heavily in the decision-making process. To what extent, however, they collectively reflect the views of the Irish people is a matter for conjecture. There is clearly a need for more widespread and informed debate on the relative importance of objectives and the implications of adopting different sets of regional planning goals.

21. J. B. McLoughlin, "Social and Economic Goals: Programming/Investment Priorities", Discussion Paper, Regional Planning Conference, Ireland, 1969, p.1.

22. R. Ackoff, *Scientific Method: Optimising Applied Research Decisions*. New York, 1962, p. 20.

of the environment is much more difficult to define than are fiscal and monetary relationships. Economists have traditionally been too obsessed with quantifiable, market-price dimensions of development and have devoted little effort to the analysis of the qualitative aspects of regional change.²³ Because of increasing population densities and urbanisation in Ireland, with their serious impact upon water, air and open space, it has become an urgent task to develop methods of analysing and incorporating qualitative phenomena into a regional development objective complex. Advances in quantifying these ecological and environmental characteristics require qualitative judgements relating to the development of valid scales of measurement.²⁴ At worst, qualitative objectives can be measured on either a nominal or ordinal scale. Also, in many cases, surrogates that can be measured on a higher order scale may be employed in place of the original variables. In this procedure a broad concept is first divided into several component parts and then indicators are found to represent the components. The underlying assumption is that the original concept is a function of the measurable indicators. A sufficient number of indicators should be introduced so that all the essential features of the concept are represented.²⁵ Thus many qualitative environmental aspects of development may be expressed quantitatively through such measures as quantity of pollutants per unit of air or water, levels of noise, recreation space *per capita*, etc. However other difficulties will arise: how many vacation bungalows can be absorbed by a rural landscape fringing Lough Swilly in Donegal before becoming excessive from the aesthetic and amenity viewpoint? How can one clarify operationally an objective to ensure that redevelopment of a Georgian area in Dublin should be in keeping with the scale and character of the immediate surroundings? Questions of value judgement and personal preference are important in such cases but the objectives should still be specified as clearly as possible. Planners are under an obligation to society to state whose views are paramount in determining such questions and to what extent the public at large has been consulted. In general, the problem of incorporating quantitative and qualitative objectives in the one goal complex can be overcome largely by one of the methods outlined and should not prevent the inclusion of relevant variables in an objective complex.

The Hierarchical Nature of Objectives

If it is decided that one of the major goals of regional planning is to increase the level of economic welfare, the department responsible for planning may operationalise this as an objective to maximise the increase in *per capita* incomes

23. John H. Cumberland, "A Regional Interindustry Model for Analysis of Development Objectives", *Papers of the Regional Science Association*, Vol. 17, 1966, p. 84.

24. M. Hill, "A Goals Achievement Matrix for Evaluating Alternative Plans", *Journal of the American Institute of Planners*, Vol. XXXIV, January, 1968, p. 24.

25. J. Drewnowski, *Social and Economic Factors in Development*. Report No. 3, U.N. Research Institute for Social Development, Geneva, 1966, p. 20.

arising.²⁶ This could also be regarded as a strategy to increase the level of economic welfare. Increasing *per capita* incomes could then be designated as a lower level objective for which it may be decided that the optimum strategy is to increase productivity. Again at a lower level increasing productivity may be specified as an objective for which the strategy selected is to increase expenditure on education and training. Hence there evolves the deductive notion of the "hierarchy of objectives proceeding in concept from the very broad to the specific".²⁷ Alternatively, a regional goal might be to "provide the most convenient pattern of shopping centres for residents in an area". This could be operationalised as an objective "to minimise aggregate distance of travel to large shopping centres" and regarded as a strategy to achieve the original high level goal. At a lower level again a strategy to "restrict new housing development in the region to within five miles of major centres" may be viewed as a policy to achieve the objective to minimise the aggregate distance of travel to large shopping centres. From the examples quoted it can be seen that higher level goals and objectives reach down to the level of individual policies, programmes and projects. The costs of each project should be assessed in relation to its effectiveness in achieving high level objectives. Different objectives and strategies may all lead towards the same goal but with varying costs and benefits.²⁸ The decision makers should proceed through a sequence of objective choice and strategy selection, in which the strategy chosen at any one stage in the sequence becomes the objective for the next stage when a more detailed specification of the strategy is made.²⁹ In addition the strategies selected should be those that yield the greatest social benefit to social cost involved. Hence in choosing from the alternative strategies available to achieve a given objective the one selected should be that which interferes least with the most efficient allocation of resources. In this way conflicts between regional policies and national efficiency can be kept to a minimum. As a result, two hierarchies exist: one of objectives and the other of strategies which proceed from the most generalised goal-statement at the top to detailed projects at lower levels in the hierarchy. This simple conceptual framework is of great practical value particularly when examining multiple-objectives and strategies. It makes clear the distinction between the objectives that are derived from others at higher

26. There is a large number of variables that may be employed as surrogates for economic welfare: Gross National Product, Gross Domestic Product, Gross Regional Product, Net National Product, *Per Capita* income arising, *Per Capita* personal income, Output per man-hour, Consumption *per capita*, etc. The Planning authorities, therefore, must also make a set of decisions upon which indices to employ as measures of social and economic welfare. For a discussion of this topic, which lies beyond the scope of this article, see J. Drewnowski, *Social and Economic Factors in Development*. Report No. 3, United Nations Research Institute for Social Development, Geneva, 1966; and J. Drewnowski and W. Scott, *The Level of Living Index*. Report No. 4, United Nations Research Institute for Social Development, Geneva, 1966.

27. G. H. Granger, "The Hierarchy of Objectives", *Harvard Business Review*, Vol. 42, May-June, 1964, p. 65.

28. J. Brian McLoughlin, *Urban and Regional Planning*. London, 1969, p. 107.

29. M. A. Poole, Discussion Paper, Geography Department, Queen's University, Belfast, 1969.

levels in the same hierarchy, which cannot, by definition, be in conflict, and other objectives at the same level in the hierarchy which are often incompatible with each other.³⁰ This concept forces planners to think both horizontally and vertically in relation to their objective sets: given a simple objective statement, such as minimising net outward migration, it stimulates inquiry as to what are the higher level objectives to which this is related, what are the strategies and lower-level objectives by means of which it may be achieved and what other objectives on the same tier of the hierarchy are in conflict with it. Accordingly, if such a framework of goals and objectives is established, the Government has a better chance of ensuring that all departments, public and private firms are working towards common purposes which are mutually consistent and realistic, for each project and programme should be carefully scrutinized for consistency with higher level goals. The measure of consistency will be an expert judgement that will be prone to some degree of error but it is better for decisions to be made in the context of specific value criteria than in total ignorance about the desired direction of development.³¹

The Resolution of Conflicts between Multiple Objectives

In many cases goals set within the context of the political system will not be mutually consistent since many countries fail to consider the compatibility of their several goals with one another and, when they are opposed, to reconcile these conflicts in a way which will best promote the totality of their objectives. Conflicts between goals can occur in a number of ways: (1) conflicts between the goals of the individual; (2) conflicts between the individual's role and the goals of society; (3) conflicts between national and regional objectives; (4) conflicts within national or regional objectives. Looking at conflicts of the first type, an individual cannot confine his attention to the objectives of one field of activity and ignore the other parts of his life.³² A new post that satisfies a career goal may entail a shift of residence location which puts stresses upon family relationships. In this case, the individual must attempt to weigh his different objectives, one against the other. This is a difficult task to perform because there is no way of measuring the unified importance of different objectives; in some way the alternatives must be evaluated across a range of objectives. This problem must also be faced by those responsible for formulating regional and national goals. For example an optimum policy designed to maximise the rate of expansion of GNP is unlikely to be the optimum strategy for maximising growth in every individual region of the national economy. Under a national growth-maximisation policy some regions will expand more rapidly than others, but there may be certain regions that will suffer from the concentration of investment and pro-

30. *Ibid.*

31. J. Friedmann, *op. cit.*, 1966, p. 59.

32. David W. Miller and Martin K. Starr, *The Structure of Human Decisions*. New Jersey, 1967, p. 47.

ductive factors in the most advantageous locations and their growth path will be, a priori, sub-optimal. A policy to maximise the rate of expansion of GNP may also cause an increasing divergence of regional *per capita* income levels. Conversely, an optimum policy for maximising the growth rate of the poorest regions may be sub-optimal for national economic growth if the social marginal product of capital is lower in such areas. A lower overall efficiency of investment is likely in poorer regions as there are fewer locations of development potential in such areas than at the centre. There may be certain places where growth potential is as promising as anywhere in the country but there are also large areas in such regions where the social marginal productivity of capital is below that in growth areas of the economy. Hence an optimum growth strategy for poorer regions will not be optimal for the nation as a whole and will therefore lower the rate of national expansion and have detrimental effects on other goals such as unemployment and emigration; this is clear evidence of sub-optimisation and the issue for planners is to decide on the relative trade-off between conflicting goals.

It is conceivable that the choice of a strategy to reduce regional disparities in one variable may lead to a widening of them in relation to another. There are certain conditions, for example, under which increasing regional employment will not result in a rise in the level of regional *per capita* income arising. Ignoring the regional multiplier effects of new employment and payments to owners of land and capital, the effect of a new activity on regional *per capita* income will depend upon the level of income in the enterprise and the source of its labour. If incomes in the new firm are above the regional average and the number of dependents per employee is equal to or less than the regional mean, regional *per capita* incomes will rise. If income levels in the firm are lower than the regional mean its introduction into the region can still raise the regional *per capita* income level, provided that it hires labour in the region that was previously unemployed or earning lower wages than the firm is paying. If unemployed people are employed in the firm then both total and *per capita* regional income will increase. If new immigrants are brought to reside in the region (because there is full employment in the region or because the quality of labour available is not suitable) they will cause an increase in total regional income but will only increase regional *per capita* incomes if their incomes are above the regional mean. Thus, abstracting from regional multiplier effects and returns to capital and land, unless development puts to work unemployed or underemployed people already resident in the region, or unless it pays new immigrants incomes above the regional mean, new activity, while increasing employment (assuming that some unemployed are given jobs even if the previously underemployed are not replaced) may fail to raise regional *per capita* incomes arising. Hence increasing regional *per capita* incomes and regional employment are not consistent objectives except in the circumstances specified above. Conversely, a policy to maximise growth of *per capita* incomes arising at regional level may be effected by a strategy to increase productivity by means of a lower level strategy of capital deepening. This substitution of capital for labour

will result in redundancy and higher unemployment unless (assuming the capital-labour ratio remains constant) the productivity increase is accompanied by a correspondingly large increase in output. Thus if the increased factor earnings of those remaining plus the welfare assistance of those rendered unemployed exceed the original aggregate factor income, regional *per capita* incomes will rise while employment may fall.

As multi-dimensional objectives are both desirable and the norm³³ the problem of resolving inter-objective conflicts must be tackled in a systematic fashion. It is not possible to maximise two variables simultaneously unless they are independent. When objectives are dependent the optimisation of one may result in a lower degree of attainment for at least some of the others: a sub-optimal solution.³⁴ One way of solving the multi-dimensional problem is by weighting the individual variables. For example the objective-complex may be stated as: 5 per cent annual growth in GNP, 4 per cent growth in poorest region, 6 per cent unemployment, 3 per cent inflation and an annual deficit of 20 million pounds on the balance of payments current account. How can one judge whether such an objective complex is preferable to one such as: 6 per cent annual growth in GNP, 2 per cent growth in poorest region, 4 per cent unemployment, 4 per cent inflation and a deficit of 50 million pounds on the balance of payments current account? Is 6 per cent growth at national level with 2 per cent in the poorest region a more desirable aim than 5 per cent national growth and 4 per cent in the poorest region? It is not possible to decide which combination of weights attached to individual objectives will optimise the economic and social welfare of the nation for the mix of variables cannot be transformed into a common measurement scale and a choice made on that basis. All problems involving conflicting objectives must be approached with full awareness of the fact that all of the different outcomes cannot be expressed in terms of a single utility measure. In practice, goals and their relative weights and constraints will have to be decided as a result of a complex process of interaction among politicians, planners, administrators, various formal and informal community groups, opinion polls and public hearings.

In an alternative solution regional planning is introduced as an integral component of a national decision model, the aim of which is to maximise some index of national economic welfare within certain regional constraints. For example, in a country where A is the poorest region and x per cent is the national average growth rate the objective could be specified as: maximise the growth of *per capita* incomes nationally subject to the constraint that the growth of *per capita* incomes in region A $\geq$ x per cent. This is easily introduced into a programming model although it may be difficult to achieve in practice.³⁵ A more flexible approach could be adopted such as:

33. C. L. Leven, "Establishing Goals for Regional Economic Development", *Journal of the American Institute of Planners*, Vol. XXX, 1964, pp. 102-103.

34. David W. Miller and Martin K. Starr, *op. cit.*, p. 48.

35. H. W. Richardson, *op. cit.*, 1969, p. 371.

Maximise

$$\frac{\Delta I_A}{\Delta I} = a$$

where ΔI = percentage change of national *per capita* income

ΔI_A = percentage change of *per capita* income in region A.

Subject to alternative constraints:

- (a) $a > 1$
- (b) $a = 1$
- (c) $0 < a < 1$
- (d) $a = 0$
- (e) $a < 0$.

Constraint (a) calls for a faster rate of increase in *per capita* incomes in the poorest region than at national level. Constraint (b) envisages equal *per capita* income growth rates in A and at national level, while (c) plans for a lower rate of increase in A than nationally—but does imply an absolute increase. Policy (d) implies stagnation at the local level in A while (e) is designed to induce a falling *per capita* income level in the poorest region. On the evidence of the county income estimates derived by Ross³⁶, for 1960 and 1965, it appears that in Ireland the situation described by constraint (c) exists—the growth rate of *per capita* incomes in the poorest counties is below the national average. Other variables such as: maximising employment growth, minimising transport costs in interregional trade, minimising net outward migration, unemployment or inflation could be built into such an objective-function.

This method of harmonising objective conflicts is not greatly dissimilar from the weighting system,³⁷ for specification of constraints, superficially a different type of exercise than choice of weighting, implicitly specifies the marginal weight attaching to regional output growth relative to national growth. Relegation of constraints to a special category is designed to give them priority, to assert the proposition that they must be achieved before other objectives are allowable.³⁷ Ideally, effects on the values in the objective function of relaxing or tightening each constraint in turn should be examined. It may be hypothesised, that an objective function to maximise the national growth rate, subject to the constraint that the growth rate in the poorest region should not fall below the national average, yields a national growth rate of 4 per cent. It is then desirable, using a regional input-output model of the economy, to examine the consequences of tightening the objective constraint, first 1 per cent. above the national level, then 2 per cent and so on. At each stage the amount of national growth sacrificed for faster growth in the poorest region becomes explicit. If, as a result of increasing the national constraint by 1 per cent, no national growth is lost, then the original

36. Miceal Ross, *Personal Incomes by County, 1965*. Economic and Social Research Institute, Dublin, Paper No. 49, 1969.

37. N. W. Chamberlain, *Private and Public Planning*. New York, 1965, p. 67.

constraint is not binding. On the other hand, if the national average constraint is binding and yields an overall growth rate of 4 per cent the effects of relaxing the constraints should be considered. If an objective function to maximise the national growth rate, subject to the constraint that the growth rate in the poorest region should equal the national rate minus 1 per cent, yields a national rate of 5 per cent it would certainly be wise to question the choice of the original constraint. Conversely, if setting the regional growth constraint at the national average plus 3 per cent only lowers the national rate to 3.9 per cent—the feasibility of such an objective function would merit consideration. Other constraints, such as reducing cyclical swings—expressed in the form of a stability function (for example, limiting the proportion of consumer durable production in total output) may be needed. Regional objectives should be evaluated in terms of the opportunity costs of national growth rates and other goals. Objectives are thus subject to modification, trade-off and substitution between each other. Marglin has suggested that constraints for new investment programmes might be revised periodically (for example at the start of each five year programme) to reflect information generated during the previous planning period.³⁸ It is vitally important that the problem of objective conflicts should not be ignored or any relevant objectives be subordinated because of a lack of suitable data. Informed decisions on the trade-off between objectives must await the preparation of a regional input-output model but, in the short-term, objective functions with constraints can be prepared on the basis of current knowledge of the spatial dimension of the economy. Contradictions between the goals of different regions are also common. An optimum strategy to achieve the objectives of one region (e.g., reducing the level of net outward migration) may hinder the achievement of objectives in others and thereby affect national welfare: this is another aspect of the sub-optimisation problem. Regions may compete one against the other in lobbying the Government for preferential treatment in the spatial allocation of the capital budget or the location of Government investment. Success may ultimately be more dependent on political pressure than on efficiency. The inference to be drawn from this is that regional policy makers should not be given too much independence or executive authority and that the central government must arbitrate between the regions. This requires a continuous process of consultation between regional and national authorities; the former identifying problems and tendering proposals for their solution and the latter reconciling the demands of competing regions.

Problems will arise if, as is the norm, the objective functions for different regions contain several variables and the weighting of each variable differs from region to region. The discrepancies in regional preference functions may make it unlikely that these differences will be automatically resolved in a consistent ordering of these goals at national level. Suppose there are three regions (R_1 , R_2 and R_3) all of which include three objectives (a , b and c) in their development proposals, but give them different weights so that for R_1 , $a > b > c$; for R_2 ,

38. S. A. Marglin, *Public Investment Criteria*. London, 1967, p. 37.

$b > c > a$, and for R_3 , $c > a > b$. As matters stand, no compatible ranking of goals may be derived. For region R_1 , $a > c$ through transitivity, but for R_2 , $c > a$. In the same way, for R_2 , b is more important than c , but for R_3 , $c > b$; another majority $R_2 + R_3$ imposes the rule $c > a$. Hence through transitivity $c > b$. But a majority $R_1 + R_2$ is in favour of $b > c$. Boudeville³⁹ has shown that this dilemma can be resolved. If the state intervenes as an arbiter and if a fourth objective is introduced without changing the order of the other three in any way, a solution is possible.

In establishing goals for regional development plans there will frequently be a conflict between short and long term goals. Inevitably politicians favour short term objectives and programmes with "pay-offs" before the next election. Yet a regional development strategy which concentrates on short term objectives is likely to fail in achieving long term goals.⁴⁰ Legislatures in Ireland turn over every five years and each new legislature inherits full authority to act as it sees fit; it is not bound by previous legislatures except as it chooses to honour their commitments. This may seriously undermine regional planning programmes which of their very nature are long term in scope; yet under the existing system what has been initiated during the life of one Government may be scuttled, modified or redirected by subsequent legislation. France has overcome this problem by a device known as programme laws, first introduced during the Second Plan, in 1958. "Of all the criticisms levelled against the present policy regarding public investment the one most frequently voiced . . . concerns the insecurity of the credits voted. It is thus necessary to establish programme laws which will guarantee to the bodies responsible for their execution, a fixed amount of funds for the duration of the plan. They will constitute a 'super budget' which the authorities will be forbidden to interfere with in the preparation of the annual budgets."⁴¹ Such legislation might also be deemed necessary in Ireland if long term regional plans are to be fulfilled.

The Concept of Balanced Regional Development

This aim is so frequently alluded to in discussions of regional welfare disparities but so seldom defined in the literature both here and abroad that it is necessary to discuss it in any treatment of regional planning objectives in Ireland. A number of Irish writers, in addition to the Government's Third Programme, maintain that various aspects of "regional balance" are of critical importance. Curtin, for example, has suggested that the primary objectives of economic development in Ireland are the "twin goals of full employment and balanced regional development".⁴² Unfortunately, the author does not define what is meant by "balanced

39. J. Boudeville, *Problems of Regional Economic Planning*. Edinburgh, 1966, pp. 131-5.

40. Stefan H. Robock, "Strategies for Regional Economic Development", *Papers of the Regional Science Association*, Vol. 17, 1966, pp. 129-144.

41. English Translation from PEP, *French Planning: Some Lessons for Britain*, pp. 373-374.

42. V. Curtin, "Regional Planning Problems and Possibilities in Ireland", in *Planning in Ireland*, ds., F. Rogerson and P. O'hUiginn), Dublin, 1967, p. 50.

regional development". Newman has spoken of the need to make the "national culture in general a more balanced one".⁴³ He was referring to the rural-urban dichotomy but neglected to specify the rural-urban proportions consistent with his concept of a "balanced" culture. Also Smith, with reference to Ireland, has stressed that there "is a need for a geographical and social balance in employment".⁴⁴ Does a "geographical balance in employment" imply an equal rate of employment growth in every region, or does it refer to equal employment opportunity in every area? Meagher has asserted that planning must seek to establish a comprehensive physical framework within which "a balanced distribution of planned economic activities will be achieved".⁴⁵ This implies that the programme planners have already defined what is a balanced geographical distribution of population and can readily monitor deviations from such an equilibrium; but, regrettably, this optimum state of balance is not specified. A similar criticism may be made of the Buchanan Report when it contends that "by measures to influence the location of new industry, the Government has the possibility, over a period of years, of playing a very important part in shaping the future regional balance".⁴⁶ Later the consultant's report refers to "breaking down the overall forecasts among the different parts of the country, and devising policies for achieving a desirable balance of prosperity and growth between the areas".⁴⁷ Again we are not informed as to what constitutes a "desirable balance of prosperity and growth between areas".

All of these writers have referred to regional balance in somewhat ambiguous terms and none has presented an explicit definition of the objective function. Is it possible to define balanced regional development? Fisher⁴⁸ has suggested that there is a number of concepts subsumed within the macro one: (i) that the socio-economic variables which constitute the regional objectives should converge towards the national average; (ii) that certain sectors of the economy are lagging behind—in agricultural regions more industry is required and vice-versa. It is also frequently argued that each region has its own appropriate balance between agriculture and industry and that it should be the aim of policy to move towards that point. Some regard it as synonymous with equality: that regional *per capita* income levels should be equal. This implies that poorer regions must grow at a faster rate than richer ones in order to bring about absolute convergence. Another possible interpretation is that growth rates of *per capita* incomes arising should be equal in every region. Historical evidence shows that rapid growth tends to

43. J. Newman, *New Dimensions in Regional Planning: a case study of Ireland*. Dublin, 1967, pp. 38-9.

44. L. P. F. Smith, "Employment Prospects in the Republic of Ireland", *Christus Rex*, Vol. XVIII 1964, p. 250.

45. G. A. Meagher, "Planning and National Development", *Administration*, Vol. 13, 1965, p. 247.

46. *Regional Studies in Ireland*, p. 93.

47. *Ibid.*, p. 181.

48. J. L. Fisher, "Concepts in Regional Economic Development", *Papers of the Regional Science Association*, Vol. 1, 1955, W-8.

affect areas unevenly. To aim at steady inter-regional development may therefore involve the choice of having to sacrifice national growth for spatial stability. Robock is of the opinion that balanced regional development implies that resources should be distributed geographically in an inverse proportion to the existing level of welfare.⁴⁹ Should a region be considered in balance when it is progressing towards some pre-determined measure of its own potential? Should intersectoral investment be balanced regionally or is investment divided by population, number of households or unit area a more appropriate criterion? It has been emphasised that both in Ireland and abroad the concept of balanced regional development has a wide variety of meanings. Seldom is the aim defined in quantitative terms so that progress towards the achievement of the objective can be measured; this is a valid general criticism of goal formulation and objective specification throughout the whole field of regional planning. If this physical analogy is to be incorporated in any future objective-complex in Ireland one hopes that the planners will specify the concept in a more meaningful and precise manner than in the past.

National Efficiency and Inter-regional Equity

An important set of decisions that must be made by the Government are those relating to the width of spatial, social and economic welfare disparities to be aimed for during a programme period. For example, if the Irish Government wished to initiate a convergence policy so that the absolute differentials in personal *per capita* incomes between the richest and the poorest counties would be reduced, with the constraint that the annual rate of growth of personal *per capita* incomes in Dublin should not fall below 5 per cent (in real terms), it would require in the first year a growth rate of 9.11 per cent in Co. Leitrim to stabilise the differential and a rate greater than 9.11 per cent to both reduce the absolute differential and initiate convergence. Thus, assuming a rate of 5 per cent in Dublin, the rate of growth in Leitrim could exceed this figure by up to 4.11 per cent and the absolute differential in mean personal *per capita* income would continue to increase. If the Government desired to initiate convergence at planning region level, with the constraint that the annual growth of *per capita* incomes in the Eastern Region should not drop below 5 per cent, a growth rate of 8.35 per cent would be needed in the Donegal Region to stabilise the absolute differential and a rate in excess of 8.35 per cent to start convergence. This sets in a clear perspective the scale of regional disparities in Ireland. Most regional policies are based upon growth rate differentials on the realisation that although absolute income disparities may be more meaningful politically, to expect that a programme aimed at convergence will result in a reduction of absolute differentials is something of a utopian ideal. Even the highly integrated American economy, with its trend towards regional convergence, has been unable to reduce the absolute gap between

49. S. Robock, "Regional and National Economic Development in India", *Papers of the Regional Science Association*, Vol. VI, 1960, p. 72.

North and South; and in Italy, despite a sustained post-war effort by the government to develop the South, real income per head there as a percentage of that in the North fell from 63 to 55 per cent between 1951 and 1962.⁵⁰ This occurred despite an unprecedented rate of expansion in *per capita* income levels in the South over the same period.

The Irish Government, however, is committed to the concept of equal opportunity. Since one's place of birth is as fortuitous as one's class should an individual be penalised because he is born in the West? It is perfectly reasonable to argue that large regional inequalities in income are just as intolerable as severe inequalities between the incomes of individuals. But regional development is a dynamic phenomenon: the emergence of growth cores in the course of development means that "inter-regional inequality of growth is an inevitable concomitant and condition of growth itself".⁵¹ Economic growth implies change and therefore it is misleading to view it as a static concept in terms of an optimum combination of factors of production or full employment of the factors in a particular region. As a consequence of the uneven spatial distribution of national resources the growth and decline of different sectors of the economy is not spread evenly so that through time there will be a kaleidoscopic pattern of differentials in *per capita* incomes between regions.⁵² Investment is lumpy and to be economically feasible many projects have to be undertaken on a large scale at a limited number of locations; external economies and indivisibilities provide a strong motive for agglomerating industrial investment. Hence as growth in the spatial sense is axiomatically unbalanced complete equity in regional welfare distributions could only remain in equilibrium under a stagnating economy and once growth is initiated again disequilibrium will be established. By employing personal *per capita* income levels as a proxy variable for economic welfare the critical problem is to decide what level of spatial inequality in this variable is consistent with maximising *per capita* output at national level. Assuming that such a distribution would result in marked regional disparities, to what extent should the goal of maximising *per capita* income growth at national level be compromised to alleviate regional differences? To what degree are disparities to be reduced? A national preference function is likely to involve an equity as well as a growth component. The weight of the equity objective will depend upon the level of disparities and value judgements. Equity, however, as Reiner has aptly described it, is a "slippery concept" and several notions exist.⁵³ Is equity a matter of equal growth rates or an equal share in the benefits of growth? Is equity achieved if existing disparities do not deteriorate or does it involve the elimination of regional

50. *The Economist*, March 28th, 1964.

51. A. O. Hirschmann, *The Strategy of Economic Development*. New Haven, 1958, p. 184.

52. M. J. Pullen, "Regional Development in the United Kingdom", in *Planning and Growth in Rich and Poor Countries* (Eds., W. Birmingham and A. G. Ford), London, 1966, p. 109.

53. Thomas A. Reiner, "Sub National and National Planning: Decision Criteria", *Papers of the Regional Science Association*, Vol. XIV, Ghent Congress, 1964, p. 114.

welfare differentials? The latter concept is widely held. Is equity to be expressed (as is commonly done) by measures of central tendency—the mean or median income levels—or is a more meaningful index of well-being to be found in an analysis of the spread of values?⁵⁴ It has already been argued that it is unrealistic to seek for and implement policies to bring about an equalisation of welfare; but policies based upon growth rate differentials are likely to be both desirable and practical.⁵⁵ The precise width of spatial welfare disparities to be aimed for must become an explicit policy objective. This will depend upon the value judgements of individuals and decision makers but is also a function of time scale and the size of spatial unit selected. In the short term a policy of maximising real *per capita* national income would result in a further increase in regional disparities and would therefore be in conflict with the goal of social equality. In the long run, however, national growth and relative convergence at planning region level may be consistent aims if certain premises are accepted and location policies implemented.⁵⁶ This is in contrast to the usual view in Ireland that the objective to reduce regional disparities is envisaged, not as a means to maximise national welfare, but as a high level objective for its own sake. Problems arise because clearly the sum of maximised income per head in each region does not equal maximised national income per head, except in a world of perfect competition. Regional planners may propose strategies to maximise regional income growth but this is likely to involve committing some resources to uses that are inefficient from the national viewpoint. In evaluating regional investment projects in terms of their future costs and benefits consideration must be given to the social opportunity cost of investment as measured by returns to factors in alternative uses and locations in the national economic space. In the case of public projects the social opportunity cost is the present value of what society gives up in order to obtain the benefits of the particular project and Whelan has argued that the appropriate measure of the social opportunity cost of a public project is the discounted value of the consumption stream that would have occurred and would have been availed of by society, had the project not been undertaken.⁵⁷ The execution of a convergence policy, without sacrificing national growth, will only be possible if the long run marginal efficiency of capital, private and social, at the points of maximum growth potential in the depressed areas at least equals that in the remaining regions of the country. Furthermore, it is desirable, if higher level goals are to be achieved, that relative convergence should not be brought about by reducing the wealth of

54. *Ibid.*, p. 114.

55. Walter Isard and Thomas Reiner, "Regional and National Economic Planning and Analytic Techniques for Implementation", in W. Isard and J. H. Cumberland (eds.) *Regional Economic Planning*. O.E.C.D., Paris, 1961, p. 22.

56. Patrick N. O'Farrell, "Regional Development in Ireland: the Economic Case for a Regional Policy" (forthcoming).

57. Noel Whelan, "Social Opportunity Cost of Government Investments", *Administration*, Vol. 16, No. 3, 1968, p. 304. See also M. S. Feldstein, "Opportunity Cost Calculation in Cost Benefit Analysis", *Public Finance*, Vol. 19, 1964, p. 117.

prosperous regions, but rather by expanding that of poorer ones. Whatever the relative weights of the equity and growth goals, decisions will need to be reached on the degree of inter-regional convergence to be aimed for in various indices of social and economic welfare.

Spatial Units

In addition to deciding on the variables to include in the objective-complex, their specific constraints and on the degree of convergence to be aimed for over a given period of time, those responsible for policy formulation and execution must also make explicit the boundaries and size of the regions towards which these policies will be directed. There is a discontinuous series of aggregation levels at which policies could be implemented.⁵⁸ This ranges from the individual person to a household through to more macro-scale units such as townlands, parishes, urban and rural districts, counties, planning regions, provinces, designated areas and non-designated areas, to the nation unit. The decision on the set of regions whose level of social and economic welfare is to become the focus of government policy is, like the others enunciated above, of vital importance. For example, the optimum policy to reduce *per capita* income differentials at planning region level, consistent with maximising national growth in the long-run, may result, as it is likely to involve concentrating investment at the most advantageous locations, in increased spatial disparities at county or rural district level within the planning region. What range of heterogeneity is acceptable at intra-planning-region level? Some might argue that inter-regional convergence is a relatively meaningless goal if at intra-regional level disparities remain or indeed increase as a consequence of the inter-regional development programme. This internal inequality may be expressed spatially or largely non-spatially (as where minorities or disfavoured groups are scattered throughout the region).⁵⁹ Policy objectives could be formulated with respect to more than one level of aggregation. It has been suggested elsewhere that there is a need to select a hierarchy of region sets.⁶⁰ Goal statements for small areas lower down in such a hierarchy would effectively operate as constraints upon the achievement of objectives set for larger regions at a higher level in the hierarchy. This would follow further decisions on the areal scales to be introduced and the degree of spatial variation in welfare variables to be tolerated at each level.

There is no optimal set of planning regions for the ideal spatial unit based upon efficiency criteria for one function will not necessarily be perfect for another. Even if it were possible to define empirically optimum spatial units for different objectives it would be impossible to aggregate them objectively because of the

58. M. A. Poole, "Decision Making and the Formulation of Regional Development Objectives: the case of rural Ireland", forthcoming in *Irish Geographical Studies* (ed. N. Stephens and R. E. Glasscock).

59. Thomas A. Reiner, "Organising Regional Investment Criteria", *Papers of the Regional Science Association*, Vol. II, 1963, p. 65.

60. M. A. Poole, *op. cit.*

contrasting importance of goals and the relative significance placed upon them by groups in society. The decision on the size of regional units is of great importance as it will directly influence the scale at which disparities will increase or decrease. In practice they are likely to emerge as a result of an interaction process between national objectives and constraints, regional objectives, the degree of convergence desired in welfare indices and the influence of various pressure groups upon decision makers.

Conclusion

It has become apparent throughout the course of this paper that the design and implementation of an integrated national and regional planning policy is a highly complex process involving close interaction between a number of decision-making levels. A hierarchical decision model has been presented reaching down from aggregate sectoral planning at national level through detailed targets at regional level to individual projects and their locations at local level. Both horizontal co-ordination between plans on the same level in the hierarchy and vertical co-operation with plans at high levels are essential if an optimal spatial distribution of resources consistent with development objectives is to emerge.

A critical innovation in the overall formulation of goals and objectives is that regional strategy should become an integral part of national growth policy. This will involve a regionalised transformation of the major sectoral growth targets and investment goals of the national programme which will provide a framework within which regional objectives relating to *per capita* incomes, unemployment, emigration, etc., will be achieved. From the regional growth targets it will be possible to derive estimates of the employment shift by sectors, population change, unemployment, migration, the increase in GRP and *per capita* income change. If more employment is required in a specific region or if it is desirable to increase incomes more rapidly then changes in the sectoral targets and investment schedule may be made; such changes will have, however, important inter-regional repercussions in terms of foregone opportunities elsewhere. If the marginal efficiency of capital is lower than in other areas such policy changes will have a detrimental affect upon national growth.

Another important decision to be reached is a specification of the higher level goals of Irish society; these must be articulated through the political process. These high level social and economic welfare goals must then be transformed into quantitative variables for inclusion in an objective complex. Inevitably more than one variable will appear in the objective-complex and decisions must be made on the relative weights and constraints to attach to each variable. The problem of multi-dimensional goals must therefore be resolved. Alternative strategies for the achievement of specific objectives must be considered and those selected should be the ones that maximise social benefits to social costs. The question of whether the current pattern of spatial welfare disparities is acceptable or whether some alternative distribution should be aimed for merits careful consideration. This paper has argued that a policy of equalising existing spatial welfare disparities is

unrealistic and would involve considerable sacrifices in terms of national growth, but that a strategy to reduce relative disparities is not only desirable on grounds of social justice, but in the long term, given certain locational policies, is consistent with maximising national output. Explicit decisions will have to be made regarding the precise degree of inter-regional convergence to be aimed for in welfare indices.

Decisions must also be made on the size and boundaries of the regional units towards which planning strategies will be directed; the problem of whether to make intra-regional variation a subject of policy must be considered and, if it is judged desirable that it should, further decisions must be made on the hierarchy of spatial units for which intra-regional variation will be monitored.

It is vitally important that all these problems are resolved consciously and publicly; that they are not shrouded in ambiguity and vagueness nor lacking in specificity as the Third Programme objectives are, but are clearly outlined to the community. Given our current stage of knowledge not all factors relevant to social and economic welfare can be taken into account in the decision-making process. Planners must continually wrestle with a social system which is only partly comprehended, but it is better that decisions be made on this basis than for the Government and people to be totally unclear about the future direction and trend of regional development.

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