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Urban Stud 1999 36: 1195

DOI: 10.1080/0042098993187

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Growth-pole Strategies in Regional Economic Planning: A Retrospective View.

Part 1. Origins and Advocacy

John B. Parr

[Paper first received, July 1997; in final form, January 1999]

Summary. The paper undertakes a detailed examination of growth-pole strategies, an emphasis in regional economic planning during the 1960s which never lived up to its early promise. The initial concern is with the origins of the strategy, particularly the manner in which the work of Perroux (on dominance and economic space) became modified to form a normative concept in regional economic planning. Consideration is given to the various regional-problem settings in which the growth-pole strategy has been advocated. These settings reflected such policy concerns as depressed-area revival, the encouragement of regional deconcentration, the modification of a national urban system, the pursuit of interregional balance, etc. Attention then turns to the fundamental nature and underlying rationale of the strategy. The paper is continued in Part 2 which appears in the next issue of the journal.

1. Introduction

One of the more intriguing aspects of the analysis and practice of regional economic planning over the past several decades has been the changing attitude towards the growth-pole strategy. This strategy or family of strategies has been proposed in a variety of settings, and is therefore not easily generalised. Certain common features can be identified, however. The growth-pole strategy typically involves the focusing of investment at a limited number of locations (usually as part of a deliberate effort to modify regional spatial structure), in an attempt to encourage economic activity and thereby raise levels of welfare within a region. By the

mid 1960s, the growth-pole strategy had emerged as the object of considerable fascination and enthusiasm, and was viewed as “an idea in good currency”, to use the borrowed phrase of Lasuén (1969, p. 137). Indeed, a newcomer to the field at that time could have been excused for thinking that no matter what the nature of the regional problem, it would be most effectively overcome by the adoption of a growth-pole strategy. Doubters subsequently emerged, including Gilbert (1974) and Moseley (1973), but they were few in number and their warnings went largely unheeded; such was the spirit of the times. Large areas within the field of regional

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economic planning came to be recast in terms of the growth-pole strategy. Commenting later on this trend, Kuklinski (1978, p. 21) tellingly observed:

Sometimes the judgement is expressed that growth-pole theory is the closest approximation to the general theory of regional development.

The period from the mid 1960s to the mid 1970s saw a rapid expansion of academic interest in growth-pole strategies, with numerous conference sessions, collected volumes and journal articles devoted to the subject. Coinciding with this, and probably not unrelated to it, were the many attempts to apply the strategy in a variety of settings within developing as well as developed economies, the nations of Latin America being among the early adopters. In the light of subsequent experience, however, the strategy can only be judged to have been unsuccessful, at least in the sense that it failed to achieve the primary objectives of policy within the time-interval envisaged. There were, it is true, cases where it was broadly successful, either by design or good fortune, and other cases where certain facets of the strategy achieved a measure of success. Nevertheless, the instances where the strategy was implemented in a consistent manner and carried through to fruition are few in number. In fact, the recent history of regional economic planning in many parts of the world is littered with examples of growth-pole strategies having failed or having been prematurely abandoned.

It is hardly surprising therefore that present-day attitudes towards growth-pole strategies stand in marked contrast to those of the 1960s. Despite spirited and cogently argued defences of the growth-pole strategy during the intervening years (Boisier, 1980; Hansen, 1975; Richardson, 1978), it has fallen from favour. Governments have largely turned their backs on it (Breathnach, 1982; Conroy, 1973), and among planners it tends to be regarded as *passé* or as some relic of earlier planning practice. Frequently, it is rejected out of hand, and some even take the

view that the strategy represents a fundamentally inappropriate approach to regional economic problems. Gore (1984) and Lipton (1977), for example, come very close to this position. Among others, the notion of a growth-pole strategy has aroused a suspicion, if not hostility, on ideological grounds (Coraggio, 1973). Such a *volte face* within the field of regional economic planning over an interval of not much more than three decades is disquieting. It suggests at the very least a superficiality of approach and more seriously perhaps an inability or an unwillingness to subject new concepts to close scrutiny.

Enough time has probably elapsed for the chequered career of the growth-pole strategy to be placed into perspective. If it were simply a case of a particular planning strategy having shown itself to be ineffective, then the episode could simply be written up in the annals of planning history in the usual manner. Useful as such an account might be, the examination of growth-pole strategy should extend beyond the purely historical, if only because the reasons surrounding its frequent failure go to the very heart of regional economic planning, and have powerful implications for virtually every form of policy intervention at the regional scale. In other words, the kinds of questions that needed to be asked of growth-pole strategy (but, as we shall see, were not) are the very questions that should be asked of any other strategy or emphasis in regional economic planning. The analysis of growth-pole strategy thus has a relevance and generality which extend far beyond the strategy itself. As will be apparent, the arguments to follow represent neither a dismissal of growth-pole strategy nor an attempt to rehabilitate it. Rather, the concern is with drawing attention to its complex and highly conditional nature. What will also become evident is the absence of an adequate framework or general theory of regional economic policy, within which the growth-pole strategy could have been evaluated, either conceptually or operationally. In fact, the absence of such a framework goes a long way to explaining not only the initial enthusi-

asm towards the growth-pole strategy, but also the more recent rejection of it. There were also a number of confusions that have bedevilled the conceptualisation of growth-pole strategy from the very beginning, and attention now turns to certain of these.

2. Some Underlying Confusions

Much of the early writing on growth-pole strategies failed to make a clear distinction between the growth pole as a feature of a dynamic space economy and the growth pole as a key element in a strategy designed to improve the performance of a regional economic system—i.e. a distinction between the ‘natural’ or ‘spontaneous’ growth pole and the ‘planned’ or ‘induced’ growth pole. The concept of the natural growth pole derives directly from the work of Perroux (1955), who viewed growth within an economy as stemming from the effects of disequilibrium and domination, and necessarily occurring unevenly. To quote a well-known passage from Perroux (1955, p. 309) in this connection:

Growth does not appear everywhere at the same time; it appears at points or poles of growth with varying intensity; it spreads along various channels and with differing overall effects on the whole economy [author’s translation].

The growth pole was described primarily in terms of a complex of industries, linked in an input–output sense and dominated by a propulsive or stimulant industry (*industrie motrice*), the latter being the engine of development by virtue of its capacity to innovate and to stimulate, as well as to dominate, other industries (*industries mues*). To a large extent, Perroux couched his argument in terms of abstract economic space, a concept that he had developed earlier (Perroux, 1950). Within such a space, polarisation was measured with respect to the intensity of interfirm or interindustry transactions. Nevertheless, Perroux fully recognised the possibility that a growth pole in economic space might also exist as a territorial entity, and

considered the implications of this. Thus he drew attention to the reinforcing influences of spatial concentration, the effects on inter-regional disparities and the impact of the growth pole on its environment (Perroux, 1955, pp. 317–318); such an emphasis was also present in his earlier work on the Ruhr district of Germany (Perroux, 1952) as well as in his later contributions (Perroux, 1961, 1964, 1988).

The concept of the growth pole in geographical space was subsequently developed by Hansen (1967) and Hermansen (1972), following the lead of various Francophone economists, most notably Paelinck (1965, 1968), Aydalot (1965) and Boudeville (1966). But this was not always undertaken satisfactorily. For example, one definition of a growth pole in geographical space, in many respects typical of the period, involved

a set of expanding industries located in an urban area and inducing further development of economic activity throughout its zone of influence (Boudeville, 1966, p. 11).

Such a definition immediately raises the following questions: if an urban centre with expanding industries does not induce favourable effects throughout its zone of influence (a common occurrence), does this imply that it cannot be regarded as a growth pole? And can the growth poles of London, New York and Paris in the 19th century, or Atlanta, Lyon and Munich in the 20th century, be satisfactorily defined in these terms? Definitions of this kind reflected a tendency at the time to treat the growth pole in geographical space as an urban centre which possessed the attributes of the growth pole in abstract economic space. However, this represents an unjustified and analytically unhelpful restriction, which robs the concept of much of its usefulness in regional economic analysis. In fact, a case can be made for viewing the growth pole in geographical space as *any* urban centre (above some minimum threshold) which displays specific growth characteristics (in absolute and relative terms), with no presumption about the

bases of growth or about the effects on its zone of influence (Parr, 1973). Contrary to the opinion of a number of writers, there is no unambiguous correspondence between abstract economic space and geographical space. Reality is such that a given structure (a given level of polarisation) in economic space can translate into a variety of structures in geographical space, and vice versa. The growth pole in geographical space is an entity in its own right, which may have differing manifestations in economic space, and needs to be analysed accordingly.

By the early 1960s, this notion of the growth pole in geographical space began to assume a normative aspect. Attention was given to the possibility of pursuing a growth-pole strategy, the cornerstone of which would be the activation of planned or induced growth poles. Two rather different strands of thinking lay behind this. First, it had been recognised for some time that development in a regional or national economy was associated in a causal sense with a tendency towards concentration and polarisation, and the historical evidence for this was abundant. It therefore followed, so the argument ran, that the deliberate focusing of investment at a limited number of centres would satisfy a necessary condition for development. Such arguments recognised the important fact that development was not independent of the nature of the spatial structure of the economy and that in many regional economies an increased level of concentration might well represent an indispensable precondition for economic progress (Friedmann, 1956). This was something of a departure from conventional approaches in regional economic planning, where much of the previous effort had been directed towards encouraging decentralisation and deconcentration, often in the context of metropolitan decongestion or river-basin development. A second strand of thinking behind the planned growth pole drew heavily on the work of Perroux and on the subsequent conversion of this into geographical space along the lines discussed above. In essence, it involved the planned location within a region of a firm

belonging to a propulsive industry, with the expectation that this would stimulate the development of linked industries at the planned pole and/or cause growth to be diffused throughout its zone of influence. In the absence of other conditions there can, of course, be no reasonable expectation for either occurrence.

There thus emerged two sources of confusion: the assumption that the growth pole in geographical space was simply a particular variant of the growth pole in economic space; and, following on from this, the assumption that the natural growth pole in geographical space could be replicated in the form of a planned growth pole, by the implanting of propulsive industries and the provision of infrastructure at particular urban centres. These confusions subsequently led to unrealistic perceptions of the growth-pole strategy and what could be reasonably expected of it. Such confusions even gave rise to the presumption (difficult to imagine but real nonetheless) that the mere activation of a planned pole would cause it to assume certain, if not all, of the characteristics of a natural growth pole in geographical space—for example, its favourable environment to growth-minded entrepreneurs, its capacity for innovation, its ability to attract capital from other regions, etc. In other words, the phenomena associated with natural growth poles were offered as arguments in favour of the creation of planned growth poles. The fallacy of the argument hardly requires demonstration, but it is worth mentioning the question of scale. The natural growth pole has to assume a substantial magnitude (say, at least 250 000 population) before the above-mentioned attributes become apparent, whereas the projected planned growth poles frequently involved populations considerably below this level.

If only to avoid confusions of this kind, it is desirable to maintain the distinction between the natural and the planned growth pole. In many respects, it was regrettable that the term 'growth pole' should have been used both to describe spontaneous development within a regional space economy and to

characterise a strategy designed to stimulate development within a region. This was not clearly recognised in the early years, so that the term came to assume two quite different meanings. The problem has been compounded by the use of other terms: growth point, growth centre, growth area, development pole, development centre, etc. Certain authors, notably Darwent (1969) and Higgins (1971), suggested particular conventions by which these terms might be distinguished. Unfortunately, their suggestions appear to have gained little general acceptance. While it is important to differentiate between the natural growth pole and the planned growth pole, it must be acknowledged that occasions may arise when the distinction is blurred. For example, in pursuing a growth-pole strategy, it may be desirable to select for activation as planned poles those centres which have displayed certain of the characteristics of natural growth poles, especially if these have a potential for future growth. Relatedly, if a growth-pole strategy is successful, the planned growth pole may eventually resemble the natural growth pole with respect to rapidly growing industries, the development of interindustry linkages, the attraction of capital and labour, the spontaneous nature of growth, the planned pole's position of economic and social dominance within its region, etc.

3. The Differing Settings for Growth-pole Strategies

In order to indicate the impact of growth-pole strategy on the field of regional economic planning and to gain some insight into its internal logic, it may be helpful to review the diversity of regional-problem settings in which the strategy has been advocated. As already mentioned, growth-pole strategies were proposed for regional problems within nations of the developed as well as the developing world. The strategies were often purely regional in scope, involving concentration (though occasionally deconcentration) of the regional spatial structure. Sometimes, however, such concentration at the regional scale

was seen as the means of achieving deconcentration at the national scale, so that a particular regional strategy also contained an interregional component. Growth-pole strategies usually represented examples of developmental planning, but on more rare occasions conformed to a trend-planning or adaptive-planning mode, to use the dichotomy discussed by Friedmann (1964). To all this may be added the variety that existed in the implementation of growth-pole strategies, particularly with respect to the means for activating the planned poles, the policy instruments employed, the sequencing of investment, the time-horizon envisaged for the strategy, etc. While certain of the regional-problem settings were characterised in terms of modifications to the regional or interregional space economy, the underlying objective invariably concerned the securing of an improvement in the level of regional welfare or regional economic performance. In outlining each of the various settings, there is no implication that the growth-pole strategy was the optimal strategy—or, indeed, the only strategy available. When the growth-pole strategy was being proposed, however, little consideration was given to alternative strategies, and it was assumed from the outset that the growth-pole strategy represented the most effective approach, a reflection of the enthusiasm which the strategy engendered.

Reviving a Depressed Area

Within the 20th century, the depressed-area problem has emerged as a serious issue in the economies of economically advanced nations. This problem concerned regions which were at one time in the vanguard of economic progress, but which were subsequently affected adversely by exogenous shocks and failed to adjust adequately to these. The depressed area was commonly characterised by relatively high unemployment, low per capita incomes, below-average levels of human-capital development, marked social deprivation, an inadequate level of public-service and infrastructure provision, etc. The economies of such areas either possessed an

earlier manufacturing specialisation with substantial urbanisation or were based on resource exploitation and existed in a less-urbanised or rural setting. In both cases, the depressed-area condition emerged as a result of the collapse or significant run-down of the export base and the subsequent negative multiplier effects, a problem which was frequently exacerbated by selective out-migration of labour, the flight of capital and the emergence of a weak fiscal base. The latter rendered difficult the maintenance of public services at an acceptable level, and reduced the scope for adjustment or the restoration of anything resembling an equilibrium. Without some form of state intervention (direct or indirect), the various weaknesses would tend to reinforce one another in a downward direction, often to the considerable distress of the remaining population.

For a variety of reasons (not to be considered here) the depressed-area problem is one to which national governments in North America and western Europe have felt obliged to respond. One approach was concerned with fiscal transfers to the problem regions. A more visible policy response involved either 'moving workers to the work', through the encouragement of interregional movement of labour from the depressed area, or 'moving work to the workers', by which employment opportunities were enhanced through the movement of capital into the depressed area by means of various incentives, including improved infrastructure provision, the payment of subsidies to private and public corporations, and the direct implantation of particular industries. The former emphasis tended to result in a qualitative deterioration of the remaining supply of labour, while the latter emphasis often led to a dispersal of investment, so that its overall impact was dissipated.

It has been alleged that the growth-pole strategy overcomes both types of difficulty. Such an emphasis appears to have originated in two influential reports of the Scottish Council (1952, 1961) which advocated its adoption in central Scotland (a region of

declining coal mining and heavy industry). The general approach was subsequently elaborated upon by Hoover (1969, 1971) and Cameron (1970). The argument ran broadly as follows: if a given level of public investment on infrastructure and inducements to the private sector could be focused within the region at a limited number of locationally favoured centres, the impact on the economy in terms of inward investment (leading to increased employment opportunities and higher per capita incomes) would be greater than under a strategy which sought to assist the least-favoured parts of the region or one which allocated expenditures on a purely proportionate basis in terms of population or employment. The essence of the growth-pole strategy in this setting has been summarised in a study of an industrial depressed region of north-west England:

The problem should be viewed, not as one of moving work to the workers, or vice versa, but as one of moving the work, and the workers if necessary, to places within the region where it will be most efficiently performed (Economist Intelligence Unit, 1959, p. 150).

The strategy thus sought to create a more competitive spatial structure for the region (Parr, 1978). In terms of factor movement, such an approach combined the interregional movement of capital with the intraregional movement of labour, the implicit assumption here being that people would "migrate more readily to a growth centre in their own region than they would to places outside the region" (Hoover, 1971, p. 284). Growth-pole strategies came to be implemented with varying duration and with differing success in the depressed areas of the UK (European Free Trade Association, 1968; Moseley, 1974; Parr, 1979) and eastern Canada (Higgins, 1972; and Wilson, 1964), as well as the Appalachian Region of the US (Appalachian Regional Commission, 1970; Estall, 1982; Hansen, 1972; Newman, 1972; Widner, 1990), to name but a few examples.

When successfully activated, the planned growth poles were to constitute the primary

foci in a restructured pattern of regional labour supply. If the region was densely populated, commuting to the poles from urban or rural locations would represent a likely adjustment. This might still be possible with moderate densities, as long as deliberate attempts at highway improvement were undertaken, or if car ownership or car-pooling was sufficiently well developed. Eventually, commuting might give way to intraregional migration of labour, something which would be necessary from the outset, if the region had a low population density. In either case, a key feature of the growth-pole strategy would be the transformation of the spatial structure of the regional economy, towards one which was more in keeping with the requirements of potential incoming economic activity that would replace the declining traditional export base. To the extent that such a transformation of the spatial structure was indispensable, and given the fact that radical transport improvements were often necessary to secure this, the barbed comments about the Appalachian Regional Commission's early decision to emphasise highway investment (to the effect that 'people could leave the region more easily') obviously betrayed a misunderstanding of both the underlying problem and the basis of the strategy. A more pertinent criticism of the Commission's thinking involved its decision not to extend the strategy to rapidly growing metropolitan areas located near but outside the boundaries of the Appalachian Region (Hansen, 1966).

Encouraging Regional Deconcentration

Whereas the previous setting related to economic weakness or difficulty, the second setting was usually associated with economic success. The scale involved the large metropolitan area and the considerably wider region over which it had an economic and social dominance, the whole entity being variously referred to as a city region, a metropolitan community, a polarised region or a metropolis-based region. In this second setting, the growth-pole strategy was designed to reduce the level of regional con-

centration—i.e. the extent to which the metropolitan area dominated the entire region in terms of employment and population. In certain situations, deconcentration was already underway (as a result of improved transport and changing locational preferences on the part of households and firms), in which case the strategy attempted to impose an order on the process. It was taken for granted that the metropolitan area was suffering from substantial negative externalities, and that future regional economic growth would be better served by an alternative spatial structure. In other words, without intervention the spatial structure would become transformed in an unsatisfactory manner or at an inadequate rate, so that the efficiency of the regional economy would be impaired, with the consequent loss of interregional or international competitiveness.

In this setting, the growth-pole strategy addressed itself to securing an appropriate spatial structure, especially with respect to the activation of planned growth poles in the non-metropolitan part of the region. The term 'appropriate' is important in this connection, since not simply *any* form of regional deconcentration would be consistent with the facilitating of regional growth. Several considerations were important here. For one thing, the planned poles had to be of a minimum size, in order to secure adequate infrastructure availability, and thus a satisfactory level of agglomeration economies which could sustain economic activity. The issue of frequency was also important, as was the location of the poles, which needed to be close enough to the metropolitan area to have access to specialised services, but sufficiently distant from it to gain the advantage of lower input costs, particularly with respect to land and labour (von Böventer, 1970). A further consideration was the fact that not all locations within the non-metropolitan part of the region would be suitable. For example, certain urban centres might oppose their designation as planned poles, while the development of other centres might be rejected on grounds of damage to the environment. The general effect of the strategy was to modify

regional spatial structure in the direction of focused or centralised deconcentration.

This approach to regional deconcentration via the growth-pole strategy was followed in the metropolitan regions of several developing nations (Townroe, 1979; Townroe and Keen, 1984), although it tended to be more common in developed nations. In Australia, the most prominent examples were the new cities of Albury-Wodonga and Bathurst-Orange which were developed, largely with financial support from the commonwealth (federal) government, as a means of reducing the metropolitan dominance of Melbourne and Sydney within their respective regions, roughly speaking, the States of Victoria and New South Wales (Searle, 1988; Vipond, 1982). This emphasis was in response to government-commissioned studies which were, in turn, influenced by the possibilities for deconcentration within the eastern states discussed earlier by Neutze (1965), who argued that the continuing concentration, which resulted from the lack of non-metropolitan alternatives, was not in the interests of economic efficiency.

In the UK, the New Town policy of the post-war era represented an interesting case. Up to the 1960s, the New Towns and similar satellites around London and Glasgow (and later Birmingham and Liverpool) were part of a programme designed to reduce inner-city densities and at the same time to limit metropolitan growth, the latter objective being pursued by a fairly strict green-belt policy. Instead of peripheral expansion of the metropolitan area, particularly along transport routes, urban expansion was to take place in the New Towns. These urban centres, in essence nothing other than planned growth poles, were located away from the metropolitan area, anything up to 50 km from its core (beyond but sometimes within the green belt), and were well provided for in terms of infrastructure and housing. As anticipated, the effect of restrictions on metropolitan growth and the locational advantages of the New Towns was to encourage the process of regional deconcentration. At the same time, the build-up of the New Towns dove-

tailed neatly with other, more general, trends towards deconcentration which were independent of the restrictions on metropolitan growth. Indeed, the economic success of the New Town policy was due in no small measure to the fact that it was very much consistent with these latter trends, both temporally and spatially.

The general recognition that regional economic performance and the trend towards regional deconcentration were related, coupled with an acceptance of the need for strong land-use control, led to proposals for a second generation of New Towns around London (Great Britain, 1964 and 1970). The programme was also extended to other regions of the UK, including north-west England (Great Britain, 1965). Against a background of mild economic growth, the new urban centres were designed to avoid excessive metropolitan suburbanisation and to facilitate the process of regional deconcentration. While less elaborate in scale, the plans for satellites around Paris (Merlin, 1969) and Madrid (Richardson, 1975) also represented attempts at securing regional deconcentration, although the aspect of metropolitan decentralisation was emphasised.

Modifying the National Urban System

A third setting of the growth-pole strategy, which encompassed a wide range of scales and local conditions, involved the attempt to modify the urban system in order to regulate the interrelated processes of urbanisation and migration. Implicit in the pursuit of a growth-pole strategy in this setting was the assumption that the long-run performance of the national economy is strongly influenced by the nature and form of its urban system. In the UK and the Netherlands during the early 1960s, for example, the question arose as to how the large projected increases in population could be accommodated within already highly urbanised nations. It was thought undesirable on economic grounds for this to be attempted within existing metropolitan areas and their wider regions, and

that the population increase should be steered towards planned growth poles, involving wholly new metropolitan areas which would act as effective counter-magnets to existing metropolitan areas (Rigby-Childs, 1963; Drewe, 1971). The need for such a strategy became less pressing, however, when it transpired that the projected population increases would not materialise. In France during the same period, there existed the long-held view that the position of Paris in the urban system caused it to exert a disproportionate dominance in the economic and social life of the nation, and that this state of affairs was undesirable. The official response to this concern was the creation of a number of *métropoles d'équilibre* (Allen and MacLennan, 1970; Hautreux, 1966; Hautreux and Rochefort, 1964). These represented existing regional metropolitan centres located between 300 and 1000 km from Paris, the competitive position of which was to be improved by substantial investments in infrastructure equipment, the scientific base and cultural facilities.

This third setting of growth-pole strategies tended to be associated more with developing nations, where the urban system was deemed to have an excessive level of primacy or (more accurately) inter-urban concentration—i.e. a very high proportion of the urban population located in one or sometimes two or three large metropolitan areas and the remainder located in small urban centres, with few centres of intermediate size (Richardson, 1981). Such a size distribution may have resulted from recent patterns of modernisation and economic development, although it was frequently viewed as a legacy from some colonial past. Various arguments were proposed to suggest that such a structure acted as a brake on national economic development. For example, it was held that high levels of inter-urban concentration nationally and the associated transport network represented an inefficient means for exploiting the potential export bases of peripheral regions (particularly with regard to the shipping of produce to national or international markets) and for the distribution of consumer

products and intermediate goods imported into such regions (Johnson, 1970). Also, to the extent that the availability of services tended to be associated with centres above some minimum size, the fact that there were few centres of intermediate size meant that the access of households and firms to services was spatially inequitable. In addition, it was hypothesised that the consequences of a highly concentrated size distribution and the monopoly-like possession of the nation's commercial and institutional infrastructure by the primate metropolis denied to large parts of the national territory the opportunity for indigenous development and reinforced their dependency relationship with the primate metropolis.

This pronounced level of primacy or inter-urban concentration within an urban system tended to be perpetuated by the prevailing patterns of migration. Given the typically high rates of out-migration from rural areas and given the paucity of urban locations, the few large metropolitan centres became the primary destinations of these flows. This resulted in further growth which was inevitably accompanied by the difficulty of providing even rudimentary services, and also in the exacerbation of existing social problems (Johnson, 1970, p. 157). There existed, of course, a rationality behind such migration patterns, as Todaro (1969) has shown, and it is very difficult to demonstrate the overall economic disadvantage of city size (Alonso, 1968), something that became apparent in the debate between Gilbert (1976, 1977) and Richardson (1976) on the advantages of large cities. Nevertheless, conditions in the primate metropolitan centres of a number of nations were sufficiently adverse that active consideration was given to the possibility of modifying the urban system in order to avoid these problems. The difficulties of formulating such a policy have been discussed in some detail by Richardson (1987).

The advocacy of the growth-pole strategy in this third setting has been seen as a mechanism for reconciling two fundamentally opposing outlooks: that of the 'modernisers' who regarded primacy as a transitional

phenomenon which would ultimately precipitate a series of self-limiting mechanisms; and that of the 'traditionalists' who argued that the experience of the West was not applicable in the developing world and that existing economic forces could not be relied upon to break the iron grip of the primate cities. In this connection, Berry (1971, pp. 142–143) has argued that advocates of the growth-pole strategy

co-opt the traditionalists by pointing to the advantages of being latecomers in the development process. Mistakes made in the western nations can be avoided and limited resources diverted to more productive uses. For example (feeding on the traditionalists' fears), they say that decentralized [i.e. less concentrated] patterns of urbanization, with emphasis on medium sized cities, probably will cost less in infrastructural investment while avoiding the social perils of gigantism ... To the modernizers, the planners sing another tune, however. Strategies of 'downward decentralization' are argued in this arena less to contribute to equity goals in a restructured society than to further ... efficiency goals by creating a system of alternative growth centers. These, it is said, bring new or underutilized resources into the development process. Further, allocation of public investments to stimulate the filtering process will bypass current constraints by creating alternative magnets for migrants, reducing pressures on the large-city labor market ...

The advocacy of growth-pole strategy thus emerged as a rather transparent means of consensus building. Indeed, a common objection to growth-pole strategy is that it lends itself to manipulation of this type.

The usual response to what was deemed to be an inefficient or ill-formed national urban system and the allegedly undesirable migration streams associated with this, involved the encouragement of a system of strategically located planned growth poles. Rodwin (1961, p. 226), for example, argued that the establishment of a regional pole would en-

able it "to compete more effectively with the existing metropolises" and that the development of such "regional centers would likewise enable the capital cities to cope more effectively and economically with the population avalanche that now threatens them". The central feature of the growth strategy in this setting involved the build-up of planned growth poles at urban centres of intermediate size. One such approach was followed by Colombia during the 1970s (Conroy, 1973, p. 373). By acting as intervening opportunities, the planned growth poles intercept or partially intercept the migration flows from rural areas and small towns to large metropolitan areas. The planned poles at intermediate-sized centres were also seen as contributing to the process of regional development in terms of improved service provision, more efficient regional transport, the promotion of linkages to agriculture and the general diffusion of innovation to the rural sector (Rondinelli, 1981; Rondinelli and Ruddle, 1978).

It may be argued that once people migrate to intermediate centres (i.e. the planned growth poles) and become more familiar with the challenges and opportunities of urban life, the attraction of the primate metropolis becomes even stronger, so that the subsequent migration there ultimately renders the strategy ineffectual or counter-productive. At least three points should be borne in mind here. First, even if people eventually migrate to the primate metropolis, they will take with them skills, savings and a familiarity with urban culture which will all help to ease their assimilation into a complex metropolitan existence. Secondly, while such second-stage migration to the primate metropolis may be inevitable, the strategy will have delayed the movement there, thus partially relieving pressures on such a centre. Thirdly, this second-stage migration from the planned growth poles may provide opportunities for further migration to these from the still-overpopulated rural areas. In this way, the strategy assumes a continuity with respect to migration flows, and contributes to the alleviation of rural poverty.

Attaining Interregional Balance

In contrast to the third setting for growth-pole strategies, which sought to promote regional development by modifying the national urban system, the concern in this fourth setting was with the unsatisfactory interregional structure of the national economy, usually with respect to welfare levels but sometimes in relation to the undeveloped nature of certain regions. In certain cases, of course, the two problem settings virtually coincided, one being a characteristic feature of the other. On the other hand, it is not difficult to identify cases where the urban system was not deficient in the ways described above, and where the primary concern was with interregional balance. There is at least some justification, therefore, for treating these two types of problem setting separately.

The phenomenon of interregional welfare disparities is usually most pronounced during the early and intermediate phases of economic development. Initial development within a nation tends to be localised within one or a few regions as a result of such advantages as resource endowment, access to markets, proximity to centres of political and administrative power, etc. Furthermore, the forces of cumulative causation tend to encourage the process of divergence in interregional welfare levels (Myrdal, 1957). There may also be certain rigidities which tend to confine development and income growth to one or a few favoured regions. To quote from Hirschman (1958, pp. 184–185),

Investors spend a long time mopping up all the opportunities around some [natural] 'growth pole' and neglect those that may have arisen or could be made to arise elsewhere. What appears to happen is that *the external economies due to the poles, though real, are consistently overestimated by the economic operators* [original emphasis].

To this may be added the frequent lack of information and uncertainty about underdeveloped regions, which cause en-

trepreneurs to perceive the possibility of investment outside the established major core as a risk-laden venture. In the words of Alonso (1968, p. 6)

a hard-pencil advantage of a few percentage points in one or another cost, which might be decisive in a developed country, is likely to be washed out in the interest of the flexibility and adaptability of a central location in a developing country.

The overall effect of these various forces is to produce a growing divergence in interregional welfare levels. In many developing nations, there has emerged an economic dualism which often manifests itself in spatial terms as a core-periphery contrast. It has been argued that as serious as this problem of interregional-welfare or core-periphery differentials may be, it is essentially a transitory one. Hirschman (1958) recognised the existence of unfavourable effects on the periphery of growth at the core, but argued that these would eventually be overcome by favourable effects—i.e. a set of mechanisms by which growth at the core is transmitted to the periphery. In a related manner, Friedmann (1969, pp. 165–166) outlined a series of 'countervailing trends' that could be expected to dampen the core-periphery contrast. Furthermore, following Williamson (1965), a body of literature has accumulated which demonstrates (by no means conclusively) that with continued national economic growth, the level of interregional income inequality initially increases, then reaches a maximum level and subsequently decreases, in the manner of an inverted U-shaped function. Moreover, it is generally assumed that there is a necessary short-run trade-off between national economic efficiency and interregional welfare equity, by which the latter can only be achieved at the cost of the former.

From all this has come the frequent assertion that convergence in interregional welfare levels is best achieved through the pursuit of national efficiency objectives. Whatever the merits of these arguments—and powerful counter-arguments such as

those of Myrdal (1957) have been advanced—central or federal governments often felt the need to respond in the short run rather than wait (or hope) for solutions which, *even if* more effective, would only materialise over the longer run. Governments frequently found themselves under considerable pressure to reduce differences in levels of interregional welfare. And these pressures became all the stronger if interregional welfare differences coincided with ethnic, tribal, linguistic or religious differences. Governments engaged in the difficult task of nation-building or maintaining national unity were unlikely to be persuaded by arguments about the possibility of long-run convergence. A very strong pressure existed for them to be seen to be doing something for the less-favoured regions.

Now while a government may be prepared to pursue a policy of interregional equity (perhaps at the expense of national efficiency), it may not necessarily go about this in an effective manner. To quote again from Hirschman (1958, p. 190):

In contrast to widespread impressions, the most pervasive tendency of governments of underdeveloped countries in making their investment decisions is not so much the obsession with one showpiece as the dispersal of funds among a large number of small projects scattered widely over the national territory.

In the relatively backward region of Brazil's north-east, for example, assistance by the federal government through SUDENE was made available on a region-wide basis rather than at selected focal points (Robock, 1956; and Berry, 1973). The great danger here was that in seeking to uplift a problem region, the potential impact of a given level of assistance would not be at a maximum, if various projects were dispersed among a number of different locations within a region. Under certain conditions, confining investment to a limited number of planned growth poles within a lagging region or an underdeveloped frontier region may help to improve the efficiency and welfare-raising potential of

this investment (Körner, 1967). Growth-pole strategies thus "prevent the spreading of investment like butter on a piece of bread" (Alonso, 1968, p. 3). Among the many examples of growth-pole strategies in this fourth setting were the development of a metallurgical complex at Ciudad Guayana in Venezuela (Friedmann, 1966), the establishment of National Growth Centres at Limerick and Cork in the Republic of Ireland (Breathnach, 1982; Moseley, 1974), the development of industrial growth poles in selected backward regions of India (Mathur, 1978; Misra, 1972) and the programmes pursued in Indonesia, Malaysia, the Philippines and Thailand (Salih *et al.*, 1978).

This approach to interregional balance, based on the planned concentration of economic activity, has been questioned. In a valuable review of growth-pole strategies in Latin America, Conroy (1973, p. 376) argued:

If spatially polarized development reflects market processes or the internalization of agglomeration economies, it is polarized development which has created the current pattern of regional disparities ... Is it likely that further polarization of development will reduce the regional problems apparently created by historical processes of polarization?

Such a query was perfectly reasonable in the context of certain nations of Latin America (and elsewhere), where the centres designated as planned poles included natural poles. In other contexts, however, it would not be valid. Planned polarisation was usually regarded as a counter to the legacy of natural or unplanned polarisation: the forces of planned polarisation in the peripheral region(s) were seen to be confronting the forces of natural polarisation in the core region. It was a case of 'setting a thief to catch a thief' or, phrased in the less dramatic language of Richardson and Richardson (1975, p. 171), a case where 'diamond cuts diamond'.

Additional Settings for the Growth-pole Strategy

While most of the situations where growth-pole strategies were advocated occurred within one of the settings already discussed, there were certain additional settings that are worth mentioning briefly. These tended to be of a narrower or more functionally specific character. One such setting involved the case where regional development was based on the expansion of recreational or tourist activity (Harper *et al.*, 1966). In this setting, the growth-pole strategy was proposed as a device for managing and controlling a recreational resource. It combined the need to maintain the environmental quality of an area (by limiting the extent of physical development) with the need to provide a wide range of specialist services and amenities to discriminating tourists. Both requirements had to be satisfied in order to encourage tourism (and, at a later time, conference activity and retirement-based development), thus building up export income and the various rounds of secondary income based on this. It was further argued that the absence of such a nodal emphasis in the location of recreational resources would lead to a "sprawl of numerous small and poorly planned facilities" which collectively would not be able to supply the range of services required (because no single facility would be able to gain sufficient economies of scale), and would also cause the visual and physical deterioration of the recreational resource (Harper *et al.*, 1966, p. 99).

The improvement and rationalisation of service provision within a region represented another setting where the principles underlying growth-pole strategies have been advocated. Here the strategy was seen as a means of improving the quality of life, although it was sometimes viewed as a vehicle for improving regional economic efficiency and promoting regional integration (Laatto, 1969). The problem typically concerned an existing system of service provision, which may have been perfectly appropriate during some previous period, but which had become

inefficient as a result of various trends. These included changing patterns of demand due to different income and/or demographic characteristics, changes in marketing or supply technologies resulting from shifts in long-run average cost functions, and changes in mobility levels brought about by greater car ownership, improved highway travel and (more rarely) upgraded public transport. In this setting, the growth-pole strategy was concerned with the building up of a limited number of centres from which a particular service or range of services would be supplied. In certain cases, a hierarchy of centres was designated for the supply of different sets of services. This would usually differ from the pre-existing hierarchy in terms of one or more of the following: the set of services supplied at a particular hierarchical level; the number of centres within a given level; the number of hierarchical levels (Parr, 1981). Such decisions were frequently taken with respect to publicly-supplied services, the spatial structure of which subsequently influenced the structure of privately supplied services. Examples of this approach were numerous, and included the 'key village' concept in the UK (Cloke, 1979) and the reorganisation of service provision in Sweden (Bylund, 1972) and India (Shah, 1974).

Somewhat related to the question of improved service provision was the final setting for the growth-pole strategy: the promotion of rural development. In the rural areas of developed nations, the emphasis was usually on alternatives to agricultural or resource-based employment, involving small-scale industrial development. This was encouraged by the availability of financial inducements and the provision of improved infrastructure and small industrial parks. A prominent feature of such rural development programmes was the restriction on the number of centres at which development was encouraged. The cases of Germany (Krumme, 1972) and the UK, particularly Scotland (Moseley, 1974, pp. 27–33) and Wales (Thomas, 1992; and Welsh Development Agency, 1990), were typical. Not surprisingly, the situation tended

to be markedly different in the rural areas of developing nations. There the standard of service provision was substantially below national norms, and rural economic activity (mostly agriculture) tended to be inefficient and subject to severe pressures of population growth. Planned growth poles in this setting related to the improvement of service provision (often at a basic level), as well as to efforts to raise the level of rural incomes, partly through improvements in transport, storage and agricultural credit, and partly through the encouragement of agricultural-supplying and agricultural-processing activities. Such emphases were central to what later became known as 'integrated rural development', and the approach has been followed with varying degrees of success in India (Johnson, 1970), Indonesia (Leinbach and Cromley, 1989; Leinbach, 1992), Kenya (Richardson, 1978) and a number of other nations (Harrison, 1967). In both developed and developing nations, however, considerations relating to economies of scale, transport costs and agglomeration economies in the relevant activities usually caused programmes promoting rural development to assume the characteristics of a growth-pole strategy.

Alternative Settings: A Further Comment

The purpose of this somewhat lengthy section has not been to develop a typology of settings for the growth-pole strategy, but rather to indicate the diverse range of regional problems, for which the strategy was looked to as a framework for solution. In this connection, several points are worth stressing. For one thing, the list of problem settings is not exhaustive, in the obvious sense that additional settings can be identified, although these are likely to be of a rather specific nature. Also, the problems of a particular region may contain elements of more than one setting, and mention has already been made of the possible overlap between modifying the national urban system and attaining interregional balance. Another overlap could involve the reviving of a depressed

area and the encouragement of regional deconcentration from a dominant metropolitan area, as in the case of Central Scotland in the 1960s (Great Britain, 1963). Furthermore, it is entirely possible for growth-pole strategies to be adopted simultaneously in regions with quite different problem settings. An obvious danger lurks here, to the extent that pursuing the strategy in one region may not be consistent with the adoption of the strategy in another region with a different problem setting. It is likely, however, that such a conflict would arise if alternative strategies were applied, conflicts of this kind being part of the more general problem of national or multiregional co-ordination.

4. The Nature of the Growth-pole Strategy and its Rationale

In spite of the wide diversity of problem settings in which the growth-pole strategy has been proposed, it is possible to identify the following set of characteristic features of the strategy, this being common to all settings.

First, the strategy involves encouraging the growth of employment and population within a region at particular locations or planned poles over some specified period. This does not necessarily imply that growth will be absent from other parts of the region, but the planned poles are usually seen as the primary foci for regional investment, whether public or private and whether based on a key industry, an industrial complex or some alternative economic-activity set.

Secondly, the strategy imposes a definite limitation on the number of locations or centres which are designated as planned poles, and this will vary from setting to setting. For example, a policy aimed at stimulating rural development within a region might require relatively many planned poles, while a policy designed to attain interregional balance would involve relatively few. The limitation on pole frequency is also likely to be related to the type of economic activity to be located within the region.

Thirdly, the strategy necessarily requires spatial discrimination or selectivity among locations. This discrimination is usually concerned with the identification of centres which have the potential for sustaining a given range of economic activity, and is based on such factors as interregional or intraregional locational advantage, hierarchical level within the urban system or (less satisfactorily perhaps) past growth record.

Fourthly, the strategy inevitably involves a modification of the spatial structure of employment and population within a region. Indeed, an important foundation of the growth-pole strategy is the proposition that the existing spatial structure represents an impediment to regional economic expansion, and that policy objectives can only be realised if *inter alia* the spatial structure is modified, usually in the direction of concentration. Such a modification of the spatial structure is primarily with respect to employment and, except for certain special circumstances (where reliance is placed on commuting), this will inevitably result in a modification of the spatial-structure of population. It is possible, however, that the attempt at spatial-structure modification may be directed in the first instance to population, in the expectation that a more concentrated spatial structure of employment will evolve.

All four of these characteristics are present to some degree in the various settings for the growth-pole strategy considered in section 3. Each of the characteristics is not, of course, unique to the growth-pole strategy but, taken together, these represent the *sine qua non* of the strategy, by which it stands apart from others. Moreover, the presence of all four elements within a given regional development programme virtually implies the existence of a growth-pole strategy, even though it may not be referred to in such terms. To insist that the strategy contains any additional features, however, would be to elaborate on the detail of one particular setting or to claim too much for the strategy. Cameron (1970, p. 19), for example, has argued that the designation of planned poles assists in "the establishment of priorities for public

investment in quantitative and spatial terms", while in a similar vein Richardson and Richardson (1975, p. 164) have suggested that the strategy offers an opportunity "for integrating industrial policy, physical planning, and interregional and intraregional economic planning". Both statements are undeniably valid, but it is difficult to imagine why such arguments would not also apply to other strategies, as long as these were sufficiently well articulated. The prominence of spatial considerations is not unique to growth-pole strategy, and does not therefore confer on this strategy any particular advantage with respect to the general co-ordination of public investment or regional policy.

The Concentration of Infrastructure

The rationale for growth-pole strategy in regional economic planning rests on a series of related arguments, and it is important for the various elements to be clearly identified. One such element concerns the availability of infrastructure, a consideration of obvious significance where infrastructure is known to be a necessary ingredient for economic development. Here infrastructure is defined in the broadest sense to include both economic overhead capital and social overhead capital. Individual types of infrastructure are subject, in varying degrees, to substantial economies of scale and sometimes have the characteristic of an indivisibility. In public-expenditure terms, therefore, there may be a justification for a given outlay on a particular infrastructure type to be confined to a limited number of large-scale facilities. For transport infrastructure, the comparable emphasis would involve the development of new or upgraded routes in order to focus on planned growth poles, as opposed to a general upgrading of the existing network.

Of considerably greater importance, however, is the desirability of concentrating different types of infrastructure. The argument for concentration is based on the expectation that the availability of a relatively broad range of infrastructure services at selected

locations will create significant externalities. These will have the effect of rendering the region more attractive to firms in terms of location, thereby stimulating inward investment and possibly encouraging indigenous development. Infrastructure expenditure at a limited number of planned poles is thus held to elicit the most favourable private-investment response and long-run improvement in the economic performance of a region (Cameron, 1970, p. 19). Determining the particular spatial configuration of poles that would be necessary for such a response remains a difficult technical issue, which will be discussed in sections 5 and 6 (Part 2 of the paper). The emphasis on infrastructure concentration, as one element of the rationale for the strategy, is only justified where the region is deficient in these terms *and* where it possesses or can be expected to possess other locational advantages such as access to raw materials, energy supplies, low-cost labour or a growing internal market. Otherwise, the mere concentration of infrastructure at particular locations within a region could well come to resemble the practice of a cargo cult.

The Concentration of Economic Activity

A second element in the rationale for the strategy concerns the concentration of directly productive investment, and is related to the exploitation of agglomeration economies (Hoover, 1948). These represent economies to the firm (both internal and external) which are contingent on the spatial concentration of economic activity. Concentration is of obvious importance, if the activity in question is characterised by pronounced internal economies of scale in production, as in the case of an iron and steel works, an oil refinery, an automobile plant, etc. In such cases, a splitting of capacity among several locations within the region would be likely to raise unit costs and reduce the level of regional competitiveness. The concentration of economic activity might also be desirable, again on grounds of regional competitiveness, where the industry was not character-

ised by substantial internal economies of scale (though such a situation might well be seen by decision-makers as an opportunity for dispersing firms, in order to assist various parts of a region). Here the case for concentration would rest on firms within a given industry benefiting from external economies (pecuniary and/or technological) which represented agglomeration economies of the localisation type—for example, cost reductions based on the build-up of skilled labour, the availability of specialised services, and on joint action with respect to input acquisition, marketing, research and development activity, etc. A case for concentration would also exist if the economic activity in question involved unrelated firms belonging to different industries. The relevant external economies here would represent agglomeration economies of the urbanisation type—for example, cost reductions stemming from the shared availability of public services as well as a wide range of specialised business and technical services not specific to any one industry. Clearly, this question needs to be considered in conjunction with the concentration of infrastructure, as discussed in the previous sub-section.

The concentration of economic activity becomes more complicated when a propulsive industry is established at a planned pole in the expectation that this will make the region locationally attractive to firms which are related to this industry in terms of backward and forward linkages. This approach, which harks back to the work of Perroux and implies certain assumptions about the correspondence between polarisation in geographical and economic space, frequently evades the issue as to whether the linked activities are to be located at the pole or elsewhere within the region. Here the case for concentration depends on external economies involving agglomeration economies of a further type: activity-complex economies—for example, cost reductions in transport, energy and co-ordination which arise from the joint location of different activities that are linked in input-output terms. The tempting decision to locate a chemical plant (the

propulsive industry) at one location, an oil refinery (the backward-linkage industry) at a second, and a plastics plant (the forward-linkage industry) at a third, in order to extend development over a wider area, could well result in significant cost savings being foregone, again impairing the interregional or international competitiveness of the activities concerned.

This second element of the rationale for growth-pole strategy, which is concerned with the potential efficiency gains from concentration, also needs to be viewed in temporal terms. The argument here is that, as concentration proceeds, there will be a cumulative build-up of the various types of agglomeration economy, which will contribute to successive improvements in the locational competitiveness of the region, leading to further rounds of investment, both external and internal. In this sense, the strategy has to be sustained over a relatively long time-period. There remains an important question as to how the process of concentration might be realised. In the case of state corporations or in situations where the state has effective control over locational decisions, the desired level of concentration can be achieved by official direction. Where such conditions do not hold, however, the matter is less straightforward. On the surface at least, it would seem that, if the various types of agglomeration economies at the planned poles were significant, then private corporations would have an obvious incentive to concentrate there, unless there were compelling locational reasons for doing otherwise. Yet the problem of unrelated investment decisions (taken over slightly different periods, under different market conditions and with incomplete information) may well result in an undesirably low level of concentration, with the attendant disadvantages (Alonso, 1968). In these circumstances, there seems to be a case for securing the appropriate level of concentration by making any financial assistance to private corporations conditional upon their location at the planned pole(s), although it has been claimed that this restriction is undesirable (Wilson, 1964).

The Planned Poles and the Region

There exists a third element in the rationale for the strategy, and this concerns those parts of the region which have not been designated as planned growth poles. Here, however, the rationale for the strategy appears to follow two diverging paths. One view holds that growth at the planned poles will be transmitted by a variety of mechanisms to the remainder of the region, the unstated assumptions being that growth in the rest of the region is not only greater than would occur under some alternative strategy, but is also greater than any possible disadvantages caused by growth at the planned poles. An alternative view states that the spatial structure of the region undergoes a radical long-run reshaping, by which growth at the planned poles is accompanied (and partially facilitated) by a major redistribution of population and employment towards such centres (Wilson, 1964, p. 21). This view of the strategy inevitably involves the running down, if not the virtual abandonment, of certain parts of the region, an approach which is justified in terms of a more efficient utilisation of the region's existing factor endowment. The presence of a labour force in sufficiently large pools consolidates the advantage of low-cost labour and permits improvements in the provision of consumer and business services. All this helps to render the region more attractive to inward investment, and under the most favourable of conditions may assist the process of indigenous development. In this way, the focusing of population and employment on planned poles becomes the means by which a more competitive spatial structure can be attained, leading to an improved regional economic performance (Hoover, 1971, pp. 278–279).

We thus have two contrasting views of the role of planned poles in relation to the rest of the region, a further reflection of the fact that the strategy has been proposed in a diversity of settings. It was sometimes the case, however, that the growth-pole strategy was designed with both emphases in mind—i.e. the expectation of some favourable impact of the

planned poles throughout the region, as well as the encouragement of a more concentrated spatial structure focusing on the planned poles. Such a mixing of emphases may have been appropriate in certain situations, but there were other occasions when it reflected an uncertainty on the part of planners or an unwillingness to come to terms with the underlying demands of the strategy.

The Rationale in Context

These three categories of argument, which collectively form the rationale for the growth-pole strategy, are insufficient for the policy-maker, however. To establish a rationale for a strategy is neither to provide a justification for its adoption, nor to demonstrate its superiority over other strategies. The arguments are conditional, inasmuch that these are based on assertions and suppositions which in any proposed application of the strategy would need to be demonstrated. And even if such arguments can be shown to be valid and consistent in a particular proposed application, there remain important questions which go beyond the scope of the rationale. These involve such issues as the budgetary requirements of the strategy, the economic and administrative instruments by which it can be implemented, the desirability of the anticipated outcomes in terms of intraregional equity and balance, the existence of secondary objectives of policy, the acceptability of the strategy, etc. More than anything else, it was the failure of the zealots (whether theorists or practitioners) to place the rationale within the context of these other issues that led initially to the widespread acceptance of the strategy.

Continuation

In Part 2 of the paper, which appears in the next issue of the journal, questions of this type will be addressed. Attention will be directed to four important and closely inter-related facets of growth-pole strategy that have never received adequate attention. In the examination of these neglected aspects,

the highly conditional or contingent nature of the strategy, and thus its restricted potential for implementation, will become evident. Various reasons for the failure and non-adoption of growth-pole strategies will also be discussed.

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