SERIE RESEARCH MEMORANDA

Goodbye to planning?
Reflections on the case for regional planning in poor countries in a neo-institutional framework

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Research Memorandum 2000-1
April 2000
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REFLECTIONS ON THE CASE FOR REGIONAL PLANNING IN POOR COUNTRIES IN A NEO-INSTITUTIONAL FRAMEWORK

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6th April 2000

The author was attached to the Development Economics Section of the Faculty of Economic Sciences and Econometrics as a guest researcher, sponsored by the Netherlands Ministry of Foreign Affairs, from September 1999 to March 2000. His main topic of study was: the implications of the insights of the New Institutional Economics for the theory of regional planning in poor countries. The opinions expressed in this paper are his own. Comments on the paper can be sent to tkuhlman@hetnet.nl.
After many years spent in developing countries working in regional planning, development planning, integrated rural development and region-based research, I badly needed some refreshment of my theoretical knowledge of planning theory. In particular, I wondered how the scholars had dealt with the shocks that our profession had undergone and which I had also experienced. In my last planning job I could not help feeling that my work was something of an anachronism. I wanted to find out whether the field had undergone any redefinition, and how we planners could ensure that our work would be useful.

My last employer, the Netherlands Ministry of Foreign Affairs, was generous enough to allow me a sabbatical of six months in which to explore these questions. The small group of development economists at the Free University led by Prof. Peter Lanjouw kindly accepted me as a guest researcher for that period, thereby providing both the institutional frame and the facilities I needed.

A friend suggested that I choose the New Institutional Economics as a paradigm for my study. That was a very good suggestion. I found the concepts and methods of this school highly appropriate for thinking about the questions I was asking. The acquaintance with this school has been a most rewarding and intellectually exhilarating experience.

This paper is the result of that study. The answers I present in it are tentative and time-bound. I am no seasoned scholar and cannot pretend to pathbreaking thoughts. My intention is to elicit some discussion on the proper agenda for regional planning in poor countries, which will help to correct and deepen my views.

I wish to express my gratitude to my colleagues in the Development Economics Section, who gave me hospitality, commented on an earlier version of this paper, and made many valuable suggestions: first of all to Peter Lanjouw, and also to Chris Elbers, Kees Burger, Paul Makdissi, Peter Nijkamp, Piet Rietveld and Jan-Willem Gunning. Thanks are due also to Walter Kolkma, who first suggested NIE to me. I also want to acknowledge my debt to those from whom I learned the most without meeting them: the intellectual giants whose books and articles have given me great inspiration and joy: Ronald Coase, Mancur Olson, Douglass North, Jean-Philippe Platteau, Ernest Alexander, Aaron Wildavsky, Robert Putnam, and Paul Krugman.
1. Introduction

Since the early 1980s, and even more since the fall of communism in Europe, development planning has lost much of its former appeal. As we all know, this is because we no longer trust in the state to steer the process of development. What was once considered as needing the guiding hand of planning is now left to the market. The subject of development economics, of which development planning was the main practical application, has to some extent been dragged down with it.

Regional planning has so far been spared that fate; although it can be seen as a disaggregation of national plans, it apparently has some additional value beyond that. Yet, it too is less popular than it was twenty years ago. It too faces obsolescence and irrelevance, in developing as well as developed countries. It is necessary to critically re-examine its role in the development process. What I aim to do in this paper is to try and falsify the hypothesis that regional planning is useful in promoting development. To the extent that I fail to do so, we should end up with a minimum agenda for regional planning — but one of maximum feasibility, discarding all functions that regional planning cannot fulfil efficiently.

A central question in such a venture must be: what should be left to the market and what to the state? Or are there other alternatives? Such questions can be explored in the framework of the school of New Institutional Economics (NIE). Whereas conventional approaches have taken the organization of society as given, this school examines the effects of different institutional arrangements on economic performance and vice versa. In particular, it is interested in conditions under which markets fail to provide the most efficient outcomes; markets then tend to be replaced by hierarchical forms of decision-making — which may involve planning.

This is not to say that NIE alone is a sufficient basis on which to build a theory of development — on which any theory of development planning must ultimately be based. NIE complements economic growth theory, but does not replace it. The other major development of recent decades is endogenous growth theory, which NIE complements. That theory also carries some important implications with respect to the role of the state in the development process.

The next section introduces the central concepts and research agenda of NIE, to the extent that these appear relevant to planning theory and in particular to planning for development. I shall proceed to give my view of what regional planning is, how it developed and what has been its role in developing countries. In section 4, that role is critically reviewed in the light of insights from NIE, from endogenous growth theory and from experience over the past 40 years. The final section looks at the implications of those criticisms for regional planning theory.

2. New Institutional Economics

Market failure: the rationale for hierarchies and markets

1 Although it must be borne in mind that markets and hierarchies are not the only alternatives in coordinating human decisions. Negotiation leading to mutual agreement is another one, which is explored in public-choice theory, which can be regarded as a variant of NIE.
Ronald Coase’s article ‘The Nature of the Firm’ of 1937 is rightly regarded as the pioneer publication of the new institutional school. Coase asks: if it is true that the market is the most efficient way to coordinate the decisions of individuals, why would there be firms? After all, within a firm decisions on the allocation of resources are not made by individual employees on the basis of supply and demand but through vertical coordination. The very central decision-making which is decried as inefficient in the overall organization of an economy is found in the bosom of the firm. This can be so only if hierarchies are sometimes more efficient than markets. When and why should this be so? Coase’s answer is that market transactions are not cost-free: there are costs involved in obtaining information, in concluding agreements, and in enforcing those agreements. Where these transaction costs are substantial, it can be more efficient not to work through the market but to exert central control over the allocation of resources — in other words, to plan. In the case of the firm: instead of contracting for each particular service on the market every time you need it in the production process, you engage a worker at fixed cost and then allocate his time and skills as required. A firm exists to minimize not just production costs, but the sum of production and transaction costs.

To impute a cost to market transactions is to jettison the classical assumption of a perfect market. However, the NIE framework does not question the fundamental assumptions of scarce resources and utility-maximizing individuals, and therefore it does not discard the neoclassical paradigm as such (as the older institutionalists tended to do). Instead it seeks to extend it by examining conditions of imperfect markets and the interplay of markets and hierarchies. This is not at all in contradiction to the orthodox view — on the contrary, Kenneth Arrow has held that general equilibrium theory only aims at establishing an ideal type against which the more complex real world can be assessed (quoted in Williamson 1987). Market economies cannot be created by fiat: there are conditions that must be fulfilled for markets to work. These conditions involve not only a legal framework (especially property rights), but also widely shared values and informal codes of conduct (Platteau 1994). In NIE, the focus is on institutions, defined by North as ‘constraints [. . .] to shape human interaction’ (1990, p. 4). Such a research agenda calls for interdisciplinary work. A relationship with economic anthropology, which has traditionally examined the impact of different economic institutions and compared economic behaviour across cultures, ought to be particularly fruitful. Cross-fertilization with political science and sociology are also called for.

Thus, markets may fail to provide the optimal solution to the allocation problem because of transaction costs, or because the necessary institutions are lacking. There is more that can make markets fail. Classical economics rests on the assumption of *Homo economicus* as an individual who is not only rational and self-interested but abides by the rules of the game. What about those who do not? It can be argued that under conditions of perfect information it does not matter whether people have a tendency to cheat: they will be denied the opportunity to do so; however, in the real world information is costly and people will have a tendency towards opportunistic behaviour (Williamson 1987). Nor is actual behaviour always fully rational, even if rationality is intended: the cost of information leads to bounded rationality (Williamson 1975, quoting Herbert Simon). NIE also seeks to explain individual preferences (another datum of conventional

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2 A hierarchy is defined as an organization where decisions affecting individuals within it are made at some central level; this decision-making can take place with or without the participation of those individuals, but in either case the central level is capable of enforcing the decisions.
economic analysis) in terms of what North (1990) calls mental models. Another overlap with economic anthropology.

Externalities are another form of market failure, and therefore a field of interest for NIE. The central tenet of market economics is that the sum total of individual decisions aimed at rational self-interest will ultimately lead to the greatest good for all. Externalities are exceptions to this rule: social costs or benefits are not in agreement with private ones, leading to suboptimal allocation of resources from a social point of view. NIE sees externalities as a problem of property rights, which define to what extent you reap the benefits of your work and pay the costs that your activities incur (North 1990). Coase (1960) gives a most enlightening treatment of externalities, showing that positive and negative ones are really two sides of the same coin. He goes on to point out that, as long as property rights are defined and adjudication is effective, bargaining between the two sides affected by the externality will tend to produce a socially desirable outcome irrespective of who holds what rights.3

Where the social benefit of the production of a good exceeds the private one, the market will not produce enough. Coase’s argument would lead to the conclusion that, in the right institutional environment, production will be optimized even where externalities exist; but there are believed to be goods for which it is difficult to define property rights in such a way that all externalities can be ‘internalized’. Such goods are public goods, with the related categories club goods, common property and merit goods. Public goods are defined as non-rival (i.e. consumption by one consumer does not reduce that by another) and non-excludable (i.e. it is not possible to exclude anyone from consuming the good in question); a typical example is traffic lights (Kaul et al. 1999). The former condition implies that the good is not scarce, which would make the market mechanism pointless in establishing a price for it; whereas the second mechanism means that consumers could easily avoid paying for the good, unless they can be coerced to do so. Club goods are non-rival but excludable (for instance a toll road), while common property is rival but non-excludable (say, a communal pasture); merit goods are neither, but are goods where the social benefit is deemed to be higher than what individual consumers are prepared to pay, and therefore public funds are needed to produce the socially optimal amount (e.g. education or classical music). That there are public goods is not really controversial, but there is no agreement on what goods are to be included in each of these categories. Neither do public goods necessarily imply state intervention: rules of courtesy are clearly a public good, but they are not usually produced by the government.

Undoubtedly the debate on what are public goods will go on for a long time to come, and its outcomes at any point in time will partly be determined by the intellectual fashion of the day. Today security and justice and a monetary standard are almost universally regarded as goods that ought to be publicly provided, and most people would include education and infrastructure as well. However, the American constitution allocated a significant role to the individual in providing security; the judiciary is independent from the state in all civilized countries; and the same independence has come to be more and more demanded for monetary authorities – the most striking case being the recent establishment of the European Central Bank. In both education and infrastructure provision, innovative approaches are presently being experimented with assigning

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3 In the sense of a Pareto optimum. How the benefits are distributed between parties depends on their relative strengths and on how the property rights are defined.
an increased role to the private sector: voucher systems in the former, unbundling in the latter (World Bank 1994).

NIE can provide us with a conceptual framework in which to study these issues, which are of obvious relevance to our central question. Planning as a public activity can make sense only if it is concerned with public goods (or club goods, or common property, or merit goods). Even then it has to be shown that planning is necessary. For one thing, as pointed out above, a public good does not have to be provided by the state: it might also be produced by a local authority, a supranational body, a religious group, or another kind of non-government organization, or indeed by the general public without any central intervention.

A number of students have pointed to the importance of ‘civic society’ as a producer of intangible goods that somehow appear to be important factors in development. With this is meant community organizations such as sports clubs, churches, charities, or cooperatives. Economists like to call this ‘social capital’, which term denotes that (a) we are talking about an investment that will yield benefits in the future in terms of higher income or a better standard of living; and (b) being social, the market mechanism will not produce enough of it and some other institutional arrangement is needed to produce the optimum amount (Narayan & Pritchett 1999). There is empirical evidence for a correlation between such organizational capacity and economic performance (Ibid., cf. also Putnam et al. 1993). Clearly we have here an example of a public good not provided by the state.4

**NE and development theory**

Differences in resource endowments - whether of human or natural resources - can explain only a small part of the vast differences in wealth and growth rates between countries, as the late Mancur Olson convincingly pointed out (1996). If not resources, the explanation can lie only in institutions and policies, Olson goes on to say. In that case, institutions are the most problematic and therefore the most worthy research topic: to the extent that policies are determined by the free choice of rational politicians who either want to maximize national welfare or are pushed by their constituents to do so, the right ones should eventually come about naturally. To the extent that policies are governed by power relations and cultural values, we ought to analyze those more durable factors. This brings us back to institutions as the most significant determinant of the wealth of nations. That line of argument has been followed by economic historians, showing how the rise of Western Europe to global economic and political dominance was due to economic institutions which enhanced growth. Technology in this view is subsidiary to institutions: innovation was encouraged by the right institutions (North & Thomas 1973). In some cases, new techniques already existed but came to be applied only when the institutional environment was right; in others, invention itself received a huge stimulus once the right incentives were created (e.g. patent laws); in yet others, remarkable growth took place without any technological innovations, purely as a result of institutional change (ibid.). Thus, NIE is important to development theory not only in that it can elucidate the role of the state vs. the market (our main agenda in this paper), but also in that it can help explain many baffling constraints to development. NIE accords with modem growth theory, in that it treats

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4 Belonging to any particular local organization should be seen as a *club* good, the degree of local organization, however, is a *public* good, benefiting also those who are not themselves members of any organization. It may also be noted that history has known many stateless societies, where public goods are produced without any government being involved.
technology as an endogenous variable; in the latter, technological progress is explained by investment in knowledge, in the former it is brought about by the right institutions. These explanations are clearly compatible and complementary. What new growth theory does not consider is the effect of imperfect markets and other inadequate institutions.  

Notwithstanding this aforementioned relevance, contributions from NIE to the field of development economics have been slow in coming and limited in number. Although there were a few microeconomic applications in the early 1970s (Harriss, Hunter & Lewis, 1995), a steady stream of publications began only with Nabli & Nugent’s essay in 1989. That article spells out a research agenda for NIE in development issues, separated into a transaction-cost and a collective-action line. The former would include topics such as different contractual arrangements, imperfect markets, property rights, and market failure; whereas the latter would focus on issues related to public goods and the public sector: the free-rider problem, rent-seeking behaviour, the ‘tragedy of the commons’ and the like. The collection of articles edited by Harris, Hunter and Lewis (op. cit.) provides a sample of what is being done, and it includes several articles about the relationship between state and market in poor countries.

If institutions are crucial to development, the study of how they can change - and in particular, how such change can be induced - must be an essential part of the theory of economic development. Here again, linking the insights of economic theory with those of anthropology (especially economic anthropology), but also with political theory and public administration appears potentially fruitful. On the other hand, within the discipline of economics the economics of institutional change have also been studied by Mancur Olson and his New Political Economy school; this mode of analysis brings a perspective of instrumental rationality to political theory. Ruttan & Hayami (1984), writing in a neo-institutional vein, propose a model for studying induced institutional change in which interaction between four sets of factors are considered: resource endowments, technology, culture, and institutions - all conventionally taken as given in economic theory. They identify variables that influence both the demand for and the supply of institutional change.

Will NIE, in combination with knowledge from other social sciences, with public-choice theory (New Political Economy) finally provide the ‘grand theory’ of development we have all been waiting for? The school is not without its critics, and several of them are included in the aforementioned volume by Harriss, Hunter & Lewis (1995).

Toye (1995), while not denying the usefulness of NIE, is of the view that it fails as a grand theory of development, firstly because it is empty, providing a point of view but no new insights; and secondly because it is difficult to operationalize: no one has actually measured transaction costs. This leads to the risk that it can be an unscientific theory in the Popperian sense: explaining everything but proving nothing. Another criticism is that institutions are a function of relations of power between groups of people, and that this element is not considered by NIE - Pareto optimality is the goal, without looking at how benefits are distributed; nor are institutions necessarily efficient in terms of maximum economic growth (Bates 1995, Khan 1995). In a similar vein, Stein (1995) argues that the emphasis on property rights leads to the neglect of

5 It can even be said that NIE, in true Hegelian fashion, subsumes dependency theory, in that institutions are the result of history and do not change easily - what North (1990) calls path dependence. That history refers to dominance and exploitation. Recognizing the insights of dependency theory does not necessarily mean endorsing the now widely discredited policy recommendations to which it led.
power relations; because of this he prefers the old institutionalism which still lives on. He believes that the old institutionalist framework has a superior capability to explore the role of money in economic development (by treating it as an endogenous variable) and to explain innovations (through its theory of the firm, not as a minimizer of transaction costs but as a stable social environment, shielded from the vagaries of the market).

I believe Toye is right in holding that NIE cannot be regarded as a theory of economic development; however, as a conceptual framework for formulating such a theory it is highly useful, in that (a) it focuses on the very variables that account for the divergence in economic growth across countries; and (b) it builds on, rather than opposes, the neoclassical paradigm that has proved its value in explaining economic phenomena. Whereas transaction costs may not have been measured in a numerical sense, they have been ranked and this limited measurement has produced relevant knowledge. Still, it has to be admitted that the measurement of transaction costs is a major problem in NIE, if only because they are not independent of production costs. As regards distribution problems, it is true that the transaction cost approach aims at identifying the most efficient solution in terms of aggregate benefits, whereas in reality negotiations will often be influenced by distributional considerations; this is a shortcoming (Platteau 2000). On the other hand, NIE is perfectly capable of analyzing power relations as both a determinant and a result or institutional arrangements, and it allows the consideration of distributional aspects of institutional and economic change (North & Thomas 1973). I find Stein’s arguments in favour of the old institutionalist school the hardest to deal with; but I see them as less of a refutation of NIE than as an exhortation to look for additional explanatory variables in economic development.

The issue of power relations brings us to another important topic on which NIE should have a contribution to make: governance. The main controversy in development economics (and its derivative, development planning) has always been between those who see the role of the state as a necessary guiding and promoting agent for development - the 'helping hand' - and those who think that the market should fulfill those functions (Adam Smith’s ‘invisible hand’). Both see the state as a fundamentally benevolent agent whose aim is to maximize social welfare. However, there is state failure as well as market failure, especially in many of the very poorest countries (Brett 1995, Chabal & Daloz 1999), but the phenomenon is universal (Pressman & Wildavsky 1984). This points to the necessity of viewing state organizations and those who hold the reins of power in them as self-interested rational actors: the ‘grabbing hand’.

A theory of planning that does not consider this aspect will work to the benefit of those in power, not those on whose behalf that power is held. Here we are at the boundary of economics and political science (or public administration), one of those disciplinary boundaries which are the playing field of NIE.

In conclusion, although NIE has some weaknesses and may not offer a ‘grand theory’ of development, it provides a mode of analysis which is highly suitable for exploring the relative roles of hierarchies and markets in development: what planners should do. Moreover, by focusing attention on what are probably the most crucial constraints to development, it is

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6 This is because social factors can lead to alterations in technology; resulting in higher production costs in order to lower transaction costs (Platteau 2000).
7 This is the title of a recent book on the subject (The Economist 1999).
relevant also to the methodology of development planning: how they should do it. We must now turn to those topics.

3. Regional planning

In this section, I shall sketch the agenda of regional planning: what it is, what issues it is concerned with, and how these have been applied in developing countries. First we must know what planning is, which might seem a trivial issue; however, the definition of planning leads us straight into fundamental problems of the planning profession.

**What is planning?**

When you open a book on planning theory, you may find a definition like “planning is decision-making based on rational thought” or some such formula (Faludi 1973; Alexander 1992). This implies that planning is a normal part of all human behaviour, and that is indeed what planners contend; but if everyone does it, why should there be professional planners and what do they do? Whereas there are fields such as corporate planning and economic planning, whenever we come across ‘planners’ tout court they seem to be most often involved in urban planning or something akin to it — spatial planning, regional planning, physical planning, or land use planning. All of these have to do with the allocation of space, and the plan itself takes the shape of a map or a design. Plans made by people who do not call themselves professional planners, but who do planning as an aspect of some other profession, are in the form of texts or diagrams. Thus, a military strategist will make a plan for an offensive; a business executive will engage in corporate planning; and public economists may do economic planning? What do they have in common?

To be sure, there are some techniques such as linear programming which are used by planners in widely diverging fields; but these techniques cannot constitute a profession. I suggest that there is no planning profession as such, and talk about planning as a universal human activity belongs to the realms of psychology and operational research. Where planning is carried out as an organized activity by an enterprise or public body, assigned to specialists, it is a sub-specialization within a professional field such as military strategy, business management, public economics or engineering. The only planners that regard their job as a profession by itself, with its own theory and methodology, are spatial planners and their ilk. Why would this be so?

**The origins of spatial planning**

Spatial planning began with urban planning. Until the nineteenth century this was the province of architects and engineers; but the dramatic rise in urbanization, linked with the industrial revolution, led to a new situation. The social problems associated with this trend (urban poverty

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8 Another important form is social planning, based on the works of Karl Mannheim; it is no longer as respectable today as it once was. Social planning has also had a major impact on planning theory.
9 This is not a commonly accepted view among planners. John Friedmann (1987), for instance, sees planning as social engineering, a tradition that began with the rationalism of the 18th century. However, social and economic planning never became either professions in their own right or part of what professional planners mostly do; and moreover both are now held in scant respect.
and urban sprawl) caused great concern, and this led to activist thinking in sociology.\textsuperscript{10} Such thinking began to influence the design of urban expansion and of new urban settlements, as exemplified in particular in the ‘garden cities’ movement of Ebenezer Howard in the late 19\textsuperscript{th} and early 20\textsuperscript{th} century. In the garden-city concept, the planning of a community with its social and economic aspects took priority over technical considerations. Since that time, architects and engineers have had to share the field of urban planning with social scientists: sociologists at first, later also geographers and economists.

That cooperation has not always been easy. Planning became a battleground between people with different academic backgrounds, with architects and engineers forming the ‘urban design’ line of thinking: the former concerned with the coherent and aesthetic concept of design, the latter with the efficiency of infrastructure (Faludi \& Van der Valk, 1994). Sociologists were particularly concerned with the fostering of communities and the welfare of urban residents, geographers and economists with the efficient allocation of space. This overlap and rivalry over competence led to the rise of planning as a separate professional and even academic field.\textsuperscript{1} Planning in areas other than spatial organization (such as economic or corporate planning) has been more easily confined within one particular field of expertise.

\textbf{Regional planning}

Once urban planning was conceived as an activity aimed at solving urban social problems instead of just a design, it was not long before cities began to be seen in the spatial context of the surrounding area with which they were connected economically and into which they were sprawling. That way of thinking began with Patrick Geddes, a Scottish biologist who was concerned about cities spreading into conurbations; his ideas were soon taken up in the United States by Lewis Mumford and others, in the 1920s. Thus, regional planning began as an offshoot of urban planning and remains more or less closely connected with it: ‘urban and regional planning’, ‘town and country planning’ are the current terms in the Anglo-Saxon world.\textsuperscript{12}

However, it soon received two injections which gave it a character of its own, one from planning practice and the other theoretical, from the developing field of spatial organization. The former was the launching of the Tennessee Valley Authority in the United States, in 1933. Regional planning was used here in the first place to promote the development of an impoverished region, rather than the efficient allocation of space. Assisting backward regions has remained a goal of regional planning ever since. The implication for planning theory is that regional planning is more than spatial planning alone: it is a combination of spatial and economic planning.\textsuperscript{13}

\textsuperscript{10} Actually, activism came first, academic sociology later; but today’s urban sociologists consider themselves heirs to pioneers such as Howard and Geddes, who were not themselves academics.

\textsuperscript{11} As exemplified in the term ‘planology’ used in the Netherlands.

\textsuperscript{12} The literature most of us read gives us a bias towards considering mainly developments in Britain and the United States. It may be noted here that regional planning existed also in other countries as early as the 1920s, for instance in Germany where a regional planning body for the Ruhr area was created in 1920 and still exists today (Alexander 1992); and in the Netherlands, where the concepts of the ‘Randstad Holland’ and its ‘Green Heart’ were launched in the same decade (Faludi \& Van der Valk 1994).

\textsuperscript{13} This is exemplified in definitions of regional planning: “the process of formulating and clarifying social objectives in the ordering of activities in […] any area which is larger than a single city” (Friedmann 1963, quoted in Wannop 1995:xv). Wannop himself prefers: “the balancing of resources to modify standards of living and disparities in economic conditions as between different parts of the nation (ibid.).
The theoretical injection came with the entry of geography into the planning field, in the 1930s. This introduced Christaller’s central-places theory into planning, as well as the agricultural location theory first designed by Von Thünen in the early 19th century. It was the application of location theory and central-place theory to the problem of regional economic growth that created regional planning as a field of its own, rather than as an appendix of urban planning. Economists had also become interested in location theory and spatial organization, and combined these geographical concepts with economic theory. This created the discipline of regional science, the theoretical underpinning of regional planning, in the 1950s (Isard 1961).\(^\text{14}\)

Regional science is a flourishing academic field today, and has received a new stimulus with the concepts of ‘learning regions’, focused on networks, innovation and competition (Helmsing 2000). In this framework, the emphasis is (at least to my understanding) neither on avoiding the social (including environmental) costs of unplanned development, nor on alleviating inter-regional inequality, but on the role of space and proximity in maximizing growth.

Regional planning, the practical application of regional science is not in the same rude health. There is a widespread feeling that planning has failed to live up to its promises (Faludi & Van der Valk 1994, Alexander 1992, Klosterman 1985). This is linked, of course, to the general scepticism about state intervention in society which became the dominant view in the 1980s. Still, although the prestige of regional planners has suffered and they may command fewer public resources than in the past, there remains a feeling that spatial organization is important, and that it cannot be left to the market. In spite of the doubts about their ultimate impact, regional plans continue to inform government policy. Moreover, political support for subsidizing lagging regions remains strong, especially in the European Union.

\textbf{Regional planning in poor countries}

When development economics, development planning and development aid all took off in earnest after World War II, the political climate for planning was highly favourable. In the Western world: Keynesian economics reigned supreme; public investment had helped to overcome the Great Depression; and economic planning had been applied successfully during the war. For those newly independent countries which were less than enamoured with Western models (and there were many), Soviet planning with its five-year cycles appeared worth emulating. Both types of planning were enthusiastically supported by the United Nations with funds and technical assistance.

Regional planning was initiated in developing countries not primarily as spatial organization, but as disaggregated national planning. In part it was planning for those public investment projects that were the competence of regional authorities, and it part it meant putting together all investments planned for one particular region and looking at their linkages - which could lead to other proposals for investment - national in scope but emanating from the regional level. To the extent that spatial concepts were used at all, growth poles were all the rage in those days of

\(^{14}\) In economics, the subdiscipline dealing with the efficient allocation of space is called regional economics, or in the Netherlands spatial economics; to the best of my knowledge, it is identical with regional science. In geography, the corresponding branch is economic geography. The differences between these two are slight, except that geography has a more holistic tradition, which is sometimes still discernible (Lambooij 1972). On the development of regional science, see also Krugman (1995).
optimism about industrialization and urbanization. Later, in the 1960s, when this optimism was tempered and it was deemed necessary to pay more attention to agriculture and rural areas, interest in regional planning surged; but it was an a-spatial planning. There were at that time academic regional planners specifically interested in developing countries (notably the Americans E.A.J. Johnson and John Friedmann); Johnson saw the lack of a balanced spatial hierarchy of urban centres as a crucial constraint to rural development (quoted in Belsky and Karaska 1990). However, it was only in the 1970s that theories of spatial organization began to be applied. A major role in the practice of regional planning in developing countries was played by the Urban Functions in Rural Development project, financed by USAID and led by Dennis Rondinelli; it was based on Johnson’s ideas. This project, which began in 1976, developed a relatively low-cost approach aimed at designing an efficient structure of urban centres in rural areas (Rondinelli 1985).

Other approaches, however, were also developed, and in 1990 Belsky and Karaska (who had written an appreciative foreword to Rondinelli’s book in 1985) published an article in the International Regional Science Review in which they criticized Rondinelli’s methods. Instead they extolled the virtues of location-allocation analysis, a computerized technique for locating public investments which was being applied in India. This article led to a lively debate in the pages of that journal, in which yet other approaches were also discussed (for an overview and conclusion, see Rietveld 1993).

Thus, the concepts of spatial organization have been introduced into regional planning in poor countries as is done in rich ones. The goals are still somewhat different. In rich countries, the foremost goal of most regional plans has been to avoid negative consequences of unplanned but predicted development. The goal of uplifting a backward part of the country is secondary. In poor countries, the two main goals are (1) to counteract interregional inequality by uplifting backward regions; and (2) to enhance national development by optimally using the potential of specific regions - in the hope that this can be understood better by taking a comprehensive view of a region with all the spatial linkages between the various sectors. This means that the economic aspect comes first, the spatial organization dimension second. The efficient utilization of space becomes a means to economic growth, not an end in itself as it often is in rich countries. This is strikingly exemplified in a recent book on regional development in Africa: there, the problems that regional planning ought to address are listed as including ‘the need to cushion local and regional entities from the vagaries of global instability’, ‘enhancing the competitive edge of the regions’, and ‘avert further local economic decline’ (Gooneratne & Obudho, 1997).

There is, however, yet another goal of regional planning that deserves mention. In the 1980s and 1990s, popular participation in planning has become an important issue. Obviously, the lower the spatial level of aggregation, the easier this is to achieve. Regional planning has been advocated as a way to achieve such participation. In Kenya, for instance, the District Focus for Rural Development has become a parallel planning mechanism to the sectoral plans promoted by line ministries; whether this makes for better planning in the interest of the population is a moot point, but it does serve to articulate local political interests against policies imposed from the top. Such a level (a district in Kenya typically has a few hundred thousand inhabitants) is too

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15 *viz.* the Randstad./Green-Heart policies in the Netherlands, which are aimed at channelling and restricting growth in the interest of a minimally acceptable living environment (Faludi & Van der Valk, 1994).
high for genuine ‘grassroots’ participation. Techniques for achieving that (such as participatory rural appraisal) are more geared towards a very small-scale local level with no more than a few thousand people. I would call this local rural planning rather than regional planning; the latter pertains to any area between the national level and the rural settlement or urban area?

Not only the goals of regional planning are different in poor countries: the means are different too, and so are the initial conditions in which planning is supposed to intervene (we shall not go into those in this paper). Whereas in rich countries the capacity of government to formulate and implement plans keeps on increasing (notwithstanding the supposed retrenchment of the public sector since the 1980s), in developing countries the means at the disposal of a government are not only far more modest, but in many of the poorest there has been a dramatic erosion of the state sector. This has caused planners and planning theoreticians to look for low-cost methods of planning, as we saw above. Even so, planning remains expensive, and participatory planning even more so. Planners face a hard task in ensuring that the benefits of their work are higher than the costs.

4. Towards a critique of regional planning in poor countries

Let us recapitulate what functions we now have for regional planning. To begin with, there is the disaggregation of national development plans; secondly the optimization of spatial organization in terms of maximum economic growth; thirdly, the minimization of negative externalities through the efficient allocation of space; fourthly, interregional equity; and finally the promotion of democracy by articulating regional interests. In this section, we shall consider the viability of each of these in a neo-institutional framework.

(1) The demise of economic planning at the national level removes the rationale for the original function of regional planning in developing countries. National planning still exists, of course, especially in countries like India and Pakistan which started it in the 1940s. However, it may be doubted whether today it is much more than government budgeting; and that becomes increasingly irrelevant as the public sector loses ground to private enterprise (cf., for instance, Kolkma, 1998). In many other countries, a development planning agency still exists, but it occupies itself with other duties: the management of foreign aid, investment promotion, or economic forecasting.

Regional planning - like national development planning - has often placed great emphasis on the need for integration: considering the effects of an intervention in one field on all other fields - whether of the economy or even on society as a whole. It is only by describing all relevant relationships that optimal progress (maximum growth with minimum negative effects) could be achieved. In the case of a region, one would look at placing different planned interventions in their specific spatial context. That vision has come to be seen as hubris: reality is too complex to be able to identify all relevant variables, let alone measure them and predict their effects. Alexander calls this the ‘obvious limitations of rationality’ (1992: 47-5, 1992a: 190). Furthermore, the Weberian view of a benevolent government with the political will and the stability to formulate and implement the required programme is at variance with the actual

16 Just what a region is has been a hot topic in regional science for many years (cf. for instance Hilhorst 1980).
socio-political constellations in all countries - but especially poor ones (Caiden & Wildavsky 1974). Planning in this comprehensive sense has been widely discredited.

However, before we take leave of national economic planning (which in any case is not the main topic of this paper), a few more words must be said about it. Firstly, the rejection of comprehensive planning as exemplified, for instance, in five-year development plans, does not imply the rejection of planning as a way for government to go about its business: a rational way of decision-making (Faludi 1986). Nor does it mean that in planning a particular project one should not attempt to consider its impact on other activities in the same region. Secondly, the function of data collection and forecasting, which is attached to many planning agencies, is undoubtedly a highly useful one, and clearly a public good. Our knowledge about economic growth has increased enormously in the last few decades, even as our confidence in using it to the benefit of the poor has withered: there are far more sophisticated models explaining growth and distribution at micro- and macro-level; a wealth of data has been collected to fill these models; and the data are easily available thanks to modern information technology.

Optimizing spatial organization involves the design of the most efficient central-places hierarchy with the associated transport and communication infrastructure, as well as an investment pattern that reflects the comparative advantages of different locations. The two questions that must be answered here are: do we have a market failure on our hands? And: if we do, is planning likely to do better? Obviously, a categorical answer to these questions cannot be given: it will differ from case to case. Yet, experience with spatial planning over the last hundred years has shown that one should certainly not assume an affirmative answer to either question. Even where there is good cause to assume that an urban hierarchy as it has historically evolved in a developing country presents an obstacle to growth which market forces will not clear (as Rondinelli, for instance, implies), applying the techniques of functional integration may not provide the answer - because spatial patterns are a symptom rather than a cause (Begg 1992), or because the people are simply too poor to afford the urban functions with which the functional-integration approach is supposed to supply them (Prescott & Vandenbroucke 1992). In such cases it would be better to focus directly on ways to raise productivity in rural production sectors.

In the appropriate location of investments, we should ask who makes the necessary decisions and how these should be influenced by planning considerations. Few would argue today that there are good reasons for attempting to influence the location of private firms directly, through subsidies, tax holidays or other incentives; this would most likely lead to suboptimal location decisions, which mean lower economic growth and quite possibly the relocation or decline of the business concerned once the incentives are discontinued. As for public investments (social amenities and transport infrastructure), these will, of course, through their external economies, influence location decisions of the private sector. They can be planned either by the ministries or public corporations concerned, or benefit from the vision of a regional plan. In the former case, they will normally be driven by demand, i.e. the number of people in an area, combined with some standard of distance at which the service concerned ought to be provided; or, in the case of a road, the existing volume of traffic will dictate the need for upgrading. Political considerations (read: special interests) are likely to exert some influence, but transparent standards provide some protection against this. In the latter case, a broader spatial view will determine that a particular town needs to grow; that different services at a particular level need to be combined in a given centre; or that a particular road is important as a development axis, and therefore needs
to be upgraded irrespective of its current utilization. These arguments will open a debate as to where to locate public investments, and since these decisions are no longer straightforward they will be wide open to politics. 17

I am not at all sure that the knowledge and vision planners can offer provides sufficient benefits over a market-driven approach to outweigh both the reduction in transparency due to more complex decision-making and the cost of collecting and analyzing the data plus the negotiations involved in the planning process (which we might call the transaction costs). In analogy to what was stated under point (1), I do believe that studying spatial organization in poor countries is very useful; and the result of such research might well favourably inform public policy. However, it might be better to do such research on an academic basis rather than as an immediate springboard for action. Applied research is not automatically of a higher social relevance than research purely for the sake of advancing the state of our knowledge. Regional science may have more to offer than regional planning at least on this point.

(3) Regulating the use of space in the public interest is perhaps the most respected aspect of spatial planning, including regional planning. It is also, as we saw, the reason why it was originally introduced. The need for it presupposes that the use of space leads to externalities with which the market cannot deal efficiently, nor can the problems be solved through negotiation between the affected parties, as Coase postulated (1960). Do these conditions apply? It would certainly appear that many uses of land by their owners will have negative effects on users of adjacent areas, and that these cannot easily be internalized. Coase’s theorem will work only if transaction costs are not too high; this would be the case where a particular use of land creates a nuisance to a few immediate neighbours, but not where the number of affected parties is very large. It can also be argued that a clean and biologically diverse environment is a public good, and this reinforces the case for intervention by an agency with coercive power representing the public interest – in other words, some form of government. An additional argument in favour of public involvement is that land use tends to be relatively permanent, especially when significant investment has been sunk into it; the development of a natural forest into an airport is not easily reversible. This affects future generations, and private cost-benefit analysis is unlikely to use a discount rate low enough to take this aspect into consideration. The fact that land resources are finite while population is growing makes this all the more urgent.

Yet, this still does not prove the case for planning. It could be that generalized environmental regulations, coupled with taxes and subsidies and such instruments as tradable emission rights, would enable the market to find the optimal utilization of space without the need for the government to draw up spatial plans. Certainly in urban planning there have been voices that these lead to better results than planners’ designs (Jacobs 1961). This brings us to a second point: that even if the market does not lead to the optimal allocation of space, the state might do even worse. Given the dynamics of the state sector in most of the poorest countries, that risk is real. 18

17 An example where a spatial vision was implemented successfully is provided by the development of housing in the Netherlands after World War II: low-cost housing was built in large quantities with government support in order to get workers into the parts of the country where growth was expected to take place. The real aim, however, was to keep wages low; with higher wages, housing might have been built through the market where the need was greatest (Faludi & Van der Valk, 1994).

18 The government itself usually holds large areas of land (nature reserves, infrastructure, and other public facilities), and its use of this land has a significant impact on overall land use in a region. However, the use of
These considerations do not make a very strong case for regional planning in the sense of controlling negative externalities. However, if we see public intervention not in terms of a Weberian benevolent and omnipotent state imposing optimal solutions on individuals, but as a Coaseian negotiation process, then the state (including local government, supranational organizations and parastatal agencies) can play a very useful role: it can act as a party representing the multitude of individuals affected by a particular land use; or better, if people can represent themselves, as a facilitator and arbiter. Planning in this context should be seen as a bargaining process, taking into account the various forces affecting policies, and its outcome will be marginal adjustments to a pre-existing situation, rather than a blueprint for change.

The political scientist Charles Lindblom has formulated a planning theory based on such ideas, called ‘disjointed incrementalism’ (1959). It has been criticized (by Alexander among others) for being a positive rather than a normative theory, i.e. a description of what actually happens in planning rather than a prescription of what planners ought to do; but it seems to me that the former ought to inform the latter. Applying such a theory can perfectly well lead to land use control for specific areas, but it is unlikely to result in a blueprint for the use of all land in a region which will be adhered to over an extended period of time.

Reducing spatial inequality is a worthy goal, but it begs three questions. One: is interregional inequality so large in comparison with inequality within any particular area that it is worth the effort of regional planning? Two: if the answer to the first question is affirmative, is spatial inequality a cause or a symptom? Three: given that spatial inequality is a problem that can usefully be attacked separately, what contribution can regional planning make to its alleviation?

As regards the first question, interregional inequality was seen by early development theorists such as Rostow and Hirschman as a temporary problem: development could start from growth poles, and in time the ‘trickle-down’ effect would see to it that regional incomes would converge. This optimism disappeared in the 1960s. Modern growth theory places great weight on economies of scale, which open the way to cumulative causation: the more a region grows, the better its potential for further growth becomes. The reverse is also true, and this means that a region can become a poverty trap - in other words, spatial location is sometimes a significant determinant of poverty.

Such a situation offers a prima facie case for regional planning. However, before undertaking it, a comparison should be made between intraregional and interregional inequality. I strongly suspect the finding that in most cases the former eclipses the latter. As Rietveld delicately remarks: “it is tempting to reflect on the appropriateness of regional policies to promote equity compared with non-spatial policies directed at specific disadvantaged groups” (199 1: 637).

As to the second question, I already quoted Begg (1992), who points out that a variety of historical, cultural and social factors can have led to the spatial inequality that an approach such as functional integration is supposed to solve; he also argues that, when problems other than

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this land could be informed by the market as well as by planning considerations, as is the case with privately-held land.

19 For a statistical formulation of both variables, see Rietveld (1991).
distance determine access to urban functions, regional planning may only serve to exacerbate existing inequality. I would agree with him that there are cases where regional planning purports to address problems that are not really regional in nature. Gooneratne & Obudho, already quoted, provide examples (1997).

Lastly, we must ask whether, if backwardness of a region is a problem, would discriminatory measures in favour of that region be the best way to deal with it? Economic discrepancies between regions (say, in income or employment levels) would normally lead to movements of people from the disadvantaged to the favoured ones. Although inevitably decried by politicians whose constituencies lie in the regions of out-migration, this is in itself not necessarily a bad thing. In Europe in recent decades, we have seen old industrial regions in decline; the dense population they have today is due to in-migration in the not-so-distant past. Why should the present spatial distribution of population be sacrosanct? They once had a comparative advantage such as the presence of coal, iron ore or water power which is no longer relevant; some have found a new advantage in their human resources (e.g. the Ruhr in Germany), and others have not. Let people move out! Still, I admit that there are cases where one can justifiably think that there is too much migration, and that there is a case for counteracting market forces: for instance, when a region is the domain of a disadvantaged ethnic minority, to whom one would wish to provide an opportunity for livelihood in their own area in order that their society and culture may survive in dignity.

In such cases, I would argue for discrimination in favour of such a region where public services are concerned, which will partly alleviate the disadvantage. Providing direct incentives to private investment in the form of tax holidays or other subsidies will inevitably lead to suboptimal allocation of resources. Much better would be to search for a comparative advantage of the region - private investors may be better at that than government planners, but the latter can be useful in providing the necessary information. However, in poor countries, which can ill afford chasing costly red herrings, one should be even more cautious to swim against the economic tide. Regional planning aimed at assisting lagging regions may well lead to misallocation of scarce capital.

Finaly, the argument about enhancing democracy, bringing government closer to the people and articulating local interests within a region. This is actually more an argument for regional (and local) governance than for regional planning. Given the former, the latter is useful only to the extent that planning in general is a good thing. The exercise of formulating a regional plan may help sometimes to galvanize public interest in development initiatives, which is a good thing if it leads to some concrete results - and that usually depends on an efficient regional authority. Planning may also strengthen the role of that authority, but only if there is a genuine commitment to devolution. There is often less to this than meets the eye: popular participation in the planning process may be of a token nature only, and in many decentralization exercises little real power is devolved to the regions concerned.

Decentralization itself is outside the scope of this paper, but I shall nevertheless risk a few remarks. At first sight, the devolution of government to smaller spatial units appears to be highly commendable, but it has its drawbacks too. For one thing, it comes at a cost, and in an environment where education and management skills are scarce resources, that cost is not small.

20 In my own experience I have never seen otherwise.
Decentralization invariably means a larger government, more civil servants, and a larger deadweight cost of government to the economy. Where probity and accountability are scarce resources, it may also lead to more corruption, less competence and more political interference in favour of special interests. These costs must be carefully weighed against the undoubted benefits. Even those benefits should not be overstated. Popular participation in regional government in a poor country may be limited to a local elite, especially in a state which in any case is not particularly citizen-friendly. The study of regional government in Italy by Robert Putnam and his associates is a good illustration of how the success of decentralization depends on the existence of social capital (op. cit.). The case for or against decentralization in each country will, of course, depend on its circumstances, such as its size and population, its level of income, its political system, the state of social capital, the existence and strength of local (i.e. subregional) government, and the presence of an ethnic factor.


The previous section leaves us with a very limited agenda for regional planning. In the absence of national development planning, regional plans as comprehensive statements of regional development are not needed. Although regional science ought to study spatial organization in rural areas and between urban centres, the benefits of influencing spatial patterns by planning are unlikely to exceed the costs - even where public investments are concerned. Regulating land use in order to compensate for externalities (especially environmental impact) does appear to be justified, but this does not always require regional planning and where it does we have to confront the risk of state failure. Regional planning to uplift economically lagging areas is justified only in special cases, not just because a region is poor. Nor should we expect too much of it in terms of enhancing popular participation, unless the climate for that is already favourable anyway.

On all the above points, the study of these topics in regional science and (especially the last one) in public administration may be more beneficial than their direct application in regional plans. It will lead to sound policy advice, especially in the longer term, but not in a way that can be guaranteed for each research project.

Yet, I believe that, with the modest agenda sketched above, regional planning still has an important role to play in the development process. Firstly, as a consumer of the results of regional science, regional planners should monitor how spatial patterns are evolving and what corrective action, if any, should and could be undertaken. Even where this is no correction appears feasible, informed public policy is better than blind policy-making, and planners should translate the knowledge acquired through scientific research. Secondly, the negative effects of inappropriate land use are often underexposed in poor countries, where the short-term success of a project will often outweigh other considerations; planning procedures, if devised intelligently with an eye to the political situation, can be of great use to counteract this tendency. And there are cases where discrimination of public investments towards a disadvantaged region is justified;

21 For further arguments for and against decentralization, see Hilhorst (1998).
this should be done in the framework of a regional plan which identifies growth constraints and opportunities.

Such a role makes demands on planning theory and methodology. What has been termed rational comprehensive planning (Kolkma 1998) has long been criticized by planning and public-administration theorists, but still informs much regional planning practice, especially in developing countries. I am not convinced that this is a drawback. ‘Disjointed incrementalism’, ‘planning as advocacy’ (Davidoff 1965), ‘planning through debate’ (Healey 1992) are all representative of a line of thinking where planning is seen as a process rather than an exercise aimed at producing a ‘plan’ which will then be implemented by someone else. They should be seen as inspiring a way of work rather than prescribing a predetermined series of steps. I do not think any of these theories are mutually exclusive, but they highlight different aspects, depending also on the role which the planner plays: part of a bureaucracy, external adviser, or acting on behalf of a community.

Planning as such is in no way in opposition to a market-led approach in development: it is a complement to the market. As Coase has taught us, markets never coordinate all economic decisions because there are transaction costs involved which in a number of cases make central coordination more efficient than markets. Such market failures include firms in general, externalities, public goods (and related categories of goods), prisoner-dilemma situations and distributional questions. Most neo-institutionalists speak of hierarchies as the alternative, but there are other institutional ways than the price mechanism or the boss to tell us how to allocate resources: custom and non-hierarchical groups arriving at mutual agreement spring to mind. Out of these four institutional frameworks, if I may call them that, planning is used in two of them, namely in hierarchies and in non-hierarchical groups, which we shall call collectivities.

Wherever decisions have to be made that are non-routine, such organizations will use planning (at least if their decisions are rational). Firms use it, governments use it and collectivities use it. The American planner Ernest Alexander has devised a theory of planning along neo-institutionalist lines (1992a), incidentally the only link between planning and NIE which I have been able to find in the literature. Not only does he point to the use of planning in the private sector; he also uses a market simile to describe political transactions (quoting Buchanan & Tullock 1967). In other words, the planning-vs.-market dichotomy does not coincide with the private-sector-vs.-public-sector one. Both planning and market principles may be used in either sector, governed by transaction costs.

In Alexander’s view, formal planning - in the sense of following definite procedures involving more than one person - becomes necessary at a certain level of complexity of the organization involved. It is the only way to ensure that different parts of the organization follow common goals, and the same is true even more where several organizations are involved in a single process and do not transact with each other purely according to market principles. Since planning is an activity of organizations (hierarchical or otherwise), it may itself involve the design of institutions, for instance when a market-led activity becomes susceptible to planning, or when planning is abandoned to the market.

As Alexander argues, the right place for planning is when transaction costs in the market are higher than in a centrally-led organization. Determining when planning is the answer on the basis of this criterion is still easier said than done, when we consider the theoretical and practical
difficulties of measuring transaction costs (see section 2). Still, it may provide a rough guideline, and I hope that the agenda for regional planning as outlined above is in agreement with it. Regional planning is public-sector planning, and here at least the two dichotomies referred to above coincide. I have also argued that certain categories of decisions made by government (such as the location of infrastructure) might be informed by market principles rather than by spatial design. However, there will still be planning, even if regional planning plays no part in it or as I propose a modest, advisory part.

The public sector will remain important in developing countries as in rich ones. The so-called Washington consensus on structural adjustment leaves large areas where opinion varies as to the role of the government (Williamson 1994); where the mainstream of development economics strongly favoured privatization in the 1980s and early 1990s, in recent years the pendulum appears to be swinging back towards an increased role for the public sector. The enormous importance of education as a determinant of growth has recently received renewed recognition (e.g. Drèze & Sen 1995); in the United States, innovative ways are being developed to introduce market principles into education, but education (basic education first and foremost) will continue to be considered a merit good, and therefore financed (if not necessarily provided) in large part by the public sector.

New Growth Theory treats technology (and therewith an important part of productivity growth) as an endogenous variable, the result of investment in knowledge itself based on education and research (Todaro 2000, pp. 99-102). Modern regional development theory runs along the same lines with its concept of learning regions, focusing on the agglomeration of knowledge, innovation and investment (Van Geenhuizen & Nijkamp 1998). To me there appears to be a convergence of thinking here, which presages hope for escaping from poverty.

The practice of regional planning ought to be in agreement with these ideas. If that requires giving up some of our cherished functions, so be it. Poor countries and their government sectors cannot afford anything that does not bring more benefits than it costs, and it is our duty to recommend only the best.

6. References


22 Peter Lanjouw (World Bank Research Department), personal communication.


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Pressman, J. L., & Wildavsky, A., 1984: Implementation: how great expectations in Washington are dashed in Oakland; or, why it's amazing that federal programs work at all: this being a saga of the Economic Development Administration as told by two sympathetic observers who seek to build morals on a foundation of ruined hopes (Berkeley, Calif.: University of California Press, 3rd edition).


