

BACKGROUND TO 'INTERDIMENSIONAL ANALYSIS'

A wide variety of approaches, frameworks, conceptions, theories, models and visions have been elaborated to better understand, explain, interpret and project the nature of cities and the functioning of urban development. Though there has been much emphasis placed on the need for inter-disciplinary and multi-dimensional analysis, in the majority of cases the starting point has remained either a single disciplinary or thematic focus on a particular facet of urban affairs, and their related causes and consequences. This has resulted in single discipline - economic, sociological, ethnographic, political, judicial, cultural, environmental and spatial - views of the city; or in a variety of one-dimensional ideas - the city as a 'growth machine', the 'formal/informal' city, the 'world' city, the 'compact/extended' city, the 'corporate' city, the 'ideal' city.

All these approaches and ideas assume and contain - explicitly or implicitly - a set of organising criteria for choosing the key elements, variables and relations which claim priority for our attention on the grounds that they are the most adequate or informative in the way they represent the significant causes of urban functioning and development.

The approach chosen to underpin the organisation of information presented here for use by actual and aspiring 'drivers of change' is that of "Inter-dimensional Analysis". The antecedents of this way of dealing with the complexity and inter-relatedness of urban existence lie in the work of both systems scientists and social critics attempting to come to grips with the working of complex systems, and the problems of instituting and maintaining social reform programmes within governmental bureaucracies. Formal models of 'dimensionality' build on the work of economic modellers and other social scientists trying to assess the degree to which their analyses correctly identify and interrelate explanatory variables and causal links in any given area of concern. These may be anything from the dynamics of national economies under processes of

structural adjustment, , the environmental impacts of different qualities and costs of basic service provision , or the major influences bearing on the distribution of 'life chances' among social groups in a city. This type of analysis has been further extended by the need to provide robust means of appraising and evaluating the impact of public policy, planning and management interventions across the whole spectrum of urban, national and international development.

With respect to the dynamics of urban development, 'inter-dimensional analysis', builds on the insights provided by these efforts and attempts to build a composite picture of these dynamics and their determinants, avoiding the more common weaknesses of single disciplinary or single issue perspectives. The four most common deficiencies in urban analysis, as elsewhere, are the following:

a) **"uni-causal explanations"**: the privileging of one 'key' element in an urban system as uniquely responsible for its overall trajectory or performance. Such single



causes have included industrialisation, social stratification, the 'interests' of local government, the maldistribution of infrastructure investment, or prevailing 'cultural values' of the urban poor. It is however highly unlikely that such a complex system will be determined by any one variable or dimension, however crucial it may appear to be; and attempts to enlarge the scope of 'key' variables will result in their losing definition and coherence.

b) "Illegitimate isolation of contributory causes": overestimation of the 'independence' of a 'key' variable as a sufficient, as well as a necessary, condition of development, failing to place it correctly as one among several complementary variables, all of which are necessary to produce an overall developmental dynamic. A classic case of this kind is to link increases in productivity or poverty reduction to large scale infrastructure investment programmes, without giving sufficient attention to such other matters as annual maintenance, revenue streams, management capacities, or external disturbances, that will, together, determine the outcome of any given level of investment.

c) "Misplaced aggregation" : the adding together of elements of an urban system to produce a 'key' variable which cannot bear the weight of operating as a coherent single 'cause' of development, but becomes a diffuse amalgam of many overlapping ingredients. Thus, categories such as the 'informal' or 'service' sectors, or 'decentralisation', or 'participation', or even 'the poor', each contain distinctly different component parts, not all of which will move together or in the same direction in influencing urban development trends.

d) "Unidentified assumptions" about the nature of the urban system : the exclusion of key variables and interrelations crucial to the functioning of the system, or the idea that certain conditions or behaviours are 'given' and will not, or cannot, be affected by other variables operating in or on the system. This applies to such things as 'external investment' decisions, 'gendered divisions of labour', client-patron systems, or the character of cultural 'traditions'. In general this kind of reasoning proves equivalent to the classic 'ceteris paribus' clause in economics and other social sciences; "other things being (assumed to be) equal" or unvarying, where in fact they are not, even over quite short periods of time.

Taking into account the above considerations, it will be found that recent reviews of research and practice in urban development confirm the repeated appearance of the same 'clusters' or 'dimensions' of urban systems in a wide variety of cases. These 'dimensions' encompass sets of closely related independent causal factors, which taken together with their multiple 'inter-dimensional' linkages found to account for the dynamics of "development performance" in cities worldwide. ■

