alternatives, but rather than methods of *generating* policy alternatives, that is, ways of facilitating the policy *design process*. This is an often neglected, but arguably important, perspective. Research, design and policy challenges following from the proposed approach are introduced and briefly discussed as part of the conclusion.

## Urban form and economic performance

### Theoretical background

Academics, policy makers and spatial economists in particular, have long been interested in the relationship between urban form and economic performance. A number of theoretically well-founded findings can be elicited from this literature. All else being equal, a well-functioning city enhances its economic performance by reducing production costs such as those for gathering inputs and distributing outputs, for example, by shortening the journey times between company locations and worker's homes or between different functionally connected companies. The spatial enlargement of urban markets also translates into lower costs: it gives companies access to a larger pool of labour, whilst at the same time helping job seekers to find adequate work. A well-functioning city thus creates a more efficient-labour market, one in which it is easier to match jobs with skills. Similar benefits can also be obtained in other spatial markets, such as those for housing and services. In a more general sense, a well-functioning city generates favourable opportunities for exploiting economies of scales, such as those obtained from having the widest possible access to specialist personnel, intermediaries, customers and suppliers. Finally, a well-functioning city encourages the incubation and spread of knowledge and innovation (for overviews of these arguments see *inter alia*: McCann, 1995; Rietveld and Bruisma, 1998; Gordon and McCann, 2000; Cervero, 2001; Geurs and Ritsema van Eck, 2001).

A problem with most of these theoretically well-founded statements is that they are supported by relatively little empirical research. Furthermore, in most studies, the various aspects that make up the urban system (e.g. land use and transport) are examined separately rather than simultaneously. In addition, the relationships between economic performance and characteristics of the urban system (other than its size), are addressed only to a limited extent. One interesting exception is

research conducted by Prud'homme and Lee (1999). This is discussed in the next section.

## Urban form and economic performance

### An empirical analysis

Since the groundbreaking contribution made by Alonso (1971), there has been a whole stream of research into the relationship between a city's size and its economic performance. The results are intriguing. Alonso's theory implies the existence of an optimum city size, but actual experiences are contradictory. Cities in different socio-economic contexts seem to be governed by different cost–benefit curves: a city like Tokyo, the largest in the world, may not yet have reached the limit of its expansion; but there are other, often far smaller ones elsewhere, in particular many capital cities in developing countries, which already seem to have grown to an unmanageable size. Prud'homme and Lee (1999) contended that other factors, not just size need to be taken into consideration in order to explain these differences. It is not the size of a city in itself that is significant, they argue, but rather the *actual extent of the spatial markets* involved in its economic functioning. It is not the number of jobs or workers cited in the municipal statistics that is important, but the number of actually *accessible* ones. In this respect, two further factors play a leading role in addition to the size of the city:

1. ***The speed of its transport system*: the faster it is, the greater the spatial reach of those seeking jobs or workers**
2. ***The geographical spread or 'sprawl' of activities*: in this case, the greater the spread, the fewer jobs or workers within a given spatial reach**

The combination of size, speed and spread determines what Prud'homme and Lee call the 'effective labour market,' the number of jobs or workers reachable within a certain time ($t$) in minutes. Particularly in large cities, this 'effective' labour market is often considerably smaller than the total labour market. In most cities, not all the jobs and workers are within what most people would consider to be an acceptable journey time. In the Paris conurbation, for example, the total size of the labour market is 5.1 million jobs, but its effective size according to Prud'homme and Lee's calculations is only 2.7 million for $t = 60$ minutes and just 1.2 million for $t = 45$ minutes. It is this