Complexity of multiscale residential context

Where do neighbourhood effects end?

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BOOK OF ABSTRACTS

Complexity of multiscale residential context: Where do neighbourhood effects end?

2. Disadvantaged Urban Neighbourhoods and Communities

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The spatial scale at which neighbourhoods are operationalised is a crucial issue in neighbourhood effects research. The theory on neighbourhood effects identifies a variety of mechanisms through which socio-economic characteristics of residential space can impact on individual socio-economic status. These contextual influences operate at different spatial scales, and, what is more, the scale may not remain constant in various settings. Role models and job-finding networks in the neighbourhood around one's home, spatial concentration of poverty within the city, local (regional) labour markets and other aspects of the spatial opportunity structure can generally be related to different spatial scales, but also to specific local settings. Yet, many quantitative studies, particularly the early ones, which examine neighbourhood effects, used single spatial scale, largely being constrained by administrative unit as an ultimate representation of the residential context. More recent studies have benefited from the increasing availability of socio-spatial data, but also from the increasing awareness of the importance of scale as established within both the theory of neighbourhood effects and the methodological considerations of the modifiable areal unit problem (MAUP). Therefore, neighbourhood effects studies have started to compare two or sometimes more spatial scales, mainly concluding that smaller scale of the residential context has stronger effect on individual socio-economic status. However, these studies use data from different countries and cities, for different samples of people, examine very different spatial and temporal scales, let alone different outcome variables assessing people's socio-economic status. Therefore, the importance of spatial scale for neighbourhood effects remains relatively underexplored and only fractionally understood. This paper takes a systematic approach to spatial scale, by providing a conceptual discussion and an empirical demonstration of the general relevance of scale and the context dependence of scale. Specifically, we explore the methodological aspects of measuring the share of low-income people and modelling the effect of this contextual characteristic on personal income from work at a substantial range of scales, using micro-geographic data for the whole population of the Netherlands. We modelled neighbourhood effects for the entire country at the array of spatial scales keeping everything else constant and embracing a wide range of residential contexts, from the "front door effect" to the effect of a large urban environment of the city. We then focused on specific cities to demonstrate that neighbourhood effects not only depend on choosing scale, but also on choosing scale in a specific spatio-temporal setting.