Modelling place attractiveness in the era of Big and Open data

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From hedonic house price models on micro-scales to estimations of regional economic resilience on the macro-level, an understanding of the spatial distribution of amenities and the local composition of neighbours and jobs is of key importance. Some of the amenities or attributes that are commonly used in house price modelling, such as quality of housing, job-accessibility as well as proximity to railway stations or nature are relatively easy to measure and integrate in an empirical modelling framework. Factors relating to perceptions about neighbourhood characteristics, status or even architecture may be far more difficult to account for in a satisfactory way. Moreover neighbourhood characteristics, amenities and prices are partly linked by circular causation.

In recent years, an increasing amount of spatio-temporal data have been made publically and openly available for research, particularly in online map-databases and through API: s. This development enables researchers to connect weather, transport schedules, and detailed geocoded databases listing a wide range of amenities to data on urban form, street-networks and housing. The new data sources enable us to reformulate the way we measure and use amenities in econometric models.

In this call we invite presentations that problematize and develop methods and theories that can be used to better understand and define amenities in studies of housing markets or place attractiveness.

We specifically invite presentations that address questions relating to:

- Combining hedonic price house price models and spatial analysis
- The study of temporal variations, including yearly, seasonal and diurnal patterns, of availability and attraction of amenities
- Theory and methods for the measure of accessibility to green and blue resources using spatial analysis and GIS
- Enriching models on mezzo- and macro-scales using disaggregate spatial and temporal data for the creation of variables.

- The use of international resources and classifications of data that could be integrated in comparative modelling.
- Usage of data from demographic and socio-economic micro-data registers, and the creation of bespoke neighbour statistics.
- Usage of Big data, smart data and qualitative methods
- Integrating mobility and the ambient population in measures of place attractiveness
- Architecture, space syntax, and urban form – what are the connections between the spatial form of the urban landscape and place attraction?
- The modelling of causal impacts rather than correlations, as well as of endogenous amenities
- Modelling approaches focusing on location choice and selection processes in view of idiosyncratic amenities.
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