



## Accessibility and environmental quality: inequality in the Paris housing market

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### Abstract

In this paper we examine empirically the market for local amenities in the Paris metropolitan region. We find first that there is considerable inequality in the spatial distribution of these local amenities, including accessibility, environmental and social indicators. We use a spatial representation and Lorenz curves to examine the degree of inequality in these amenities, and this provides evidence that some amenities (or disamenities) are much more inequitably distributed than others. The most extremely unequally distributed amenities are noise (due to its concentration near airports), “Redevelopment Areas”, presence of water (lakes and rivers) and forests, and presence of train and subway stations. Some indicators, such as the “Poulit accessibility” measure, were by contrast remarkably constant over the region. We recognize that local amenities should be capitalized into the housing market, and explore the willingness to pay of households for these amenities within the Paris region using alternative specifications of a location choice model. One of the core questions we examine is the spatial scale of the amenity effects and how this is captured in a location choice context. By estimating models at both a commune and at a grid cell level, we obtain new insights into how households in the Paris region trade off amenities against each other and against housing cost. We find that the residential location choice model fits the data moderately better at the smaller scale of the grid cell compared to the commune.

*Keywords:* Inequality; Efficiency; Local public goods; Residential location; Integrated model; Transportation modelling; Paris area.

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### 1. Introduction

Integrated land use and transportation models have received increased attention in research and practice over the past decade, principally based on their ability to examine the combined effects of land use and transportation policies on the endogenous system of urban development and patterns of travel, and their ability to represent the long-term induced travel effects of expansion in transportation capacity (Waddell, Ulfarsson,

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