

Accessibility inequality across Europe: a comparison of 15-minute pedestrian accessibility in cities with 100,000 or more inhabitants

David Vale, dvale@fa.ulisboa.pt (corresponding author)

CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa

André Soares Lopes

CIAUD, Research Centre for Architecture, Urbanism and Design, Lisbon School of Architecture, Universidade de Lisboa

Abstract

Active accessibility is a paramount objective of current sustainable urban development policies. Recently, the 15-minute city concept emphasized this framework by stressing proximity as a key urban feature. In this paper, we use two accessibility indicators — cumulative opportunities (total destinations) and Variety (number of different types of opportunities)—to evaluate pedestrian accessibility, using a 15-minute threshold, in a sample of European cities with 100,000 or more inhabitants, and measure within-city and between-city inequality, by calculating pseudo-Gini coefficients. Our results show not only that European cities are not 15-minute cities yet, but also that there is significant inequality within them, although less so in cities with high Variety. Our cross-city comparison found diminishing returns between both total destinations and population density and between Variety and density. Our findings suggest that European cities can increase pedestrian accessibility and reduce internal inequality by increasing the Variety of opportunities accessible by foot, along with improvements to pedestrian infrastructure.

Keywords

Accessibility inequality; pedestrian accessibility; 15-minute city; European cities