

# DISTANCE-BASED MEASURES OF SPATIAL CONCENTRATION: INTRODUCING A RELATIVE DENSITY FUNCTION

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## ABSTRACT

Since a decade, distance-based methods have been largely employed and improved in the field of spatial economics. Such tools are very powerful to evaluate accurately the spatial distribution of plants or retail stores for example (Duranton and Overman, 2008; Jensen and Michel, 2011). In the present paper, we introduce a new statistic measure based on distances to evaluate the spatial concentration of economic activities. As far as we know, the  $m$  function is the first relative density function proposed in the economic literature. This tool completes the typology of distance-based methods recently drawn up by Marcon and Puech (2014). By working on several theoretical and empirical examples, we prove the advantages and the limits of the  $m$  function to gauge the spatial structures in spatial economics.

**Keywords:** Spatial concentration, Aggregation, Point patterns, Agglomeration, Economic geography.

**JEL Classification:** C10, C60, R12

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