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Recognition of spatial relationships of companies by local scaling

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The main aim of this paper is revealing whether positions of companies are spatially dependent or independent. The positions are considered to be a point process. It is not possible to use a homogeneous model, because the positions are clearly attracting due to the underlying population. Thus, in our research, we suggest to model the positions by inhomogeneous point process, where the inhomogeneity is modelled by local scaling (Hanh and Jensen, 2003). The main tool will be the analysis of locally scaled g-function that will solve relationships within the sector of firms as well as between sectors. The observe g-function will be compared by its simulated counterpart by exact functional Monte Carlo test, specifically by global envelope test (Myllymki, M., et al., 2017). The research presents an application of these methods to firms that are located in Plzensky, Jihocesky and Vysocina regions in 2015.