

Intra-urban polycentrism applied on school consolidation and school travel in Flanders (Belgium)

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Abstract

This contribution describes first a theoretical framework outlining potential interactions between aspects of intra-urban polycentrism and daily travel patterns. It is assumed that an agglomeration with a polycentric spatial structure may entail a more sustainable mobility pattern in comparison with a rather mono-centric urban system. In a polycentric agglomeration the spatial distribution of jobs and services is covering the area in a more balanced way, since this distribution is based on a large number of centers and sub-centers, each with its own catchment area. We assume that shorter trips associated with a polycentric urban structure play an important role in policies aimed at a more sustainable mobility system.

Then we test this hypothesis using data on the location of the primary and secondary schools in Flanders (Belgium) and the residence of the pupils concerned. To this end, we apply a spatial cluster analysis, providing insight in the presence or absence of spatial concentrations of schools. Next, we examine whether there is a link between spatial clustering and the catchment area size of the schools. Also the size of the school is included in the analysis. The result of this exploratory study is essentially negative: neither the presence of clusters, nor the size of the school seems to influence the home-school distance of the pupils. This finding may indicate that the spatial distribution of the schools is closely linked to the distribution of the housing stock, and that the observed increase in school mobility should be sought at least partly in non-spatial factors.