Labour market cohesion and the optimal polycentric urban region size in Belgium

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A defining feature of the spatial extent of agglomeration economies is the size and mass of the urban labour market. A larger labour market logically entails a higher potential for specialization and thus we expect a more robust regional economic performance. In Western Europe, we frequently observe that formerly independent urban labour markets have coalesced in metropolitan polycentric regions. However, such a process of urban fusion is never unambiguous and therefore discussion is rampant on the extent of the resulting polycentric metropolitan areas.

We examine the spatial integration of the core of the Belgian labour market with the 'connectivity field' method (Vasanen, 2012, 2013) based on nationwide travel-to-work data from 1991, 2001 and 2010. This allows us to draw inferences on the development of labour market interdependencies between various parts of the Belgian urban system.

As expected, the results show that the integration of the labour market extends far beyond the boundaries of traditional urban areas. Interestingly, in the vicinity of Brussels the observed cohesion ignores the boundaries between the three federal regions of Belgium. By mapping time series, a number of economic core areas may be discerned which have over time become much
stronger connected with often distant commuter municipalities. The increased integration of the Belgian spatial-economic system and the further concentration of employment in a relatively limited number of municipalities partly explain the observed growth in the average commuting trip length in Belgium. Although improved cohesion of the spatial-economic system contributes to economies of scale and matching labour supply and demand, it also entails a lot of additional traffic, including all known drawbacks in terms of mobility and environment.

We can therefore hypothesize that system boundaries prevent unlimited integration and expansion of the described polycentric urban region, which can be expressed in terms of socially acceptable commuter trip lengths, congestion, fuel consumption, and emissions. Therefore, like the theories on its monocentric counterpart, we can conceive theories of a socially optimal polycentric urban region where the marginal gains of economic integration are eventually offset by the negative externalities of that integration. Summarizing, in this research, results of the outlined analysis will be related to some of the environmental, social and economic trade-offs for the potential future evolution of the Belgian regional-urban system.