

## Manuel Weiß, M.Sc. Spatial Planning

### Title of doctoral dissertation

High-Speed Rail as a driver of the knowledge economy? – Examining impacts on urban and regional development

### Abstract

The knowledge economy's role is rapidly increasing in the structural transformation of highly developed societies and is influencing urban-regional spatial structures. Simultaneously, the development of high-speed rail (HSR) changes spatial accessibilities and, therefore, the potential for interaction and knowledge exchange opportunities.

The inauguration of HSR-lines often raises the expectation of a prospering regional economic development, while the recent literature discusses the possible impacts very differently. There is a lack of research, especially for HSR in Germany, and for examining small-scale station vicinities.

The main objective is on the interrelations between the accessibility increase through HSR on different spatial scales and knowledge-intensive firms' locational decisions.

For this purpose, a systematic assessment of the medium- and long-term impacts due to the introduction of HSR on decision-relevant scale levels in Germany with a focus on the knowledge economy is carried out.

The dissertation investigates the anticipated and actual impacts of HSR on business location and employment development as well as the structural and spatial effects over time. This project relies on a methodical triangulation of quantitative and qualitative approaches and GIS-based analysis methods. The analyses are conducted at the spatial levels of urban region, city and station vicinity, focusing on the station vicinity due to the special need for further research. Contrasting case studies examine the processes. Based on the HSR stations in Germany located in the immediate catchment area or directly along a (planned) HSR route, eight case studies serve as more in-depth qualitative analyses.

### Supervision of doctoral dissertation

Prof. Dr. Simone Strambach; Philipps-Universität Marburg, Department of Geography, Human Geography / Geography of services, communication and innovation

Prof. Dr. Joachim Scheiner, TU Dortmund University, Faculty of Spatial Planning, Department Transport Planning

### Contact

ILS – Research Institute for Regional and Urban Development

Brüderweg 22–24

D-44135 Dortmund

Phone: + 49 (0) 231 9051-181

E-Mail: [manuel.weiss@ils-research.de](mailto:manuel.weiss@ils-research.de)