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## Urbanization, Commuting and Regional Labor Markets

Peter Haller

Dissertationen

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*Nürnberg, April 2018*

*Peter Haller*



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## Introduction

### Spatial Economic Structure and Urbanization in Germany

Compared to other European countries, Germany has a highly dispersed spatial structure with many centers of dense economic activity. The left panel of Figure I.1 shows the job density in Germany in 2014. The unique polycentric structure is characterized by large employment centers, like Berlin, Hamburg or Munich. However, there are several other locations with a thick labor market. To a great extent this pattern is determined by location fundamentals, like access to amenities or natural resources, and path dependency from the countries' unique older and younger history. In the current literature these channels are of secondary importance, as the existence of booming and declining cities can be attributed to agglomeration and dispersion forces which also form the spatial structure (see Combes & Gobillon (2015) for a review). Today Marshall's (1890) ideas about the advantages of agglomerations can be summarized by *sharing* of inputs and common infrastructure, better *matching* of jobs and workers as well as knowledge spillovers and *learning* effects between workers and firms (Duranton & Puga, 2004).

Recently, the complex system of interactions within and across cities is given very much theoretical and empirical attention (e.g., Allen *et al.*, 2015; Davis & Dingel, 2017; Ahlfeldt *et al.*, 2015). Especially the New Economic Geography (e.g., Krugman, 1991; Fujita *et al.*, 1999) established a sound theoretical basis to explain those interactions by, e.g., monopolistic competition, price indices, increasing returns to scale. However, this literature falls short to establish a close connection between the theoretical predictions and the empirical data, which often reveals diverse and fragmented regional labor markets, including spatial frictions and heterogenous workers and firms. The improvements of quantitative models for spatial analyses were recently summarized by Redding & Rossi-Hansberg (2017). Besides the advances in quantitative spatial models, empirical evidence about spatial frictions and spatial interactions of workers and firms leave much room for regional and urban research. Its polycentric structure makes Germany an attractive country for empirical studies. Empirical research can give new evidence about the spatial mechanisms of the German economy by looking at the internal structure of cities and the interactions between regions.

One important phenomenon is the increasing population in cities. It is a decisive element in the analysis of spatial interactions. Urbanization is key in the political discussion about future spatial development. Politicians often fear the rural exodus in Germany, whereas many urban economists stress the chances that urbanization brings through agglomeration advantages. A prominent publication that evoked also

public interest in the benefits of urbanization is Glaeser (2011). In fact, since 1995 the growth of urban areas in Germany is rather small. According to United Nation population data, the share of urban residents in Germany increased from 73.29 to 75.09 percent. However, this increase is spatially unequally distributed. The growth of workforce population shows a clear difference between East and West Germany. Population in non-metropolitan areas decreased by 16 percent from 1995 to 2014 in eastern municipalities, whereas there was a 1.8 percent increase in the western parts. The population in big cities increased by 3.3 percent in West Germany and remained almost unchanged in the east. In the right panel of Figure I.1 we can observe the population decline in East Germany. Also several municipalities in West Germany have a shrinking number of residents. The population seems to rise in and around employment centers. Bavaria (South Germany) is the state with highest growth in its municipalities. Overall, the increase is only less than half of the growth of US urban population. In newly developed countries the rise is even larger. For that reason, Brühlhart & Sbergami (2009) are questioning whether the agglomeration economics are as expected in developed countries like Germany. Hence, there is room for additional empirical clarification whether all advantages from denser urban areas are applicable for the German spatial system with prospering southern and declining eastern regions.

