New economic geography and regional price level

Reinhold Kosfeld · Hans-Friedrich Eckey · Matthias Türck

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Abstract In New Economic Geography (NEG), price effects play a crucial role as a forward linkage in the cumulative process of spatial concentration. This paper examines the potential contribution of Helpman’s NEG model in predicting cost of living and prices of goods groups at a regional scale. We particularly aim at developing NEG-based econometric models for the overall regional price level, prices of tradable and non-tradable goods and housing prices. The empirical price models are built with the aid of spatial-econometric techniques. The predictive power of the estimated models is assessed by cross-validation using a sample of southern German districts. Econometric analysis shows that crucial features of the price mechanism of the Helpman model are not backed by the evidence.

Keywords Regional price level · Helpman model · Spatial-econometric methods · Cross-validation

JEL classification C21, R13, R31

Zusammenfassung In der Neuen Ökonomischen Geografie (NÖG) spielen Preis- effekte im kumulativen Prozess der räumlichen Konzentration eine entscheidende Rolle als Vorwärtskopplung. Der Aufsatz untersucht den potenziellen Beitrag des Helpman-Modells zur Prädiktion des gesamten und nach Gütergruppen diffe-

Schlüsselwörter Regionales Preisniveau · Helpman-Modell · Räumlich-ökonometrische Methoden · Kreuzvalidierung

1 Introduction

Although disparities in cost of living across space play a crucial role in regional economics and policy, knowledge on regional price levels is scarce in EU. National statistical offices do not gather price data area-wide. Collections of price data are usually conducted for constructing the consumer price index (CPI) at the national or state level. Although statistical offices of the states provide inflation rates for the sixteen NUTS-1 regions in Germany, the data do not allow for interstate price comparisons. In the United Kingdom, however, the private Reward Group regularly reports cost-of-living indices for the eleven standard (macro-)regions used inter alia in salary surveys (Johnston et al. 1996). Information on regional price levels at a lower regional level such as for NUTS-2 or NUTS-3 regions is ordinarily not available.

On account of this lack of information, regional EU studies must usually rely on nominal indicators. Jüßen (2005) points to the necessity to “analyze convergence of real GDP in order to assess if regional policy is likely to achieve its objective of equalization”. In measuring spatial disparities in standard of living, Aten and Hesston (2005) estimate regional price levels using spatial-econometric models calibrated with national consumer price indices. The breakdown of country estimations to a regional level is, however, not easily justified. First, the econometric models built from international studies are primarily demand-orientated and not grounded in regional economic theory. Second, the calibration with national consumer price index does not necessarily imply an adequate explanation of regional price levels. Third, there is no a priori guarantee that responses of explanatory variables and spatial effects at the national and regional level are identical.

The lack of a regional economic foundation applies as well for the newly advanced studies on regional price levels in Germany by Roos (2006) and Blien et al. (2007). While Roos (2006) based his price equations on a general demand and supply scheme, Blien et al. (2007) do without any theoretical foundation. The latter paper makes use of multiple imputation as a strategy to generate completed data sets. In both studies spatial dependence in regional price level is not accounted for. Because spatial disparities in housing rents affect overall price level substantially, the neglect of the housing sector constitutes a serious problem.