Spatial Integration of Agricultural Land Markets

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Background and objectives
- Agricultural land prices have experienced a steady increase worldwide in the last decade due to spikes in food prices and high liquidity on international financial markets.
- This led to an ongoing debate on the sufficiency of the existing market regulations.

Methodology
- The law of one price (LOP) holds, i.e., price differences of homogenous products in spatially separated markets should not exceed transportation costs and other transaction costs.
- The applications of the concept of spatial market integration to agricultural land markets are rare due to several peculiarities of the product "land": Heterogeneity and immobility.
- Our study is one of the first attempts to examine spatial market integration of agricultural land markets empirically. Moreover, we test the applicability of statistical tools that were developed for commodity markets in the context of land markets.

Data
- The empirical analysis is based on sale prices of arable land on a county level in Lower Saxony, which is the second largest state in Germany and one of the leading states in terms of agricultural production. Those data are available for 25 years (1990–2014) and 37 counties of Lower Saxony, provided by the Statistical Office of Lower Saxony. This results in a balanced panel data set of 925 annual observations.

Results
- The test procedures clearly reject the prevalence of the LOP for Lower Saxony as a whole, even after adjusting for soil quality differences.
- Nevertheless, we are able to identify regions that exhibit similar price dynamics in a sense that the relative prices of included counties are stationary and converge toward a constant. These convergence clubs are to some extent composed of neighboring counties with similar natural and socioeconomic conditions.
- Membership in a convergence club implies that land prices converge and do not drift apart: it does not mean that differences in absolute price levels vanish over time.

Discussion
- The finding that the LOP does not hold for agricultural land markets even on a state level should not instantaneously be interpreted as an indicator of land market inefficiency that calls for policy intervention and market regulation.
- Slow convergence of prices may simply reflect the immobility and heterogeneity of this production factor. Even temporal price divergence can be rationalized in a competitive market environment.
- The new economic geography asserts that clustering forces, such as economies of scale and knowledge spillovers, can foster the concentration of economic activities in space, which, in turn, can cause disparities of factor prices in different regions.

Reference

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