UNIVERSITÄT BONN

Rheinische   Institut für
Friedrich-Wilhelms-   Lebensmittel- und
Universität Bonn   Ressourcenökonomik (ILR)

Prof. Dr. Silke Hüttel   **Production Economics Group**

Title: Location as a price determinant for farmland – A case study for Eastern Germany

Background & Objective:
Farmland in Eastern Germany has seen an unprecedented price rise in the last decade. However, while farmland prices are mainly determined by land productivity, which is typically measured by soil quality and weather conditions, a considerable variability in prices across sales with similar characteristics can be found. Academic literature indicates that indeed economies of scale are one major reason why larger lots usually achieve higher prices than smaller plots. Local land markets experts (Gutachterausschüsse Grundstücksverkehr), however, often report also smaller plots to be comparably expensive, which might be due to additional transaction costs of splitting up parcels for a buyer that also owns neighboring lots. Another explanation offered by the literature is geographic and travel distance to, e.g., urban centers, which may offer an additional price premium due to larger demand, also for non-agricultural use, in particular for smaller parcels. The aim of this Master's thesis is to explore if locational characteristics are a potential determinant of farmland prices in Eastern Germany. For the empirical analysis, we provide data for farmland auctions by the BVVG (Bodenverwertungs- und Verwaltungs GmbH) in Saxony-Anhalt and Brandenburg. This data includes farmland prices and variables that allow to control for major plot characteristics. Further parameters describing the location need to be derived, which requires a proficient use of statistical software (such as R) and/or acquiring knowledge in the use of geospatial data.

Technical Approach:
- Literature review: farmland market and price determinants, hedonic regression
- Data selection, parameter creation for locational variables
- Empirical analysis of relationship, e.g. using hedonic regression or tree-based learning approaches

Contact and supervision:
Dr. Stefan Seifert (s.seifert@ilr.uni-bonn.de**)**
Note that the farmland market data will only be available at the chair. Data work must be done at the chair. German language skills are of advantage.

Background Literature:

Nickerson, C.J., Zhang, W. (2014). Modeling the Determinants of Farmland Values in the United States. In: Duke, J.M., Wu, J. (Eds.), The Oxford Handbook of Land Economics, New York, pp. 111–138.

Brorsen, B.W., Doye, D. and Neal, K.B. (2015). Agricultural Land and the Small Parcel Size Premium Puzzle. *Land Economics*, 91 (3), 572-585.

Hüttel, S., Odening, M., Kataria, K., Balmann, A. (2013). Price Formation on Land Market Auctions in East Germany - An Empirical Analysis. *German Journal of Agricultural Economics* 62(2): 99–115.

Grundstücksmarktberichte for Sachsen-Anhalt and Brandenburg for several years - available at the chair