



How do institutional market players matter in farmland pricing?



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ABSTRACT

In this paper we analyse how institutional sellers within the privatisation process shape price formation in agricultural land markets by taking the German reunification as an example. These institutions sell the formerly state owned land within first-price sealed bid auctions, publish calls and obtained prices, and are hypothesised to exploit their market power. Based on the conceptual framework of hedonic pricing models, we use a spatio-temporal modelling approach to empirically quantify these impacts. We thereby control for land productivity characteristics, potential buyers and whether farmers purchase the land. We find that privatisation agencies sell at significantly higher prices, while one agency sells at lower prices to farmers.

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1. Introduction

Land is undisputedly the most important production factor with limited overall supply that even continuously declines because it is successively taken out of production for recreation or ecological compensation areas, or because it is needed for buildings or street/motorway construction. Given its immobility and assuming that all land is utilised, land supply in the local market emerges only if farms cease production or former owners wish to sell the land instead of renting it out (private suppliers). In Eastern Germany, however, and as in many transition economies, in addition to private sellers, the state land privatisation agencies supply formerly state-owned land. In Germany, the “Bodenverwertungs- und -verwaltungs GmbH”, that is, the Land Utilisation and Administration Company (BVVG) privatises all state-owned land with the exception of state-farms on behalf of the Ministry of Finance. Starting in 1994 with 1.2 million hectares (about 20% of the total agricultural area in the eastern federal states¹), in 2016 about

156,000 ha are left to be privatised by 2030 (BVVG, 2016). Also, local public land agencies serving as non-profit settlement companies for each federal state with the aim to preserve and strengthen rural regions, act as suppliers on behalf of the federal state. The main difference between both institutions and private suppliers is the market form: While mainly private negotiations (also smaller auctions or combinations) are found in the private market, land sales within the privatisation process are carried out by first price sealed-bid auctions with public tenders in accordance with European Law.²

A considerable debate has arisen whether land prices realised by public land agencies within the privatisation process are, on average, higher compared to those from private sales. One argument for this is that first price auctions might entail higher prices compared to private negotiations, as Bulow and Klemperer (1996) derive in a general setting and Fluck et al. (2007) find in the special case of agency based privatisation. Public tenders might further attract potential bidders and as such, ease market entry, also for potential buyers not directly being related to the agricultural business with the aim of using land as an investment alternative. The 2008 finan-

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¹ According to the NUTS (Nomenclature of territorial units for statistics), the classification used by Eurostat, Federal states (“Länder”), correspond to NUTS 1, counties

(“Landkreise”) correspond to NUTS 3 and municipalities (“Gemeinde”) to LAU 2 (previously NUTS 5) in the LAU (Local Administrative Units) classification system.

² Wolz (2013) provides an excellent overview about the transition period in Germany.

cial crisis has reduced the profitability of financial assets, leading to a (re)discovery of the agricultural sector for investment activities without direct farming interest (cf. Baker et al., 2014). In times when confidence in money investments is low, land might be used to store wealth, or as a hedge against inflation (e.g., Deininger and Feder, 2001). Also, non-agricultural buyers with strong interest to establish a farm business rather than renting out the land exist and privatisation sales in first-price auctions with public tenders might ease market entry. Identifying this buyer group, often labelled as non-agricultural investors without any clear definition, remains a challenge. In both cases, the distinction often relies on the source of the invested money, namely outside the farming business (e.g., Tietz et al., 2013). But why should price differentials between the different groups of buyers exist? Non-agricultural buyers are often encouraged to bid more aggressively in the sense that they may benefit from more diversified portfolios than farmers do, and therefore are able to offer higher bids. Likewise, non-agricultural buyers very likely face fewer financial constraints than farmers. Chavas and Thomas (1999) support this argumentation by showing that risk aversion and transaction costs differ by buyer group.

In contrast, (local) farmers may have better information on expected revenues from using the land. This might include local infrastructure and accessibility, soil constitution, and land development plans (zoning) affecting future returns. Thus, their bids might better reflect the true value of the land, though corrected by their individual value. This, however, might not necessarily correspond to the highest bid in auctions or induce success in private negotiations. Summarising, different buyers may have different goals, assets, and information possibly resulting in different pricing schemes and thresholds in their willingness to pay.

Nearly all post-soviet countries show similar obstacles and governmental challenges during transition and their implications for food production. However, each country has its own idiosyncrasies and has to be investigated separately (OECD, 2015). Our empirical study concentrates exemplarily for Germany on one of its federal states, Saxony-Anhalt. This land market provides ideal settings because of the participation of two institutional sellers, the BVVG and the rural settlement company “Landgesellschaft Sachsen-Anhalt mbH” (LGSA) that is, Land Administration Company Saxony-Anhalt, possibly leading to some degree of market concentration. Also, the debate about potential influence of non-agricultural buyers on farmland prices and ownership particularly takes place in this federal state.

Against this background, the aim of the paper is twofold: First, we target at investigating the question whether the privatisation agencies as institutional suppliers sell at different prices and if so, to what extent. Second, we analyse whether different buyer groups (farmers, non-farmers) buy at different prices. To research these topics empirically, we rely on the conceptual framework of hedonic pricing models.³ In our empirical strategy we use data covering all land transactions in the years 2009 and 2010 in Saxony-Anhalt (LVermGeo, 2013). Besides price information, characteristics like quality measures and size, information about the acquiring parties, that is, farmers versus non-farmers are observed. Within this data we are able to identify institutional sales carried out within auctions by the state-agencies BVVG and LGSA. Based on a spatio-temporal modelling approach we can show that both privatisation agencies sell at significantly higher prices, but LGSA with the aim to strengthen rural regions sells at lower prices to farmers. While we can show that the number of potential buyers relates to higher prices, no clear evidence is found that non-farmers buy at higher prices in privatisation auctions.

Many studies exist analysing the privatisation process in greater detail. While earlier studies such as Braun (1998) or Kucher (2007) emphasise the need of privatisation and recommend the auction mechanism to privatise land for successful economic transition, later studies analyse consequences lagging privatisation such as land grabbing as, for instance, Visser and Spoor (2011) for post-soviet Eurasia or Kerven et al. (2016) for Kazakhstan. Even if land remains state-owned, grabbing of land is tolerated, but is increasingly charged with taxes. These authors compare the development with the colonisation of the United States and phrase it “Euro-American ranching complex”. Also, land fragmentation may emerge from privatisation, which could be shown more recently by Hartvigsen (2014) to often hamper agricultural and rural development. Nearly all post-soviet countries show comparable obstacles and governmental challenges, particularly for land privatisation. Even though Eastern Germany has nearly caught up and most of the land has already been privatised by now, this study provides insights on how privatisation shapes local markets. Since many German organisations, also BVVG, offer consulting for other countries’ land privatisation agencies, our findings may be helpful in designing still ongoing privatisation processes.⁴ As such, we intend to contribute to the research of the land price formation process and the privatisation process in transition economies.

The remainder of the article is organised as follows. We first describe the land market in Saxony-Anhalt and develop the empirical model based on the conceptual framework of the hedonic pricing approach. Following that, the data, issues of spatial correlation and the finally estimated empirical models are presented. We then present and discuss the results, and finally close with concluding remarks.

2. The market under study: background information and data

In this section we present the market under study and the conceptual framework of the hedonic pricing approach as used to develop the empirical modelling strategy.

2.1. The farmland market in Saxony-Anhalt, Eastern Germany

As with all the federal states in Eastern Germany, Saxony-Anhalt’s agricultural structure and land market is influenced by the Eastern German history of expropriation, land collectivisation and socialistic policy between 1945 and 1989. After the German reunification in 1990, a privatisation agency (‘Treuhandanstalt’) initiated and administered the privatisation of the formerly state-owned properties, including agricultural and forest assets (Dells, 2008). In 1992, the BVVG was established and assumed the tasks of the privatisation agency with regards to the management, privatisation and restitution of the agricultural/forest land on behalf of the Ministry of Finance (Wolz, 2013). Since 2007, the formerly state-owned land has been sold at market prices within first-price sealed bid auctions with public tenders in accordance with European Law. Tenants have the general option to buy directly at market value, which considers the auction-based prices from comparable lots (Müller, 2011). These sales make up, on average, about one-third of total BVVG sales across all Eastern German Federal States (Forstner et al., 2011), though are not part of the analysis here.

In addition to the BVVG, the Land Administration Company Saxony-Anhalt (LGSA), a rural non-profit settlement agency, supplies formerly and currently state-owned land on behalf of the

⁴ Among others, German state funded consulting service projects had been carried out for Kazakhstan and Ukraine in the past. For a list, see <http://www.bvvg.de/INTERNET/internet.nsf/HTMLST/PROJECTS>

³ See Nickerson and Zhang (2014) for an overview of hedonic land pricing models.

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