

## IDENTIFICATION OF FACTORS INFLUENCING THE TRANSACTION PRICE OF AGRICULTURAL REAL ESTATE

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**Abstract.** Since 2004, we have witnessed an increased demand in the acquisition of agricultural property, both by individual farmers and entities not previously associated with agriculture. A significant increase in the transaction prices of agricultural real estate in recent years has been caused by the impact of limited agricultural land supply and external factors related to the functioning of Polish agriculture in the economy of the European Community. The value of agricultural real estate is affected by many factors that are taken into account when determining the value of real estate. In the article there is an attempt to identify other conditions resulting from external factors, and the management of agricultural land in terms of Polish membership in the European Union. The analysis included sales of agricultural property from Agricultural Property Agency (ANR) resources (state market) and the private market. The data were obtained from the Central Statistical Office for the years 2005-2013. Also, an analysis of the regional variations in transaction prices observed at the level of provinces (data for 2013) has been made. As confirmed by the research results, the agricultural real estate market in Poland increasingly depends on external factors (not taken into account when determining the value of agricultural property).

**Keywords:** attribute real estate, transaction price, agricultural real estate, resource, Agricultural Property Agency.

### Introduction

Agricultural properties belong to the so-called non-urban real estate located mainly in rural areas. Since Polish accession to the European Union, increased interest in purchasing agricultural property has been observed. This has resulted in significant growth in value. In recent years we have seen a lot of interest in purchasing agricultural property as a form of investment. This results in high prices of undeveloped agricultural real estate transactions. In Poland, the market for agricultural real estate includes the state and the private market, otherwise known as local or vicinal. The turnover of agricultural land which is in the resource of the Agricultural Property Agency, which is composed of the former areas of the State Land Fund (PFZ), i.e. land of the former state-owned farms, appears to be significant [1]. The Agricultural Property Agency (ANR) has 1.6 million hectares of land in its resources, of which more than 1.25 million ha is under lease. There is most land for sale in the following provinces: Zachodniopomorskie, Wielkopolskie, Dolnośląskie and Warmińsko-Mazurskie.

The dynamic growth of the average price of arable land in Poland is approaching the lower level of the prices quoted in the “old” EU countries. Significantly higher increases in land prices in the EU since 2004 are listed in the new member states in contrast to the old ones. At the same time continuing levels of agricultural land prices are several and even several dozen times lower than, e.g., in the Netherlands or the UK.

In comparison to other European countries with similar climatic conditions to Poland and similar market potential, namely Germany and France, prices of arable land in Poland are considerably less than in comparison to prices in the Netherlands, for instance. Changes in the prices of agricultural land in the EU in recent years can be divided into three groups. The first of these are the so-called “old” EU countries, which are dominated by free-market transactions, and for most of them the average price of land has for many years been very high. The price situation in recent years has been strongly correlated with the general economic situation of each concerned country. Thus, for example, declines were reported in Ireland and Spain, and the relatively highest increase occurred in Germany.

In the second group the “new” EU member states are classified, in which free market transactions are dominant. For these areas there have been generally recorded increases in prices (e.g., The Baltic States).

The last group comprises the countries with high growth in land prices, among others, the Czech Republic, Slovakia and Romania. Often, these are countries with an unfavourable agrarian structure of farms with a dominant share of small area farms (such as Romania) and/or countries where the process of re-privatization of state-owned land is not completely finished (e.g., the Czech Republic and

Slovakia). The average price of land for domestic farmers has already reached a very high level (often too high), but for companies with foreign capital it is still attractive. The graphs below (Fig. 1) show the dynamics of the changes in prices of agricultural land in selected EU countries in 2006 and 2012, and average transaction prices in 2012 (Fig. 2).

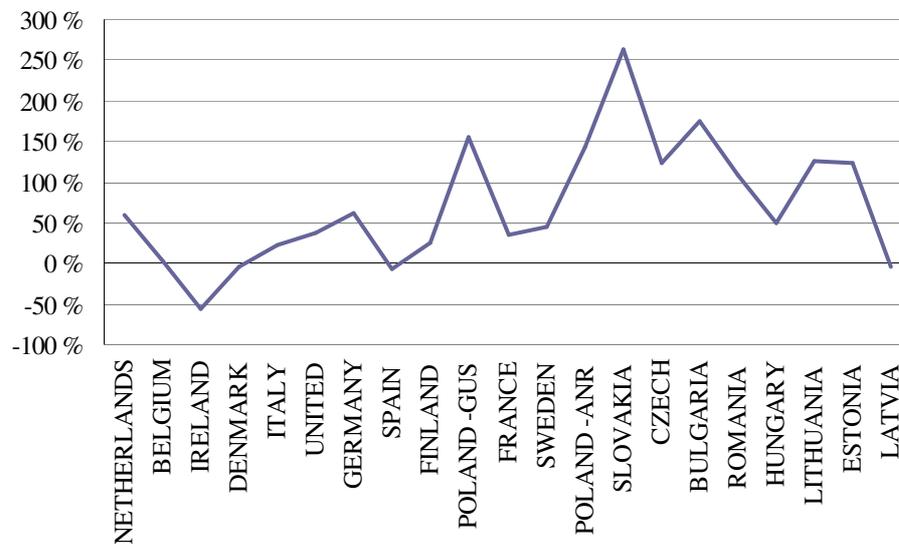


Fig. 1. Dynamics of the changes in prices of agricultural land in selected EU countries in 2006-2012

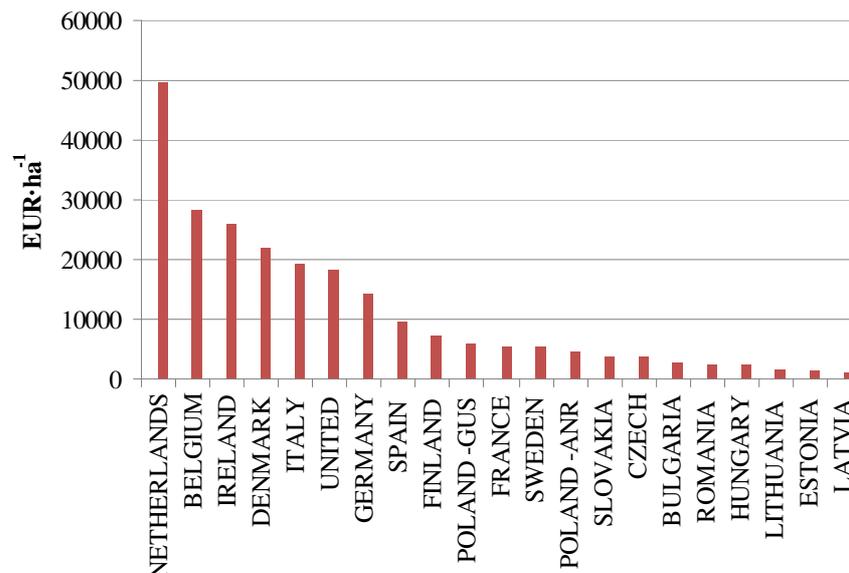


Fig. 2. Average transaction prices of agricultural land in selected EU countries in 2012

In the long term it should be remembered that in May 2016 the transition period for the purchase of land by foreigners in Poland expires. Until then, the probability of a decrease in land prices remains low. In addition, the prospect of new funds from the European Union with a large share of subsidies planned for the agriculture 2014-2020 budget should contribute to the development of this sector of the economy and sustain interest in land purchase for the development of native farms.

### Materials and methods

The scope of research concerns the analysis of agricultural real estate prices in Poland and in selected countries of the European Union. The aim of the research is to identify the main factors influencing the agricultural land market in Poland after joining the European Union. For the purpose of this article a monographic method has been applied for the review of the literature, legislation and the documents regulating the formation of undeveloped agricultural real estate prices and features that

affect their market value. In addition, a comparative analysis in relation to the average transaction prices resulting in the private market and transaction prices in relation to agricultural land which is distributed from ANR resources has been carried out. The analysis included the years 2005-2013. Also, a comparative analysis of spatial differentiation in the resulting transaction prices at the level of regions (data for 2013) has been conducted. The average transaction prices of agricultural property from the state market (ANR) and the private market have been obtained from the Central Statistical Office. In order to identify trends of behaviour in the agricultural property market in Poland, existing within the European economy, the prices of agricultural property in most EU countries have been taken into account.

The fact of progress in the transformation of the territorial structure of rural areas and increased interest in agricultural real estate in recent years have contributed to undertaking the research. Management of agricultural land includes activities related to the creation, recording and sharing of information about the area. This information can include prompts on how to use the given area, its management and ownership, and the estimated value of the land. The speculations have been carried out in the context of knowledge of behaviour preferences in the real estate market in the European economy.

## Results and discussion

The value of agricultural properties is affected by a number of factors [2], of which the most important are: location, convenience of travel, the utility value (quality valuation), the spatial configuration, level of agriculture development, the difficulty of cultivation, the level of pollution, the presence of water facilities and the occurrence of infrastructure impeding farming techniques. The characteristics affecting the value of agricultural property can be divided into basic features called mandatory attributes, and supplementary characteristics called optional attributes. The scope of the approach to agricultural property characteristics also depends on the buyer [3]. This phenomenon is particularly clear in the context of real estate sold by ANR in both limited and unlimited auctions [4]. In Poland, no decisive role of soil quality in establishing prices for agricultural land has been observed. This is due to regional differences and individual characteristics of the local market [5]. The price of land in the local market will grow in high demand for its limited supply [6].

The impact of environmental factors on agricultural real estate transaction prices varies depending on their potential designation [7]. From this point of view, agricultural land can be divided into two groups, with the possibility of non-agricultural use (group I) and real estate used for agriculture and forestry (group II). As evidenced in Kemp's study, higher prices were resulting for smaller agricultural property from Group I, where production values of soil had smaller significance. Property value increased with decreasing distance from built-up area and decreased near landfills. Proximity to protected areas was advantageous. In the second group of real estate, however, the high value of agricultural properties derived from the quality valuation [8]. The price of agricultural land is also largely dependent on the neighbourhood, but understood in economic terms [9].

The resulting transactional prices increasingly depend on factors other than agricultural [10]. These include external conditions, including the management of agricultural land under the Common Agricultural Policy. Implementation of the Common Agricultural Policy contributes to changes in the structure of farms and significantly affects the growth of agricultural real estate prices. In the context of European agricultural policy, the range of factors that impact transaction prices resulting for agricultural property has also been expanded [11]. The system of direct payments for agricultural land, and the opportunity for farmers to participate in programmes under the PROW caused greater demand for agricultural land, which directly results in an increase in agricultural property prices. It should be noted that in Poland there is currently a simplified system of subsidies on agricultural land. The same rate applies to each hectare of agricultural land provided that it is maintained in good agricultural condition. This means that the amount of subsidy is the same, and is not affected by the quality of soil or its location. An important factor in the value of agricultural land is also its location in less favoured areas for cultivation (ONW areas). Potential buyers are willing to pay more for land located within the ONW, as the unfavourable conditions are compensated by additional subsidies.

In recent years in Poland the demand for land has been supported by the trend of improving the profitability of agricultural production (including a significant increase in food prices), thus improving

the financial health of the farms. In addition, the investments in farms contribute to an increase in the value of agricultural properties. The agricultural land market, by the end of 2013, was supported by low-interest preferential loans for the purchase of land. Since 1 January 2014, the interest rates of preferential loans have been increased, and additionally low interest rates, and thus cheaper commercial loans, reduced the demand for concessional lending. Keeping commercial interest rates low in 2014 contributed to the growth of the share of this form of co-financing of land purchases.

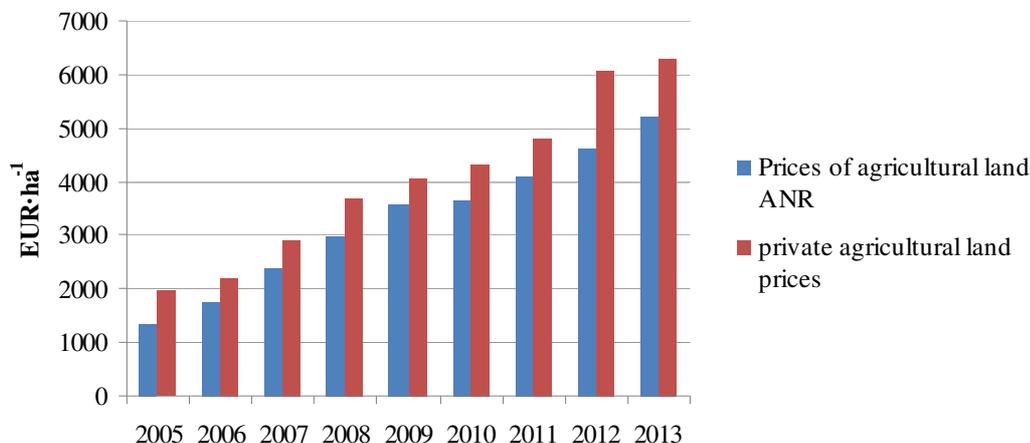


Fig. 3. Transaction prices of agricultural real estate in 2005-2013 in Poland

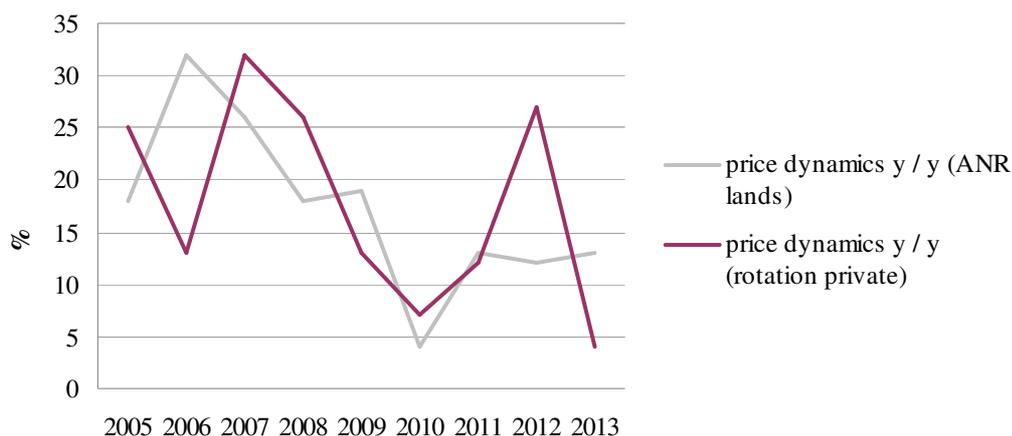


Fig. 4. Dynamic prices in 2005-2013 in Poland

In the analysed period, i.e. in the years 2005-2013, annual growth of agricultural real estate transaction prices was recorded (Fig. 3 and Fig. 4). Noteworthy is the fact that there were significant differences in transaction prices obtained from the resources of ANR (national market) and the prices of the private market. The biggest difference was recorded in 2005 (45 %), and since 2006 it has tended to stabilize at the level of 25-30 %. An important factor is the rate of change in the transaction prices of agricultural land, both in relation to the private market and the state one. Every year we see large fluctuations in transaction prices, especially in the private market. This is closely related to the unstable situation in the market of agricultural products in this period of time. In the case of transactions between farmers, deterioration in profitability of cereal production in 2013 was asserted, which should be conducive to further stabilization of land prices in 2014. The stabilization in the state market in recent years results from the state policy of managing the agricultural real estate in the resources of ANR, i.e. the 2012-2013 sale offer for the land, which came from the so-called “exemption” of the 30 % leased area.

There was a 3.5 % slowdown year on year (y/y) in the growth of land prices in transactions between farmers in 2013. (27.2 % in 2012). On average, the prices reached the level of 6 301.20 EUR·ha<sup>-1</sup>. The scale of the annual price growth was significantly lower than the growth rates recorded in the period of the strongest growth, i.e. 2007-2008 (annual price rise by approx. 30 %). The

average price of land offered by ANR in 2013 was 5 218 EUR·ha<sup>-1</sup>, i.e. an increase of 13.1 % y/y (in 2012 the dynamics y/y were 12.4 %).

Therefore, a detailed analysis of the spatial variations in transaction prices obtained in the private and state markets for 2013 has been carried out (Fig. 5). Conspicuous variations in transaction prices obtained in individual provinces can be observed. The greatest differences in the price of land from ANR resources in relation to the private trading in 2013 were observed in Podlaskie province (approx. 2 535 EUR·ha<sup>-1</sup>) and Wielkopolskie (approx. 2 464 EUR·ha<sup>-1</sup>). In only three provinces: Mazowieckie, Opolskie and Śląskie was the average price of land in private trade lower than that sold through ANR. This is due to the lack of land in the ANR resources.

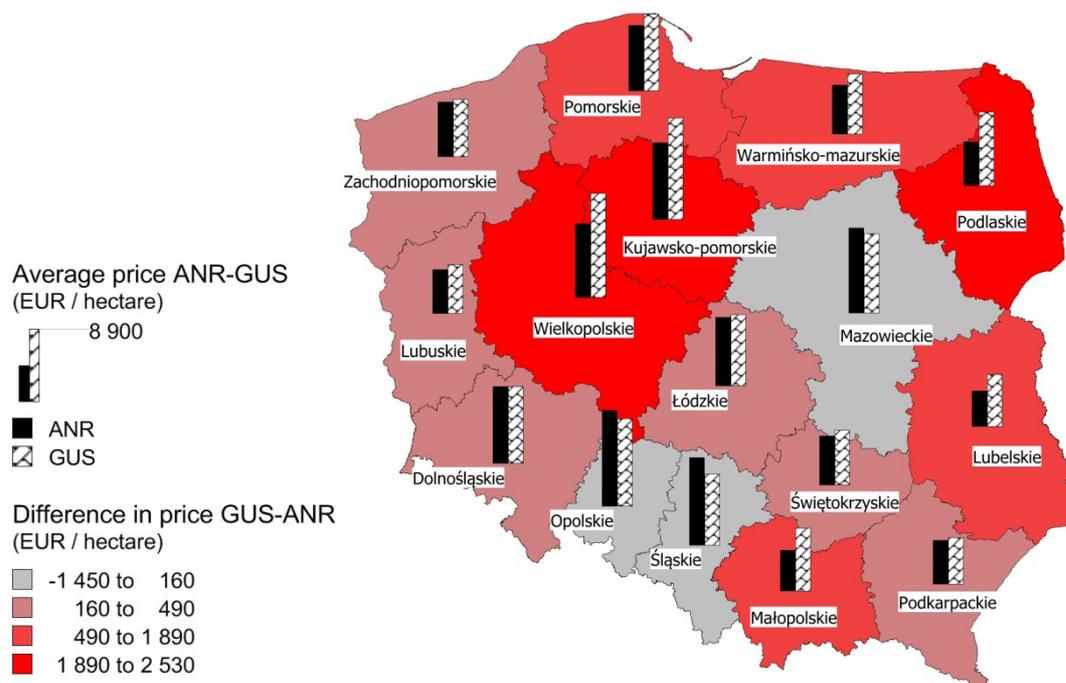


Fig. 5. Regional variation in land prices in the private and state markets

Sales of state-owned arable land are carried out mainly in northern and western Poland, which is dominated by large area plots. Further rotation of the land contributes to the fact that the number of land transactions is also highest in these areas. At the same time the number of large area transactions is significantly higher in the case of land from ANR resources in comparison to the private market. In central and southern Poland the circulation of land is being conducted in the private market, where the supply is dominated by small surface plots.

## Conclusions

1. Since Polish entry into the EU, the price of agricultural land has been constantly growing. This is because of the implementation of the Common Agricultural Policy for Polish farmers and the resulting benefits for them. The implemented 2014-2020 financial perspective and financial measures for agriculture encourage enlargement of the existing farms.
2. In the individual regions (Polish provinces) agricultural land prices vary. High transaction prices on the state market result from a decline in the supply from the ANR resources. In the provinces, where the ANR resources still remain attractive, land for sale (large areas) and lower differences in relation to the private market have been recorded.
3. Regional diversity, observed in transaction prices, also stems from the fact of the large diversity of agricultural land suitable for agricultural production (terrain, soil quality, water conditions, and climate).

4. Not without significance for the development of agricultural land transaction prices in Poland is also the transitional period forbidding the purchase of land by foreigners, which is drawing to an end (May 2016).
5. Forecasting trends in the agricultural real estate market in Poland, on the basis of the analyses, increased interest among potential buyers, and further growth in the price of agricultural land should be expected. The increasing influence of external factors modifying the level of prices of agricultural land is also being observed.

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