

# **Methodological and Practical Aspects of Rural Land Market Assessment – the Polish Example**

**Dr. Andrzej HOPFER and Łukasz ŻUK, Poland**

## **Key words:**

## **ABSTRACT**

The aim of paper is to present the methodological base for performing markets analysis. The observation area comprised local rural property markets in Poland, characterised by a small number of transaction.

The land market in Poland, especially concerning rural area, is still developing. This is caused by the fact that the economic condition and legal instrument necessary for its emergence have been created quite recently. It is followed by conditions in which the traditional models of market estimation, applied in Western World may not be always successfully used on the real estate markets in the Central and Eastern Europe. There are the cases in which it is impossible even to determine the state of the market of real estates in direct way. This results from the imperfection of land market surrounding, which manifest itself, amongst others, in relatively low number of transaction.

Therefore, especial and simplified market analyses approach is needed to describe and quantify the mechanism of price creation and to find an indirect methods of estimating the contemporary state, necessary correction and expected future time of normalisation the market situation.

## **CONTACT**

Prof. Dr. Andrzej J. Hopfer  
29 c Ogrodowa St.  
Kielpin  
PL-05-092 Lomianki  
POLAND  
Tel. + 48 22 864 2355  
Fax + 48 22 864 2355  
E-mail: [ahopfer@polan.com.pl](mailto:ahopfer@polan.com.pl)

# **Methodological and Practical Aspects of Rural Land Market Assessment – the Polish Example**

**Dr. Andrzej HOPFER and Łukasz ŻUK, Poland**

## **INTRODUCTION**

The term “market” has many meanings. It may be considered a technical category - a place where buyers and sellers meet to conduct transactions, a spatial (geographical) category – an area characterized by similar terms of purchase and sale, and an economic category – relations between sellers, representing supply, and purchasers, representing demand.

Due to a unique character of real estates as a commodity, the land market differs considerably from the other kinds of market. It seems to be less “clear”, poorly organized, difficult to study or analyze. The land market is not uniform. This means that depending on the criteria adopted, it can be divided into different categories. The most common criteria of land market division are:

- criterion of subject – the market is classified according to types of real estates (an apartment, commercial real estate, industrial real estate, agricultural real estate market);
- criterion of area/range (a local, regional, domestic, national market);
- criterion of acquired rights to real estates (a lease and rent market, where owners lease/rent real estates, and an investment market, where investors buy real estates),
- criterion of price;
- criterion of quality.

## **AGRICULTURAL REAL ESTATE MARKET IN POLAND**

In spite of numerous imperfections, the agricultural real estate market in Poland constitutes an important segment of the land market. Due to its development and differentiation, the above criteria may be directly applied to this market. For instance, there are various kinds of agricultural real estates (large commercial farms with many buildings, smaller farms, undeveloped real estates, real estates connected with agricultural service – grain stores, feed mills, etc.). The range, depending mainly on the kind of real estates and the frequency with which it appears on the market, is different for large farms (regional) and single land parcels (local).

The land market reflects the relations between supply and demand. It determines the price of particular groups of rights to real estates. This price depends on the strength of supply and demand, but also on other factors. In the case of agricultural real estates, the most important among them are production value and location – the latter is often of the greatest significance.

The land market in Poland is specific, as there exist two parallel markets of agricultural real estates. On the first one, real estates are “supplied” by natural or non-state legal persons. The other one is dominated by the State Treasury Agency for Agricultural Property, which offers

for sale real estates owned by the State Treasury. The share of communal real estates in the market discussed is minimal.

Most of the transactions characteristic of the first type of market are conducted in southern, central and eastern Poland. In the regions dominated by state-owned grounds, farmers often buy land from the Agency, due to lower prices and favorable forms of purchase. The prices of land sold by farmers in 1998 were the highest (USD 1 320) in the south-eastern part of Poland, characterized by fragmentation of agricultural holdings and a low supply of land. The lowest prices (USD 688) were noted in transactions conducted in the northern macroregion, with soils of poor quality, low crop culture and the highest concentration of grounds that once belonged to state farms.

## **AGRICULTURAL REAL ESTATE MARKET IN POLAND – AN ATTEMPT AT EVALUATION**

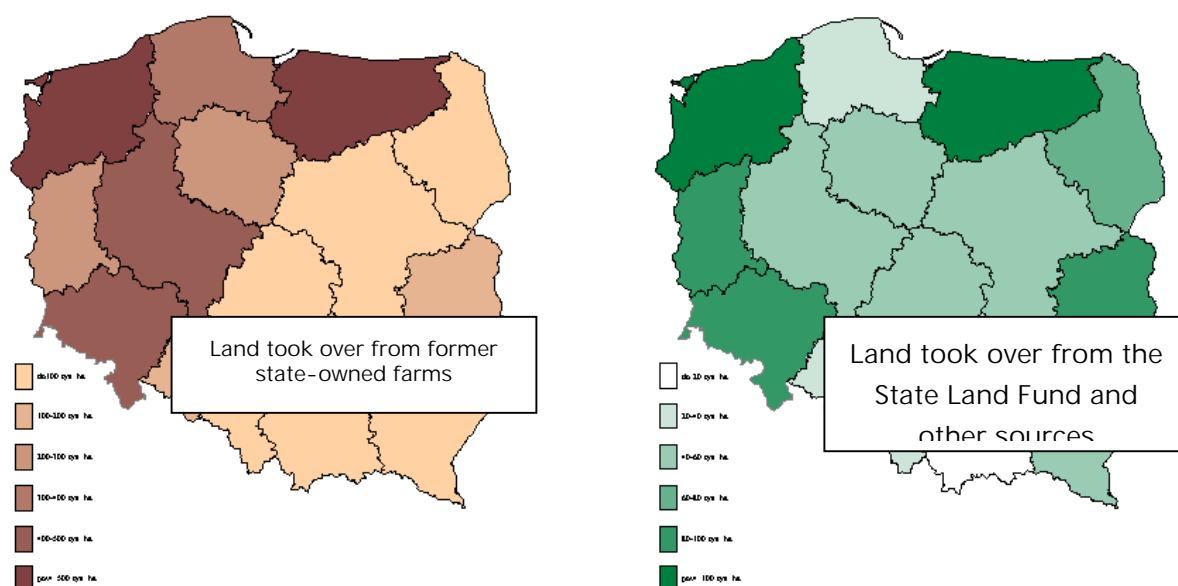
The first type of market (where transactions are conducted by natural and non-state legal persons) is much more difficult to study. The market of state-owned real estates sold by the Agency has been already described in detail, especially as concerns its formal and legal aspects. The following data are available:

- area of real properties, with a division into particular classes,
- transaction prices and forms of payment,
- transaction terms (tender, right of pre-emption).

Due to the fact that accurate records of state-owned real estates are kept, an analysis of this land market segment is relatively easy. The above data allow to determine: the volume of sale or lease, minimum and maximum transaction prices of farmland in particular regions, the number of transactions concluded, the average area of land per transaction, etc. The possibility of making an evaluation and analysis of a given market depends on available data and their reliability. The data concerning transactions on the other market are scant, less reliable and much more difficult to obtain. The reports drawn up by the Central Statistical Office are usually very general and do not reflect the trends observed on local markets. The situation is similar in the case of information collected by communal offices. It follows that as early as at the stage of gathering and estimating quantitative data (i.e. area of real estates, their division into soil quality classes, share of arable land) we encounter serious obstacles, whereas the process of market research is not limited to an analysis of these kinds of data only. Its aim is first of all to determine the effect of various attributes of real properties on their value, to investigate what are potential buyers guided by while making purchase decisions –high production value of land, location in the vicinity of an arterial road, possibility of using a given real estate for other than agricultural (e.g. commercial) purposes? It is always difficult to find answers to these questions. This is connected with the character of the land market and its imperfections, including irrational behaviors of sellers and buyers.

## DATA FROM THE REPORT DRAWN UP BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY – THE YEAR 2000

- Until the end of 2000 the State Treasury Agency for Agricultural Property took over real estates covering an area of 4 694 000 ha, coming from 1 666 state-owned farms (3 759 000 ha), the State Land Fund (608 000 ha) and other sources (327 000 ha). A relatively small area was taken over in the year 2000 – 28 600 ha, including 5 000 ha from former state-owned farms, 8 500 ha from the State Land Fund and 15 100 ha from other sources.
- Together with land, the Agency took over fixed assets with a book value of USD 1 835 mln, current assets with a book value of USD 322 mln, and liabilities amounting to USD 497 mln.
- Apart from land, the Agency took over other elements of State property, including among others 333 000 apartments, numerous industrial objects (agricultural and food industry, food processing), commercial and service facilities, i.e. 893 grain and green fodder drying rooms, 863 distilleries, wineries and breweries, 629 feed mills, 240 butcheries and slaughterhouses, as well as 210 other agricultural and industrial objects, 361 shops, 118 hotels, restaurants, inns and bars, 730 social, culture-promoting and sports centers, 2 024 country manors and palace-park complexes.



- From the beginning of its functioning, the Agency offered for sale real estates covering an area of 1 710 000 ha. 967 000 ha, i.e. over 20% of the area taken over by the Agency, was sold. Over 133 500 sale contracts were signed. In the transactions concluded in 2000, the average selling price per ha of agricultural land amounted to USD 888 and was by 4% lower than the average price obtained in the transactions conducted in 1999 (USD 921).
- Until the end of the year 2000, 1 201 000 ha of land, i.e. more than 25% of the area taken over by the Agency, was subject to permanent disposition, including 157 000 ha in 2000.

**Table 1.**

Permanent disposition	Until December 31, 2000	in 2000
Sold	967 000 ha	120 000 ha
Conveyed free of charge	210 000 ha	33 000 ha
Contributed to partnerships/companies	14 000 ha	700 ha
Other	10 000 ha	000 ha

- Until the end of 2000 the Agency offered for lease real estates covering a total area of 6 161 000 ha (some grounds for several times). 4 182 000 ha of land (68% of the area offered) was leased. 244 000 lease contracts were signed.

### **SALE OF LAND OWNED BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY**

During almost ten years of the Agency functioning, over 1 036 000 ha became the property of natural and legal persons until the end of June 2001. 134 056 sale-purchase contracts were signed, out of which 97% were contracts with natural persons and 3% - with legal ones. 76% of the land was sold to natural persons and 24% - to legal ones.

An analysis of sale according to area groups and subjects does not include 46 927 ha (4.5% of the land sold). These are built-on sites, grounds of a specific character and non-agricultural land (Table1).

### **STRUCTURE OF LAND SOLD BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY**

(as on June 30, 2001)

**Table 2.**

Area groups	Area of the land sold by the Agency (ths ha)			Number of the contracts signed		
	Total	to		Total	With	
		Natural persons	Legal persons		Natural persons	Legal persons
Up to 1 ha	23.8	23.6	0.2	58 267	57 770	497
1-10	140.3	135.9	4.4	42 408	41 352	1 056
10-100	346.2	310.2	36.0	13 514	12 375	1 139
100 –500	282.6	200.2	82.3	1 151	849	302
Over 500	193.1	80.7	112.5	246	115	131
<b>Total</b>	<b>986.0</b>	<b>750.6</b>	<b>235.4</b>	<b>115 586</b>	<b>112 461</b>	<b>3 125</b>

In the case of natural persons, the average area of land per transaction was 6.7 ha, whereas in that of legal persons - 75 ha. A systematic increase in the area of land per transaction with natural persons is observed (5.8 ha in 1996, 6.4 ha in 1998, 6.7 ha in the first half of 2001). Half of the sale contracts concerned very small real estates – up to 1 ha. Their share in the total land area is 2% only. The contracts concerning real estates covering up to 10 ha constitute 87% of all sale contracts and 17% of the total land area. The contracts for real estates covering 100 - 500 ha have the highest share in the area sold – 29%. 246 contracts (0.2%) were concluded for real estates covering an area exceeding 500 ha. They constitute over 20% of the area sold.

Natural persons buy mainly small parcels – they concluded 86% of contracts for plots of land covering up to 10 ha, 159 000 ha altogether (16%). 849 contracts were signed with them for relatively large areas - from 100 to 500 ha (on average 236 ha), 200 000 ha altogether. 302 contracts were concluded with legal persons for 82 000 ha (on average 273 ha). As regards the largest areas – over 500 ha, 131 contracts were signed with legal persons (on average 858 ha) and 115 – with natural persons (on average 706 ha).

66 contracts, for 606 ha (on average 9.2 ha), were concluded with the so called “foreign subjects” (state for June 2001). 186 contracts, for ca. 26 000 ha (on average 141 ha) were signed with companies with minor participation of foreign capital (state for the end of 2000).

It may be assumed that land covering an area of up to 100 ha, sold to natural persons, became part of agricultural farms. Until the end of June 2001, over 111 000 contracts were signed with them. Ca. 470 000 ha, i.e. almost 50% of the land sold by the Agency, became their property. There are still land resources that should be sold to farmers. In order to do that, lease contracts contain items enabling exemption of part of the land to satisfy their demand.

## **TERMS OF LAND SALE BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY**

The amount of sales proceeds depends on the price per ha of land and terms of payment. In the majority of cases land is sold by way of advertised (open) or closed bidding. An exception are here situations when authorized parties hold the right of pre-emption. The tender is based on a public auction. In certain, economically-justified cases the purchaser may be chosen on the basis of written offers.

The land owned by the Agency may be sold at a price determined on the basis of its value estimated by an expert, or at a higher price – fixed as a result of bidding or chosen from among the offers submitted. If there is no winning tender, the Agency calls for bids again and is permitted to sell the land at a reduced price – up to 50% of the initial price.

If the land is to sold to the lessee, on the basis of the right of pre-emption, two additional conditions must be fulfilled:

- the selling price cannot be lower than the total land rent for 15 years;
- the average yearly payment installments cannot be lower than the average yearly rent installments.

The Agency may allow purchasers to pay for land in installments, at a certain interest. If the measure of land value is other than pecuniary, the Agency receives no interest. The Agency may also resign from interest if the land sold is located in a commune which – according to the regulations on employment and unemployment – is threaten by a high rate of structural unemployment.

If purchasers are to pay in installments, the first payment made before signing a notarized deed should not be lower than 20% of the selling price, and the maximum payment period cannot be longer than 15 years.

In the case of land designed for agricultural production in a local spatial management plan, the amount due which is to be paid in installments or whose payment was deferred is subject to interest equal to the rediscount rate, but not lower than 4% per year.

### **PRICE OF LAND SOLD BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY**

**Table 3.**

Specification	years								
	1992-1993	1994	1995	1996	1997	1998	1999	2000	June 2001
Price of land in USD/ha	275	342	373	468	611	762	921	888	856
Increase in % (previous year=100)	100	125	109	126	130	125	121	96	96
Inflation rate	X	132.2	127.8	119.9	114.9	111.8	107.3	110.1	106.7

The average selling price per ha of state-owned agricultural land increased every year in the period 1993 - 1999, from USD 275 to USD 921. In spite of this increase, the price was higher than the inflation rate for four years only (1996 - 1999). From the year 2000 a decrease in the price per ha of land may be observed, by 4% in relation to 1999 and by another 4% in the first half of 2001.

### **COMMERCIAL FARMS**

Apart from sale, lease of state-owned farmland is one of the basic forms of its privatization. At the end of the third quarter of 2001, over 2.5 mln ha of state-owned land was under lease, which constitutes 75% of its total area (3.37 mln ha). In recent years the area of land under lease has decreased. This is connected, among others, with its pre-emption by lessees. Farms established on the grounds taken over by the State Treasury Agency for Agricultural Property were restructured and turned into ca. 5 200 commercial farms (with an average area of 443 ha), belonging to both natural and legal persons. Most of them were created by way of lease.

## SALE AND LEASE OF AGRICULTURAL REAL ESTATES BY THE STATE TREASURY AGENCY FOR AGRICULTURAL PROPERTY

(as on December 31, 2000.<sup>1</sup>)

Table 4.

Area groups	Sold		Leased	
	Number of contracts	Area in ha	Number of contracts	Area in ha
Up to 100 ha	107 357	478 211	143 188	614 106
100 ha and more	1 333	445 444	3 894	1 808 735
Total	108 670	923 655	147 082	2 422 841

### SALE OF STATE-OWNED LAND IN THE WARMIA AND MAZURY PROVINCE

The market of agricultural real estates owned by the State Treasury Agency for Agricultural Property is well developed in the Warmia and Mazury Province. In north-eastern Poland there were many State Agricultural Enterprises. The Agency started to taken them over in 1992.

**Table 5 – Average prices of land owned by the State Treasury Agency for Agricultural Property in particular administrative districts in the years 1992 – 2000**

Table 5.

District of	Total area	Average price per ha in USD
Kętrzyn	7 942 ha	731
Olsztyn	16 994 ha	661
Ostróda	11 754 ha	599
Szczytno	5 670 ha	517
Bartoszyce	9 851 ha	517
Mragowo	10 143 ha	454
Nidzica	5 571 ha	424
Działdowo	2 062 ha	390
Ława	5 888 ha	347
Nowe Miasto	2 473 ha	314
Lidzbark	4 373 ha	210

The most land was sold in the areas located at present in the administrative districts of Olsztyn, Ostróda and Mragowo. The highest transaction prices were obtained in the district of Kętrzyn, but also Olsztyn and Ostróda. There are two reasons why the transaction prices of real estates in the above districts are the highest. The district of Kętrzyn has the best soils in

<sup>1</sup> Without built-on sites, grounds of a specific character and non-agricultural land



the Province, and in the districts of Olsztyn and Ostróda real estates are located near arterial roads and attractive water bodies. The lowest prices are noted in the south-western part of the Province (the districts of Nowe Miasto, Iława, Działdowo and Nidzica), dominated by arable land and grassland of classes 5 and 6.

An analysis of the market of real estates owned by the State Treasury Agency for Agricultural Property, Branch in Olsztyn, shows some of its specific trends, e.g.:

- dependence between the transaction price of real estates and their area,
- dependence between an increase in the transaction prices of real estates and their area, noted with passage of time.

Table 2 presents the dependence of the average transaction price of a real estate on its area. It shows that small real estates – up to 1 ha - achieve the highest prices. An increase in the area results in a decrease in the unit transaction price. However, this phenomena is also affected by the behavior of buyers and sellers, as well as demand for certain kinds of real estates. The smallest ones are the most available and there is the strongest demand for them in spite of their high prices. This is confirmed by the number of transactions concerning real estates covering less than 1 ha – in recent years it has been higher than the number of transactions concerning the other state-owned real estates<sup>2</sup>.

**Table 6 – Dependence between the transaction price of a real estate and its area**

**Table 6.**

Area	Total area	Average price per ha in USD
< 1 ha	1 045 ha	1993
1 - 5 ha	3 949 ha	860
5 - 20 ha	10 033 ha	622
20 – 100 ha	17 876 ha	544
100 – 500 ha	31 576 ha	523
> 500 ha	27 141 ha	414

**Table 7 – Dependence of the number of transactions and the real estate area**

**Table 7.**

Area	Years			
	1997	1998	1999	2000
< 1 ha	455	435	406	332
1 - 5 ha	314	215	138	146
5 - 20 ha	195	161	87	101
20 – 100 ha	98	85	48	45
100 – 500 ha	16	26	25	10
> 500 ha	5	5	6	3

<sup>2</sup> The data concerning the number of transactions concluded in the years 1997-2000 with a division into particular area groups are included in Table 3.

This trend is characteristic not only of the Warmia and Mazury Province, but the whole country. Taking into consideration the area structure of agricultural real estates, both sold and leased, the vast majority of contracts (98%) concern those covering an area lower than 100 ha. Such real estates, usually without production facilities and technical infrastructure, are usually purchased or leased to increase the are of already existing farms – on average by 4.3 ha.

The total area of real estates covering up to 5 ha, sold by the Agency, constitutes over 5% of the total area sold. Real estates whose area does not exceed 100 ha constitute ca. 36%; the remaining part are real estates whose area is higher than 100 ha.

Real estates covering more than 500 ha are very rarely the object of sale/purchase. It should be emphasized that at present the State Treasury Agency for Agricultural Property is the only “supplier” of such real estates on the market. In the years 1997 - 2000 there were only 19 transactions concerning the sale of large real estates. On the other hand, since 1992 they have constituted ca. 30% of the total farmland area sold by the State Treasury Agency for Agricultural Property, Branch in Olsztyn.

Another phenomenon observed in the Warmia and Mazury Province is a correlation between the area of state-owned real estates and an increase in their transaction prices. Table 4 shows that the highest increase was noted in the prices of small real estates – up to 5 ha. An increase in the prices of those covering up to 20 ha is slighter, but also considerable – by ca. 100% during four years. The prices of real estates whose area exceeds 20 ha are subject to periodical fluctuations, but in the last few years they remained at a constant level.

**Table 8 – Dependence between the transaction price per ha of real estate and its area**

**Table 8**

Area	Years			
	1997	1998	1999	2000
< 1 ha	USD 1 739	USD 2 929	USD 4 966	USD 5 397
1 - 5 ha	USD 553	USD 1 455	USD 1 883	USD 2 327
5 - 20 ha	USD 544	USD 732	USD 1 437	USD 1 081
20 – 100 ha	USD 583	USD 767	USD 834	USD 633
100 – 500 ha	USD 458	USD 569	USD 823	USD 627
> 500 ha	USD 556	USD 420	USD 715	USD 617

A significant increase in the prices of small real estates – especially those located attractively, e.g. on lakes, in woods – is caused not only by the factors described earlier (availability, demand), but also by the way they are perceived by buyers. They often hope that within a short period of time the function of such parcels may be changed to recreational or other, which would allow to treat them as a capital investment. However, purchasers often seem to ignore the costs they would have to bear in order to change the function of farmland in a local spatial management plan, and receive a permission to use it for purposes other than agricultural production.