

## Land use and land reform in former Central and East European countries

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the lessons learned.”

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## **Abstract**

The importance of agriculture is decreasing all over the world. The aim of the paper is to compare the ownership structure and land use in some selected former Central and Eastern European countries. The property structure and land use is in dichotomy, the production is performed simultaneously on small-size farms which produce primarily for self-consumption. The importance of farm land leases is increasing. The present paper tries to identify the main differences and similarities in land ownership and property structure, the changes in the last fifteen years, what happened and whether the expectations had been met. Furthermore the paper compares the main regulations of land ownership and tenancy in different countries, explains land market protection, and the need of a real valuation system of land.

**Key words:** property structure, land prices, land use, land use and ownership

## **Introduction**

The role and importance of agriculture has decreased within the national economy in Central and Eastern European countries. Although the agriculture was different before the social-economic transition in Hungary, Slovak Republic, Poland, Estonia, Lithuania, Latvia, following the integration into the European Union, similarities can be found in the role of agriculture in these countries. The property structure and land use can be characterized by dichotomy that is the large and middle-scale farms, which provide the major portion of commercial agricultural production, operate simultaneously with small-size farms which produce primarily for self-consumption. The importance of farm land leases is increasing and the rate of tenancy is growing. Agricultural land prices were gradually increasing in the examined countries during the past decade, but in general they remain below the level of farm land prices in the EU-15 countries. Prior to the EU accession it was expected that agricultural land would be cultivated mostly by owners. However, these expectations have not been met and a large number of agricultural land owners are interested in land sale or lease, and they are withdrawing completely from farming. The increased interest in land sales or lease will influence the leasing conditions, including the annual rent. Moreover, changes in leasing conditions will change the profitability of agriculture. We compare the main characteristics of land tenure and land use in selected countries according to the observed trends in other European countries.

Before the social-economic transition, agriculture had important role in the national economy in the new EU member states. (Table 1.)

Table 1. Role of agriculture in the examined countries

The proportion of agriculture in national economy in current prices						
Year	The proportion of agriculture					Foreign trade balance, million EUR
	in GDP production	in consumption	in export	in investment	in employment	
%						
Hungary						
1990	12.5	37.0	24.9	8.7	17.0	416.4
2000	3.7	29.2	8.0	2.7	6.9	1401.6
2004	3.3	25.8	6.0	4.3	5.2	892.4
2005	n.a.	n.a.	6.1	4.6	5.0	946.0
Slovakia (1990:Czechoslovakia)						
1990	11.6* <sup>5</sup>	34.8* <sup>8</sup>	5.59* <sup>6</sup>	11.21* <sup>7</sup>	12.01* <sup>7</sup>	-22.95* <sup>4</sup>
2000	4.93	31.8	3.32	2.63	5.50* <sup>2</sup>	-42.4* <sup>3</sup>
2005	4.70	28.60	4.40	2.99	4.57	-76* <sup>1</sup>
Poland						
1995	7.0	9.4	11.0	3.3	27.1	-107.2* <sup>9</sup>
2000	4.4	5.7	8.3	1.9	27.4	-316.6* <sup>9</sup>
2004	4.5	4.9	8.9	2.0	16.5	1176.1* <sup>9</sup>
2005	4.2	4.5	9.9	2.2	16.2	2108.3* <sup>9</sup>

Note n.a. = not available

\*<sup>1</sup> in agriculture (green report 2006) = -21,436 billion. SKK; \*<sup>2</sup> (green report 2001 page.3); \*<sup>3</sup> in agriculture (green report 2001) page 39 = -16,845 billion. SKK; \*<sup>4</sup> in agriculture (Statistic yearbook 1991 only for CSFR) = -1,119 billion Kcs; \*<sup>5</sup> 11.6% in current prices, 9.62% in constant prices ; \*<sup>6</sup> Statistic yearbook 1991 only for CSFR ; \*<sup>7</sup> Statistic yearbook 1991 only for CSFR; \*<sup>8</sup> it was divided into 4 income categories (higher , lower) 20,5 ; 22 ; 18,9 ; 34,8; \*<sup>9</sup> – in mln USD

Source: own calculation from data of Central Statistical Office (KSH) and the Agricultural Economics Research Institute (AKI); The Hungarian Agriculture and Food Industry in Figures. 2004. Ministry of Agriculture and Rural Development. Statistical Yearbook of the Republic of Poland 2006. Central Statistical Office, Year LXVI Warsaw.

In those countries where large-scale farming, based on state and co-operative ownership was dominant prior to the transition, there was a strong expectation of privatization or reprivatization of land. The tendency is that most of the individual owners do not farm, therefore other tenants, both farmers and farming companies, operate on rented land. Leasing resulted higher production costs. In the new EU member states not only the price of land increases, approaching land price in the EU-15, but the rate of long-term tenancy has been growing and concentration has began in land use. At the same time, rate of private ownership is different in evaluated countries (62.0-95.8%), and there are great differences between land prices. (Table 2.)

Table 2. Shares of private ownership of land, estimated land prices in selected countries (2005)

Country	Total land area	Rate of agricultural land	Rate of private ownership	Land prices in 2004
	Thousand hectare	%	%	EUR/ha
Hungary	9 303	65.0	85.2	~ 1600
Slovak Republic	4 903	48.5	76.5	~ 1100
Poland	31 269	58.2	96.0	~ 1580
Lithuania	6 530	53.4	63.3	~ 386
Estonia	3 536	32.0	70.3	~ 350
Latvia	6 459	28.7	90.3	~ 430

Source: Based on data gathered from national statistical offices of respective countries.

The examination of available data on land use and property structure suggests that the legislation of individual countries has different elements in land ownership and there is a strong tendency of land concentration. The role of land rent has been more and more significant during the last 15 years. In some countries there are legal regulations to stabilize the long term tenancy of agricultural land and national land funds have been created. Despite the fact that the number of offers and the rate of offered land is low, they could help the land concentration process. Land market is also affected by EU accession, that means land prices and rents are increasing, although they are still much lower, than in former EU-15. (table 3.) For example rental fee is 40-50 EUR/ha in Slovakia, 45 EUR in Hungary, and 379 EUR in the Netherlands.

Table 3. Land prices (EUR/ha) in some European countries

Country	Land type	2000	2001	2002	2003	2004
<b>Belgium</b>	arable land	14 145	15 895	n.a.	n.a.	17 038
<b>Czech Republic</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Denmark</b>	agricultural land	11 001	12 882	13 727	15 516	16 000
<b>Germany</b>	agricultural land	9 081	9 416	n.a.	n.a.	n.a.
<b>Estonia</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Greece</b>	agricultural land					
	-irrigated land	11 871	11 930	12 575	12 450	n.a.
	-non irrigated land	5 012	5 038	5 188	5 085	n.a.
<b>Spain</b>	arable land	8 786	8 979	9 520	10 180	10 757
<b>France</b>	arable land	3 590	3 710	3 860	n.a.	n.a.
<b>Ireland</b>	agricultural land	12 683	13 870	13 486	14 385	16 261
<b>Italy</b>	agricultural land	13 654	14 266	n.a.	n.a.	n.a.
<b>Cyprus</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Latvia</b>	agricultural land	n.a.	n.a.	551	527	1044
<b>Lithuania</b>	agricultural land	315	333	469	390	406
<b>Luxembourg</b>	agricultural land	97 410	100 970	112 270	n.a.	n.a.
<b>Malta</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Norway</b>	arable land	36 439	37 500	35 500	31 750	29 300
<b>Austria</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Poland</b>	arable land	1 194	1 415	1 307	1 308	1463
<b>Portugal</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Slovene Republic</b>	agricultural land	895	878	888	912	945
<b>Slovakia</b>	agricultural land	n.a.	878	888	912	945
<b>Finland</b>	agricultural land	3 933	4 039	4 246	4 700	5197
<b>Sweden</b>	agricultural land	1 989	1 988	2 019	2127	2455
<b>United Kingdom</b>						
- <b>England</b>	agricultural land	11 669	11 824	11 017	10 247	11 424
- <b>Wales</b>	agricultural land	8 173	8 349	10 366	9 388	n.a.
- <b>Scotland</b>	agricultural land	5 372	4 126	7 426	n.a.	n.a.
- <b>Ireland</b>	agricultural land	15 807	16 018	19 808	21 604	23 997
<b>Bulgaria</b>	arable land	n.a.	721	721	731	685
<b>Croatia</b>	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Turkey</b>	agricultural land non irrigated	16	10	12	n.a.	n.a.
<b>Romania</b>	arable land	n.a.	307	278	237	284
<b>Hungary</b>	n.a.	n.a.	n.a.	11 778	14 226	n.a.

Note n.a. = not available

Sources: own calculation, based on data of European Commission, Eurostat

[http://europa.eu.int/comm/agriculture/agrista/2004/table\\_en/338.pdf](http://europa.eu.int/comm/agriculture/agrista/2004/table_en/338.pdf)

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## **Material**

On the basis of statistical data, we tried to explain and compare the present situation of land property structure, land prices and rental fees in some former Central and Eastern European countries, and answer the question, what happened in the last fifteen years and whether the processes met the expectations or not. First, we examine the countries separately – regarding the main differences – then summarize the main features of the transition period.

## **Results**

### **Hungary**

Territory of Hungary is 9303040 ha, out of this agricultural land represents 5817200 ha (62.52%), forest land represents 1776700 ha (19.01%), water areas are on 34200 ha (0.004%), built-up areas and other areas represent together 1614200 ha (17.4%). On the basis of specified acreage and growth of population, 0.58 ha of agricultural land and 0.47 ha of arable land falls for one citizen. [Source: CSO, Statistical yearbook, 2004]

From the point of view of property structure and land use, the consequences of transition were most visible in the change of ownership rights in Hungary. After the transition, the majority of agricultural land went into private hands. In Hungary, in 1994 there were 3 500 000 registered land owners, while the number of inhabitants reached 10.1 million. In total, 1.500.000 persons were involved in different kinds of agricultural production. The result of privatisation was the move of 95% of land into private ownership. Moreover, a new category of agricultural enterprises, the so-called family farms, emerged. A family farmer is a person who works on his own or on rented land of an acreage smaller than 300 ha, and the agricultural activity is his main source of income. He usually has certain kind of agricultural education or has been carried out agricultural activities for more than 5 years. The estimated number of family farmers is 30000. In Hungary, legal persons and foreigners cannot acquire ownership rights to land. The ownership of natural persons is limited to maximum 300 ha.

Due to the above mentioned transformation processes, the land use went through a great change, over 93% of the land users cultivated only 11.5% of arable land in 2003, while 0.8% of farmers cultivated 67.5% of the land. 3460 thousand hectares belonged to companies, agricultural enterprises and co-operatives, and 3953 thousand hectares to private farmers. That means that the rate of rented land is very high which causes several problems in profitability. Nowadays, rental fee is included in the subsidy. 20% of the agricultural farms cultivate more than 300 ha which is 88% of the land. 72% of the individual farms cultivate less than 1 ha, which means that the majority (60%) produce for self consumption and not for the market. The proportion of the individual farmers using larger than 50 ha area was slightly higher than 1%, but the area cultivated by them was nearly 40% of the total land belonging to individual farmers.

In Hungary, the land prices are much lower than in EU-15. The price is determined in Golden Crown (GC) and depends on the quality of the soil. The average soil quality in Hungary is about 19-22 GC/ha. 11.04% of agricultural land (5.53% of arable land) belongs to the worst category and 6.51% of agricultural land (8.66% arable land) to the best category. These lands are mainly covered by vineyard orchards and other plantations. The land price depends on the regional situation of the land. There are great differences between the regions. The lowest is in South-Great Plain (36 EUR/GC), the highest in Central-Hungary (70 EUR/GC). [Hamza-Miskó, 2005; Kapronczai, 2006] These differences result, that the price of land is 1000-8000 EUR/ha in real transactions. At the same time it was explored by a survey, that the demand price of land was between 1340-2014 EUR/ha in 2003-2005, depending on the regional situation. On the basis of Naárné's results, it can be stated that about 70% of the contracts

were arranged on the offered price. The remaining land disposers agreed to decrease the price only by 10-15%. [Naárné Tóth, 2006] Another survey found that the price of agricultural land varied from 320 to 18000(!) EUR/ha in 2006, in a certain region, where there are many vineyards. [Marselek et al., 2007]

According to FADN data, a slow increase could be seen in rate of land lease in EU-15 (it was 42.6% in 1989, and 52.5% in 2003. The highest rate is in Belgium (874.9%), France (82.4%) and the lowest is in Ireland (20.0%), and Spain (32.6%). According to the Hungarian FADN data, the rate of rented land was 69% in 2003: 89% in large-scale farms, 53% in middle size farms, and 40 % in small farms it was. The tendency in Hungary is similar to European tendencies, increasing concerned especially the middle size farm category, where the rate grew up by 14%-point between 2002-2004. [Kapronczai, 2006]

## **Slovakia**

Territory of the Slovak Republic occupies 4 903 423 ha, out of this agricultural land represents 2 380 000 ha (48.54 %), forest land represents 2 002 774 ha (40.84%), water areas are on 92 845 ha (1.89 %), built-up areas and other areas represent together 427 804 ha (8.73%). On the basis of specified acreage and growth of population, 0.44 ha of agricultural land and 0.26 ha of arable land fall per 1 citizen. [Source: Statistical yearbook, 2004]

In Slovakia, the structure of ownership relations of agricultural lands is different from the structure of user relations. 1 854 973 ha of land are in private ownership, which is app. 75% of the total acreage of agricultural land in Slovakia. Approximately 5% (135 703 thousand ha) of land is in state ownership, and 20% (389 324 thousand ha) of the agricultural land belong to unknown owners (land which is not documented). [Source: SPF, 2002, VÚEPP, 2002]. Private ownership relates 65% [Csaki et al., 2002], that was in private ownership during the whole period of socialism, when the owners of agricultural land could not use their own land because they were moved to cooperative farms or state farms for common cultivation. They were the so-called „naked owners“, because their land was used without any compensation.

Following the 1990s, new legal regulations were implemented in Slovakia, according to which, land owners could claim back their land which was taken away during socialism. The restitution of land was a primary task, because real development of agricultural land market could be expected only when the ownership relations of land are identified. The restitution process has not been finished yet, it has been continued up to now. In accordance with the first restitution Act No. 229/1991 Coll., 321000 ha was returned back (to original owners – 204000 ha to physical persons, and approximately 117000 ha of land to land associations), which was demanded by 43 965 authorized persons. In Slovakia, both physical and legal persons may become owners of agricultural land (what is not acceptable for example in Hungary where only physical persons may become the owner of agricultural land). From May 2007, it is allowed to buy the agricultural land in Slovakia by citizens of the European Union under the condition, that they are renting the land for 3 years. Regarding other foreigners, it is not allowed for them to purchase the agriculture land according to the present legal regulations. If a foreigner, however, decides to carry out business on the territory of Slovakia and is registered in business register as an entrepreneur, he or she may acquire the ownership to agricultural land. As for making leasing contracts, hiring the land is not prohibited for foreigners, so they conclude primarily the leasing contracts, and purchase contracts are made only in very rarely.

In Slovakia, the aim of legal regulations regulating agricultural land plots leasing is to stabilize the long-term leasing of land and provide protection to landholders. We can state that

it is aimed primarily at lessee's protection and less at owner's protection. The largest part of agricultural land is leased and only very small percentage of owners uses the agricultural land, just like in whole Europe. [Tatík, 2003]. At present the agricultural land in Slovakia is leased generally for 5 years – this is the minimum time of leasing – and in some cases for 10 years, while in EU countries the long-term leases prevail, where the land owners lease the land to farmers for a period of 15 to 20 years. It is assumed, that as a result of continuous internal transformation of agricultural branch, the leasing duration will be extended to 10 or more years, which will probably increase the internal stability of subjects. At the beginning of privatization process, there was a prevailing opinion that in the area of agriculture the land will be mainly used by the owners themselves. In spite of the fact that in Slovakia more than 70% of agricultural land belong to private owners, and in the frames of restitutions, the agricultural land was restituted to the original owners or to their heirs, the results of research show that agricultural production is more effective with self-farmed farmers than with entrepreneurial activity of legal persons [Fandel, 2002]. The reality remains that expectations of government were not met and agricultural land owners have no interest in farming the land, but instead they are interested in land sale or advantageous leasing.

Long-time expected agricultural land market is being developed slowly in Slovakia. The land lease market is not without complications, either, because the ownership of land is very fragmented. In Slovakia, similarly to Hungary, the Hungarian act was valid, under which the regulations ensure inheritance to each of survivors which resulted great fragmentation of land ownership. The fragmentation of plots represents a serious problem in land registration due to legal complications connected to shared ownership, and last but not the least, means a great obstacle to the sales of agricultural land, because only larger areas are attractive for the investors and farmers but the prospective buyer should negotiate with several owners. At present, app. 9.6 million parcels of land are registered in Slovakia. The average area of parcel is 0.45 ha and it is in the ownership of 12 – 15 people. Though the repeated fragmentation of ownership structure has happened, this fact did not result in fragmentation of agricultural activities (just the contrary, the agricultural large-scale production in Slovakia is one of the largest among the Middle and Eastern Europe countries). According to the green report (2006) agricultural cooperatives cultivated more than 44% of agricultural land in Slovakia, out of them companies make up to 38.2% and small holders-farmers are farming on 16% of agricultural land . The average area operated by one cooperatives is 1643ha (Green report 2003)

For the time being, the agricultural land attracted buyers only in cases if there was a possibility to reach the profit by using the land for non-agricultural purposes.

As regards prices of agricultural land leasing, the legal regulations say, that the price must be at least 1% of the land price according to site quality-ecologic units. Price for leasing the agricultural land which is administrated under Slovak Land Fund according the internal instruction of general director of the Slovak Land Fund, is 1.5% from land price according to site quality-ecologic units. The informal surveys performed in selected regions explore that the agricultural farming under better natural conditions rarely agree to the rent amount irrespective of amount of average agricultural land price in the respective cadastral area. This rent amount generally exceeds the limit of 2.5% from average land price. The higher rent is usually agreed in case of leasing of land of larger acreage from one owner as the lessee tries to motivate such lessor to leave him his land in lease. This fact is confirmed also by data from the research of Department of Law at SAU (2004). The growing rent price would soon affect the economic results of the Slovak agricultural companies. [Trend, 2004].

At present, the determination of agricultural land prices is very complicated and chaotic. There are several legal regulations depending on purpose for which the land value is determined. For purchase and sale between the physical and legal persons the price agreed mutually by contracting parties is valid. This agreed price is not subject to any other legal restrictions and is not dependent on agricultural land plot value calculated according to the expert opinion or according to other valid legal regulations. The market prices of agricultural land irrespective of purpose of its next utilization are higher mainly in agricultural productive districts and districts with developed tourism. [Buday, 2005] For determination of land value for the purposes of land arrangements (land consolidation) the tariff of agricultural land depends on classification into site quality-ecologic unit form, and the best quality of land costs approximately 3700 EUR/ha. In other cases, for example if the buyer is state organization or the Slovak Land Fund, an expert opinion is used for determination of value, made in accordance with valid decree No. 492/2004 Coll. on determination of general value of assets. The high-quality land in region of Nitra was sold for agricultural purpose at 2600 EUR/ha).

The difference between administrative and market price was triple in 2003. The experts expect increasing market prices of land in the future. It is logical that it will be different in different areas. Nowadays, the land price is 15 times higher in Belgium, and 10 times higher in Germany than in Slovakia. The growing land prices will reflect also in growing pressure of land owners on cooperatives and commercial companies that are farming this land in order to pay them higher rent.

Summarizing the land situation in Slovakia, we can state that up to now restitution process is uncompleted, ownership is fragmented, there is existing land tax (none in Hungary de facto), high rate of non-identified land is characteristic. For development of land market as well as agricultural land lease market and for the purpose of protection and cultivation of land fund it will be necessary to complete the restitutions process as soon as possible, to make the situation in the area of ownership structure and land use more transparent by creating of comprehensive information system recording financial operations regarding agricultural land and to accelerate the process of land arrangements, to establish the system that make situation in determination of agricultural land price more transparent when at present it is valid „that there is valid the different legal regulations for different purpose of land utilization, amended several times.

### **Baltic countries - Lithuania, Estonia, Latvia**

Territory of Lithuania in 2005 occupies 6530 thousand ha, out of this agricultural land represents 53.4%, forest land represents 31.2% and other areas represent together 15.5%. Territory of Estonia occupies 3536 thousand ha, out of this agricultural land represents 32.0%, forest land 52.0%, water areas 1.7%, built-up areas and other areas represent together 14.4%. In Latvia the territory is 6458.9 thousand ha, agricultural area is 28.7%, forest land is 45.2%, water areas is only 3.6%, built-up areas and other areas are together 22.5%. In Lithuania an average it was 1.02 ha of agricultural land and 0.55 ha of arable land per 1 citizen, in Estonia it was 0.84 and 0.45 ha and in Latvia it was 0.81 and 0.53 ha. The rate of agriculture from the GDP was 11.4% in 1995, 7.0% in 2000 and 5.1% in 2005, in employment it was 19.6%, 17.8% and 14.0% at the same time. It is the second high rate after Poland among the evaluated countries.

The structural reforms in Lithuania do not instil optimism. From 3369 thousand of agricultural land, till the end of the 2002 only about 59% of land were privatized. The regulations enacting matters of agrarian reform determined the maximum limit of a family



farm area to: 50 hectares of arable area, 10 hectares of forests (later raised to 25 hectares) and 5 hectares of water body. The accepted procedures influenced on the structure of forming agrarian structure. An amendment to the Constitution of Lithuania from 23<sup>rd</sup> January 2003 accept that maximum of land area in natural persons hands cannot exceed 300 ha. In 2005 there were 128.6 thousand farms (over than 1 ESU), the average farm size was 18.2 ha. 22% of farms operated on less than 5 ha, 62% on 5-20 ha, 11% on 20-50 ha and only 5% cultivated more than 50 ha. That means too small plots. Rate of rented land is higher in larger farms (79% farms operated on more than 50 ha), at the same time smaller farms own 70.4% of agricultural land. The significant part of people regaining lands live in cities far away from their land and in this situation they are not land users but leaseholders as they have to give their lands to local farmers or farm businessmen. In population of farms having more then one ESU over 57,7% of agricultural area in 2005 was leased from owners, and the biggest farms leased near 80% of the land. Of farms having less then one ESU about 29% of land was leased.

In Estonia, as the result of the privatization actions, the number of private farms significantly increased. While on 1<sup>st</sup> January 1997 there were about 23 thousand of private farms, this number increased to 56 thousand in 2001. But from that moment the number of farms was decreasing and in 2005 there was only 27.7 thousand of farms (over one ha). This process led to the growth of the average size of the farms and in 2005, about 13.4 thousand of farms had an economic size over one ESU. They use about 764 thousand ha of agricultural area and it gives about 57 ha per farm, the remaining 14.4 thousand family farms produce only for self consumption. In 2005, there were 13.4 thousand farms (over than 1 ESU), the average farm size was 57 ha. 18% of farms operated on less than 5 ha, 44% on 5-20 ha, 21% on 20-50 ha and 17% cultivated more than 50 ha. From this point of view, the situation in Estonia is better, but the share of agriculture – due to the very bad soil conditions – is not so important, the role of employment is low (4.4% in 2005 while it was 14% in 1992). Significant fact characteristic for Estonia is functioning a considerable number of legal person farms (collective and national). In 2005 there were 879 such farms and they used 44.3% of agricultural land, with an average size of about 418 ha. The small farms in Estonia use mainly own lands but in the biggest ones 68.6% of lands are leased. For Estonia, about 58% of agricultural area was leased in 2005 on average. [Benoist-Marquer, 2006] The rate of agriculture from the GDP was 8.0% in 1995, 3.2% in 2000 and 2.7% in 2005, in employment it was 15.8%, 5.0% and 4.4% at the same time.

In Latvia, up to 1996, 96% of the land was handed over to private users. A considerable regional differentiation of privatization processes took place. There are differences regarding the result of privatization, in attractive regions about 79–85% of arable lands were privatized, while in less attractive regions only 43–59%. An issue which attracted Latvian attention in agrarian reform was assuring the integrity of a farm and buildings connected with it. They concerned rationalization of agrarian structure. Nowadays, an average farm in Latvia consists of 1.7 plot and even big farms to 100 hectares comprise on average of 2.5 plot. In 2005, about 129 thousand farms were producing agricultural products, with land property of more than one hectare. 13% of farms operated on less than 5 ha, 56% on 5-20 ha, 21% on 20-50 ha and 10% cultivated more than 50 ha. There were 45 thousand agricultural holdings (over one ESU) with average size of 29 ha (used 1302 thousand of agricultural area), family farm was about 84 thousand (used about 400 thousand ha) with average size of 4.8 ha. Land lease is low, 30,4% in farms bigger then 1 ESU and only 4.2% in the case of farms less than 1 ESU. [Benoist-Marquer, 2006] The rate of agriculture from the GDP was 9.0% in 1995, 3.8% in 2000 and 3.4% in 2005, in employment it was 9.1%, 12.2% and 8.5% at the same time.

The land market in Lithuania in 2003 was active first and foremost to near the moment of the EU integration. An easing of the limitation rules in 2004 caused the rise of the number of transactions by 48%. The average land price significantly changed, it was about 386 EUR/ha in 2004. It rose by about 7% in 2005. The land prices were varied depending on the location and the quality. The best lands reached prices of about 550 EUR/ha, while worse quality lands of unfavorable conditions were sold for 200-250 EUR/ha. The price spreading in market transactions were very large and it fluctuated from 60 to 3000 EUR/ha.

In 2003, the average price of arable land in Estonia was 296 EUR/ha and in comparison with 2001 it was higher by 36%. The price rise in 2004 still continued and the average total price was about 351 EUR/ha. The highest level of prices was mainly due to the vicinity of the capital city (Tallinn). The most fertile lands were located in the central part of Estonia and were sold for 315-380 EUR/ha. On the west Estonian areas where the worst quality lands are, the price was between 180 and 270 EUR/ha, and it came closer to prices which appeared on the southern terrain, where better quality lands are.

As regards Latvia, the average land prices in 2003 fluctuated from 170 to 430 EUR/ha and were higher from the previous prices on average by 23%. In 2004, further price rises occurred, the land was sold for an average of 245 to 615 EUR/ha. It should be emphasized that the market dynamics decreased and the decreasing number of transactions was noted. Significant price differentiations appeared depending on the lands' location as well as the lands' quality (the highest land price was reported in 2003 year in Ryga region and it was 875 EUR/ha). One fact should be emphasized, that the average area of selling arable land was 16 ha in 2003-2004. It shows that there were probably sold the whole reconstructed farms. The leasing prices in Latvia were varied and in 2003, they fluctuated from 4 to 52 EUR/ha depending on the certain region. (Table 4)

Table 4. Average prices for arable land in rural area, in 2001, 2003, 2004. Euro/ha

Country/region	Prevailing price range		Average price				
	2001	2003	2001	2003	2004		
Estonia	North Estonia	224-331	190-480	292	330	296	351
	South Estonia	170-361	160-415	264	290		
	West Estonia	65-209	130-450	134	225		
Latvia	Zemgale (South)	450	300-430	450	370	318	430
	Kurzeme (West)	200	240-310	270	300		
	Vidzeme (North)	160	140-875	220	430		
	Latgale (East)	140	60-215	170	170		
Lithuania	Wilnius*	-	390-715	1276	1410	361	386
	Kaunas*	-	290-570	397	430		
	Klajpeda*	-	275-580	425	435		
	Other*	-	255-345	227-370	385		

\* - prices concern all administration region;

Source: Base on [http://www.registrucentras.lt/index\\_en.php](http://www.registrucentras.lt/index_en.php) 23.03.2006, Agricultural Statistic – Quarterly Bulletin. EUROSTAT, No. 4/2004 pp. 110

## Poland

In 2005, territory of Poland occupies 31269 thousand ha, out of this agricultural land represents 18208403 ha (58.2%), forest land represents 9200447 ha (29.4%), built-up areas, water areas and other areas represent together 3861 ha (12.4%). On average, 0.48 ha of agricultural land and 0.36 ha of arable land falls per 1 citizen.

In 1990, in the eve of agricultural reforms in Poland the private sector (individual farmers) possessed 78.6% area of arable land. During the transformation, the Agency took over into Agricultural Property Stock of the State treasury properties of 1666 state farms of total area 3753 thousand hectares and 607 thousand hectares of the National Land Fund. Total, from the beginning to the end of December 2004 the Agency took over 4708.7 thousand hectares. After taking over and transformation state farms, the Agency distributed these possessions mainly through selling (1478.5 thousand ha sold to the end of 2004) and leasing (2311 thousand hectares leased to the end of 2004). For future distribution 478.8 thousand hectares of land is left, the main part of which has little agricultural usefulness. It was created by the Agency create about 5 thousand farm enterprises. By the end of 2004 there were about 192 thousand selling contracts and 283 thousand leasing contracts entered. It contributed to form larger individual farms the are of which on average was about 4 hectares for a contract.

Trying to define the actual state of agricultural structure it can be concluded that Poland possesses large resources of agricultural land, however the structure and land use of farms demonstrate a great variety. About 60% of farms (individual holdings) have less then 5 hectares and they cultivate about 20% of total agricultural area. In the structure of farms, small farms of area 1-5 hectares dominate, they represent more than half (58.6%) of the total number of farms and use about 17.7% arable land. An especially intensive process of losing farms was in the range of 5-20 hectares. In six years only their number decreased by more than 16%. In the group with an area of 20-30 hectares, a significant rise can be noted, both regarding the number of farms and the total area of arable land. 2.4% farms belong to the group of farms with an area of more than 30 hectares, and they used 27.3% of total area. In Poland the process of polarization of farms' structure still exists, because it follows the getting bigger the number of extreme groups and getting smaller central groups. The average size of farms in Poland in 2002 was 9.6 hectares and it shows considerable regional variety. The biggest distribution of individual farms appears in the southern provinces (the average area about 2 hectares) particularly the biggest average area characterized farms in the Northern provinces, over 14 hectares. (Table 5)

Table 5. Numbers of farms by area groups and users in 1996 and 2002

Agricultural land area in ha	1996		2002	
	Total	Total	Private sector	Public sector
	in thousand			
<b>Grand total</b>	2046.8	1956.1	1954.9	1.2
1 – 5	1130.4	1146.8	1146.7	0.1
5 – 10	521.2	426.8	426.8	0.0
10 – 15	217.4	182.7	182.7	0.0
15 – 20	89.5	83.9	83.9	0.0
20 – 30	55.9	64.3	64.2	0.1
30 – 50	19.8	31.7	31.6	0.1
50 – and more	12.6	19.9	19.0	0.9

Source: National Agricultural Census 2002, Poland.

In 2005 about 1082.7 thousand farms were producing agricultural products, whose land property was more than one hectare. 35% of farms operated on less than 5 ha, 54% on 5-20 ha, 9% on 20-50 ha and 0.2% cultivated more than 50 ha. (Table 6)

Table 6. Land use by agricultural holdings (over then 1 ESU) in Poland in 2005

Denomination	Agricultural area in ha				All farms
	< 5	5 - < 20	20 - < 50	50=<	
Total area of agricultural holdings (1000)	1433.1	6582.0	3062.8	3881.8	14959.8
Agricultural area (1000)	1148.1	5732.9	2781.9	3469.4	13132.3
Arable land (1000)	795.9	4309.9	2174.1	3010.6	10290.5
Number of holdings (1000)	382.1	583.4	96.5	20.7	1082.7
Agricultural area per holding (ha)	3.0	9.8	28.8	167.8	12.1
Agricultural area own farmed (%)	92.4	90.0	78.1	47.9	76.6

Source: Based on Benoist G., Marquer P., *Statistics in focus. Agriculture and fisheries*. EUROSTAT 10/2006.

In Poland the land prices in private transactions were higher than state lands. It can be stated that in Poland where the traditional family farm structure was not destroyed, land prices are higher than in other countries. Now we can observe the fast increase of the land prices and probably the fastest increase will take place after the seven-year transitional period. Because the land starts to become treated as a place of a long term capital investment. (Table 7)

Table 7. Average prices for arable land in Poland, EUR/ha

Denomination	Prevailing price range in 2003	Average price		
		2001	2003	2004
Private lands	735-1775	1240	1370	1580
State lands	730-1830	802	904	1124

Source: Own calculation based on Rynek ziemi rolniczej. Stan i perspektywy. Analizy rynkowe, IERiGŻ-PIB, 2005.

The level of interests for state land expresses by the average price which was paid during realization transaction but it does not show high demand and high interests. In the beginning, the price of land increased by about 20% a year, reached its top in the years 1999-2000 on the level of about 1000 euro per hectare. The rise of land prices appeared in 2003 and still remains and it is connected to the integration processes, and first of all to the system of direct surcharges. (Table 8.)

Table 8. Prices of state lands in 1992-2004

	1992-1993	1995	2000	2001	2002	2003	2004
EUR/ha	264	356	897	802	825	904	1124
%	100.0	134.8	251.9	89.4	102.9	109.5	124.3

Source: Documents of the AWRSP (Agency of Farm Property of the Ministry of Treasury)

## Conclusions

In the evaluated Central and Eastern European countries, the large or middle-sized farms, giving the major part of agricultural production, operate parallel with small-sized farms which produce basically for self-consumption. It is natural, that individual farms also include those which started to grow and further increase is expected in their size and output. Beside the size polarization of the farms, according to the size economy requirements, the land use concentration has started, of which primary form was land leasing in spite of land ownership.

According to the land use, more than 60% of the agricultural area is used in the form of leasing which results larger average farming sizes.

The land prices in post socialist countries up to the date of integration were increasing, but it can be stated that it was not a rapid rise. From the time of integration, the prices of the land suddenly started to increase. This increase will influence the fees of leasing and at the same time it will change the profitability of agriculture, too. But we must state that we can still observe the large land prices differentiation. In post socialist countries the agricultural lands cost even 20-30 times less than in the “old fifteen”.

## References

1. Agricultural Statistic – Quarterly Bulletin. EUROSTAT, No. 4/2004 pp. 110
2. BENOIST G., MARQUER P. (2006), Statistics in focus. Agriculture and fisheries. Eurostat 10/2006, 12/2006, 14/2006, 16/2006.
3. BUDAY, Š. (2005) Rozvoj trhu s poľnohospodárskou pôdou. Závěrečná správa z výskumného projektu, APVT -27-004402, Bratislava: VÚEPP
4. CSÁKI, C. – NUCIFORA, A. – LERMAN Z. – HERZFELD, T. (2002), Potravinárstvo a poľnohospodárstvo v Slovenskej republike. Výzvy vstupu do EU. Bratislava: World Bank - Svetová Banka, ISBN 80-89041-54-X
5. FANDEL, P. (2002), Veľkosť poľnohospodárskych podnikov a ich efektívnosť. In: Medzinárodné vedecké dni, Nitra: SPU, s. 963 – 971 ISBN 80-8069-030-8
6. HAMZA E. – MISKÓ K. (2005), A földpiac sajátosságai Magyarországon az uniós csatlakozás idején. Gazdálkodás. 49. évf. 5. 1-7 pp.
7. Hungarian Statistical Yearbooks 1950-2006, years
8. The Hungarian Agriculture and Food Industry in Figures. (2004). Ministry of Agriculture and Rural Development 26 p.
9. KAPRONCZAI I. (2003), A magyar agrárgazdaság a rendszerváltástól az Európai Unióig. Szaktudás Kiadó Ház. Budapest. 147 pp. ISBN 963 9553 16 6
10. KAPRONCZAI I. (2006), A földtulajdon, földhasználat vizsgálatának tanulságai. Gazdálkodás. 50. évf. (1.) 47-65 pp.
11. MARSELEK S. – DEME P. – SZABÓ F. – HÁGEN I. (2007), A földbérleti díj és a föld árának alakulása. Gazdálkodás. 51. évf. (2.) 17-24 pp.
12. NAÁRNÉ TÓTH ZS. (2006), A termőföld közgazdasági értéke és piaci ára. PhD értekezés. Gödöllő. 179 p.
13. Priebežná správa z výskumu Katedry práva na FESR ,r. (2004) Country Report 2002, 2003
14. SADOWSKI A. (2006), Land market in postsocialist countries Collection of Papers of International Scientific Conference, Agrarian Prospects XV. Foreign trade and globalisation processes, Czech University of Agriculture Prague, Praha 20-21.09.2006 r. Volume I, str. 289-293.
15. SADOWSKI A., TAKÁCS-GYÖRGY K. (2005), Results of agricultural reforms: land use and land reform in Poland and Hungary. Studies in agricultural economics, Nr. 103, Budapest, str. 53-71.
16. TATÍK, J. – KNIEBUGEL, P. (2003), Porovnanie trhových cien pôdy a výšky nájomného vo vybraných krajinách Európskej únie. Publikované na internetovej stránke MP SR <http://www.mpsr.sk/slovak/spf/spfceny.htm>