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CHANGES IN LAND UTILIZATION IN HUNGARY SINCE THE TRANSITION

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„What was expected, what we observed,
the lessons learned.”**

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ABSTRACT

The paper discusses the fluctuation of the proportion of cultivation, the development of agrarian operating and organizational structure, the separation of estate tenancy and land use, along with the change of law. In the backward areas and territories with adverse endowment, further questions remain open during the temporal changes of land use. My study is not only limited to the description of changes, but also aims to illustrate general conclusions relating to the preferred structure and proportion of land use in Hungary.

Keywords: land utilization, farm structure, farm size

1 INTRODUCTION

There is a vast literature of the land utilization, land tenure. Land tenure is the relationship, whether legally or customarily defined, among people, as individuals or groups, with respect to land. (For convenience, “land” is used here to include other natural resources such as water and trees.) Land tenure is an institution, i.e., rules invented by societies to regulate behaviour. Rules of tenure define how property rights to land are to be allocated within societies. They define how access is granted to rights to use, control, and transfer land, as well as associated responsibilities and restraints. In simple terms, land tenure systems determine who can use what resources for how long, and under what conditions. (VRANKEN and SWINNEN 2007) “Land tenure structures mirror the distribution of power within society. While access to land is not recognised as a human right as such, it may be considered as a means to achieve fundamental human rights as defined by international conventions” (COMMISSION OF THE EUROPEAN COMMUNITIES, 2004). In my opinion, land utilisation can be defined as a fine balance between sophisticated and inter-related activities, a precise order and harmony of biological, physical and chemical processes. (MAGDA 2007) (HEADY 1964) writes in his work that if we speak about the optimal land utilization we will have to examine more common economic factors, from economical production to efficiency. (O’ CALLAGHAN’S 1996) opinion is similar: We always have to balance the optimal usage of the land and aspire to realize the highest income. (PARKIN1996) says that land utilization includes the utilization of all the natural resources, the production of goods and services. As for (CASE AND FAIR 1999), the location of the land determines utilization and also depends on the value of those products and services which are produced on them.

The land as an economic resource is mostly utilised by agriculture. The land utilisation occurs in a competitive environment (market competition) and economic factors are primary for all farmers. However it should not be forgotten that land is a natural resource at the same time. No matter who the owner of a given piece of land is land constitutes part of the national wealth and it must be used in an optimal way. The regulation of land use activities is the task of the government (e.g. environmental protection).

Before Hungary initiated the transition to market oriented economies, most of the land was used by large collective units, which had the right to use the land, but were not necessarily the land owners. This situation provided a special starting point for the return to the market economy in the agricultural sector. In Hungary decided to implement restitution of land ownership rights to former owners based on historical boundaries as a method to privatize and open the land market. However, each eastern countries – Hungary also - based on their specific needs selected an implementation procedure for the desired land reform (SWINNEN 1997).

Recommendations for privatization of land and the stimulation of land markets are based on the arguments that (a) land sales transfer full rights to the new user, (b) they increase access to credit as owned land can be used for collateral purposes, and (c) they provide optimal

incentives for investment by providing permanent security of rights (BINSWANGER ET AL., 1995; DEININGER AND JIN, 2003). However, it is well understood that the functioning of land markets is strongly affected by uncertainty and imperfections in input, product, credit and insurance markets. With substantial market imperfections, other forms of land exchange, such as rental markets, can play an important role. Hence, the functioning and development of land markets may therefore depend on the state of the surrounding economy and other markets. Yet, it is remarkable how much variation one observes empirically in institutions for land exchange even within regions where countries are relatively close in income levels and the state of their general market developments. For example, in Western Europe the role of sales and rental markets in land varies tremendously among countries (SWINNEN, 2002). The share of agricultural land rented by farmers varies from less than 10% in Ireland to more than 70% in Belgium.

However, others question the hypothesis that changes in land institutions are efficiency-driven and argue that there is no assurance that an institution will come into being simply because it is more efficient than existing alternatives (BALAND AND PLATTEAU, 1998). Changes in land institutions also imply a re-distribution of wealth and rents, and often of economic power and political influence. The emphasis on distributional aspects of institutional change underlies studies on the political economy of land reforms (BARDHAN, 1989; DE JANVRY, 1981; SWINNEN, 1999, 2002). The changes that have occurred in Hungary provide a “natural experiment” to study the formation of these institutions, and to analyze how in the historical-evolutionary process the institutional forms adapt and mutate (or not) in response to the changes circumstances.

2 LAND UTILIZATION AND OWNERSHIP

Hungary joined a common market, the EU, in 2004. The accession had a great effect on both land ownership and land utilization. In Hungary in the last 15 years those research that are focused on how to utilize land in a more rational way have become more comprehensive and organized. These programs consist of more economic factors than before, and they try to show how to use land – as one of the most important resources of national wealth – in the best way. On the one hand, we have to emphasize that land utilization is a complex category, and agricultural utilization is only one part of it – however, it may be the most important one. On the other hand, the present type of agricultural land utilization give us such examples that show us that this question area cannot be defined on its own, only in a complex system in comparison with other land utilization possibilities. It is true for both micro and macro levels as well. The aim is to find the best solution of utilizing land in the most effective way.

In a narrow sense land utilization is part of global utilization, because it uses only some parts of it, but on the other hand, in some cases it is a wider category because it includes those lands which are needed for the processing industry and the services.

However, in order to make thorough analyses of the most important production factor of the agriculture – arable land – we will have to separate the different forms of land utilization and point out its extern and intern relationships.

2.1 CHANGES IN THE LAND USE CATEGORIES

The concept of land utilization therefore means the territorial usage of the whole country and the description of it by using the methods of system analysis.(Table 1) Knowing the intern relationships of land utilization may also help us to find and analyze the different ways of land utilizations and agricultural utilization within.

Table 1: Land area of Hungary by land use categories, 1989–2005

Year	Arable land	Garden	Orchard	Vineyard	Grassland	Agricultural land area	Productive land	Uncultivated land	Total
1990	4 712,8	341,1	95,1	138,5	1 185,6	6 473,1	8 235,7	1 067,5	9 303,2
1995	4 715,9	90,2	93,9	131,3	1 148,0	6 179,3	8 010,5	1 292,5	9 303,0
2000	4 499,8	101,6	95,4	105,9	1 051,2	5 853,9	7 715,5	1 587,5	9 303,0
2005	4 513,1	95,9	102,8	95,2	1 056,9	5 863,9	7 734,8	1 568,6	9 303,4

Source: http://portal.ksh.hu/pls/ksh/docs/hun/agraar/html/tabl1_3_1.html

The table does not include the data's of the forests, reeds and fishponds

If I analyse this table I can see that before the transition (1990) the agricultural land area was 69.69% from the whole territory, but in 2005 that ratio was only 63.03%. And in the other column I can see the similar decreasing when I calculate the ratio of the productive land (88.56 in 1989 and 83.14 in 2005, so the changes 5.42%) and an increasing in the ratio of the uncultivated land (services, recreational areas, towns, roads, etc). What has happened in this period?

If I would like to answer this question with only on sentence I tell the following: Everything has changed in the country and it's also true for the land utilisation. But the answer is not so similar. Let's see the reasons of the changes, and start with the animal husbandry. The number of the animals (in a special unit) has decreased from 2.603,00 thousand to 1.297,64 thousand which means 51.16% decreasing between 1990 and 2004. (Table 2.)

Table 2: Numbers of the cattle, pigs, horses and sheep between 1990 and 2004 in Hungary (thousands)

<i>Year</i>	<i>Cattle</i>	<i>Pig</i>	<i>Horse</i>	<i>Sheep</i>
1990	1637	8457	76	1865
2000	805	4834	75	1129
2004	723	4059	67	1397

Source: Hungarian Central Statistics Office

Looking backwards to the last 15 years we can find a lot of factors which affected the dramatic decadence in the animal husbandry. The most important of them were the following: lost Eastern European markets, failed those development which increase the efficiency, not so considered land privatization, etc.

This dramatic decrease in the animal husbandry also affected the land utilization. The demand for filamentary feeds and succulent feeds produced in the country has also decreased - it should have been seen in the structure of the plant cultivation also -, but it could not. Let's see the changes in the plant cultivation. (Table 3.)

Table 3: Sown area of main cereals, 1990-2005(thousand hectares)

<i>Year</i>	<i>Wheat</i>	<i>Maize</i>	<i>Barley</i>	<i>Rye</i>	<i>Oats</i>	<i>Sum-total</i>
1990	1.221.633	1.147.563	297.480	91.142	47.696	2.805.514

2000	1.047.505	1.244.857	330.672	44.445	63.278	2.730.757
2005	1.136.525	1.204.215	320.793	46.587	66.964	2.775.084

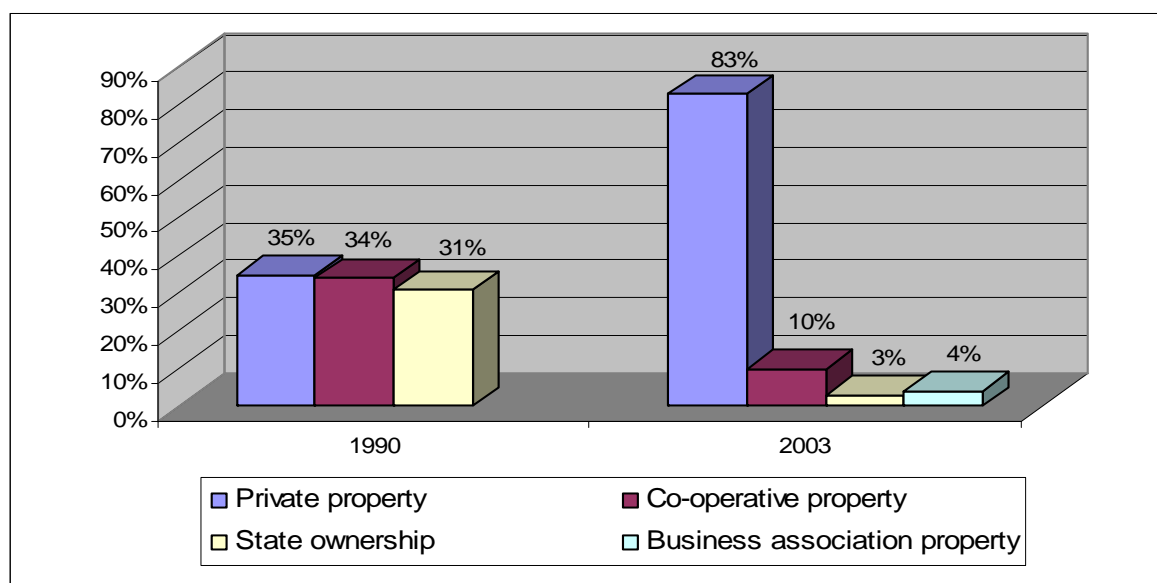
From: http://portal.ksh.hu/pls/ksh/docs/eng/agrar/html/tabl1_4_1_1.html

We can see from the table that the sown area of main cereals did not decrease so high between 1990 and 2000. The ratio was this only 2.67%. And if we analyse the next five years we can see the decrease of the sown area with 1.62%. The biggest problem was in that situation, that the sown area of the filamentary feeds and succulent feeds – green maize, oats – has increased in every year and on the other hand the demand has decreased with more than 50%. It should have been one of the cardinal point in the agricultural strategy to use the home-made filamentary- and succulent feeds in the domestic animal husbandry, and parallel with it, we will have to look for those types of land utilization which decrease the pressure of the filamentary feeds export.

2.2 CHANGES IN THE FARM STRUCTURE AND THE OWNERSHIP

A cornerstone of the transition process has been the creation of private ownership of land and secure land tenure and property rights (REMBOLD, 2003).

Figure 1: Changes of the structure of the land ownership between 1990 and 2003



Source: Own calculation based on data of Hungarian Statistical Yearbook (1990-2004)

Analysing the first figure we can see that the ratio of the different ownerships was really similar in 1990, when the ratio of the private farms was 35%, the co-operative was 34% and the state ownership was 31%. After the transition – the privatization - that ratio has totally changed. In 2003 the private ownership was the dominant with 83%, the co-operative ownership was 10%, the state was only 3% and we can find another type which is the corporate farms 4%. These ratios are nearly the same nowadays, because the changes in the ownership finished in 99% till the end of the 20th century.

Land markets, in which land can be bought, sold or rented, have been created through the privatization of state land and the restitution of expropriated land to its previous owners or

their heirs. This has resulted in significant changes in land tenure, with an increase in the private ownership and the renting of land and the decline of state and cooperative land ownership.

Hungary's post-communist land reform process was based on compensation of former owners, rather than restitution, with landless workers on state farms and cooperatives also receiving small land grants. (CSAKI, GY. MODOS, 1997) Fifty percent of the country's land area was subject to compensation claims, and over 2.1 million new land units were created during this process. (DALE AND BALDWIN, 1999)

The compensation laws enacted between 1991 and 1997 provided compensation bonds to people who had property confiscated (including land), and to people who had been discriminated against for political and racial reasons. (MATHIJS, 1997) Compensation bonds could be used to bid for the land of production cooperatives and state farms at compulsory auctions. One-third of cooperative land was purchased with compensation bonds at such auctions. One-third remained in the name of current and retired cooperative members and their rights over the land were established. One-third was redistributed to cooperative members who did not own land earlier. The compensation process was completed by 1997, and 90% of the land was physically identified. (CSAKI AND A. FOCK, 1999) Nonetheless, physical distribution of land for collective members has lagged behind. The titling of privatized land has also been slow.

In Hungary, the new owners who acquired land for compensation bonds were often not engaged in agriculture and did not live in rural areas. Instead of cultivating the land, they have rented it to corporate farms and individual farmers. Many new owners do not even know exactly where their land parcel is located because of the slow boundary marking and registration of land.

The privatization and restitution of land have created millions of new land titles, many of them for small, badly shaped parcels of land incapable of commercial exploitation. Farms frequently divided into fragmented parcels that are often awkwardly shaped for agricultural purposes. (Table 4.) The consequences have included underinvestment in agriculture, rising rural poverty and rural unemployment, as well as an ageing rural population as the young migrate to urban areas in search of work (KOTOV AND LINGARD, 2002). Subsistence farming has developed on small private plots, sometimes in response to the collapse of industrial employment and state budgets, producing the migration of industrial workers to rural areas in search of lower costs of living (BROWN AND SCHAFFT, 2002). The development of the infrastructure for operating the land markets, such as land registration and titling, land laws and mortgage finance, has tended to lag behind privatization.

Table 4: Characteristics of the farm structure (2000)

Appellation	Year	Unit	Hungary	EU-15	EU-15= 100% ⁽¹⁾
Distribution of the number of private farms ⁽¹⁾ :					
- 5,0 he	2000	%	89,9	57,6	-32,3
5,1-50 he	2000	%	9,3	33,4	24,1
50,1-100 he	2000	%	0,5	5,5	5,0
100,1- he	2000	%	0,2	3,5	3,3
Distribution of the territory of private farms ⁽¹⁾ :					

- 5,0 he	2000	%	22,5	5,2	-17,3
5,1-50 he	2000	%	46,7	31,0	-15,7
50,1-100 he	2000	%	12,4	20,3	7,9
100,1- he	2000	%	18,4	43,5	25,1
Distribution of the number of all farms ²⁾					
-10,0 he	2000	%	94,1	69,9	-24,2
10,1-50,0 he	2000	%	4,8	21,1	16,3
50,1- he	2000	%	1,1	8,9	7,8
Distribution of the territory of all farms ²⁾					
-10,0 he	2000	%	13,9	9,8	-4,1
10,1-50,0 he	2000	%	14,8	26,3	11,5
50,1- he	2000	%	71,3	63,8	-7,5

¹⁾ The EU data refer to all farms

²⁾ The EU data refer to all farms while the Hungarian ones refer to business associations/corporations along with private farms

Source: Agriculture Statistical Yearbook 2001 (EUROSTAT); Agriculture in the European Union, Statistical and economic information 2002 (3.5.4.1.)

With this let me summarize the characteristics of land utilization:

- The great majority of farms are very small, usually under five hectares and with many smaller than one ha.
- Farms comprise a number of parcels. About 4-5 parcels in a holding is common and some farmers have over 15 parcels. The size of a parcel is often between 0.25 and 0.6 ha.
- Parcels are often some distance apart, sometimes up to 20 km, and can be in different administrative districts.
- Parcels are often awkwardly shaped for agricultural purposes. Some parcels are very narrow and long, e.g. three metres wide and 1 000 metres long.
- Farms are often owned by the elderly.
- Farms are often jointly owned by a number of people.
- Farm owners are often absent, with many living in urban areas.
- Owners sometimes do not have legal titles.

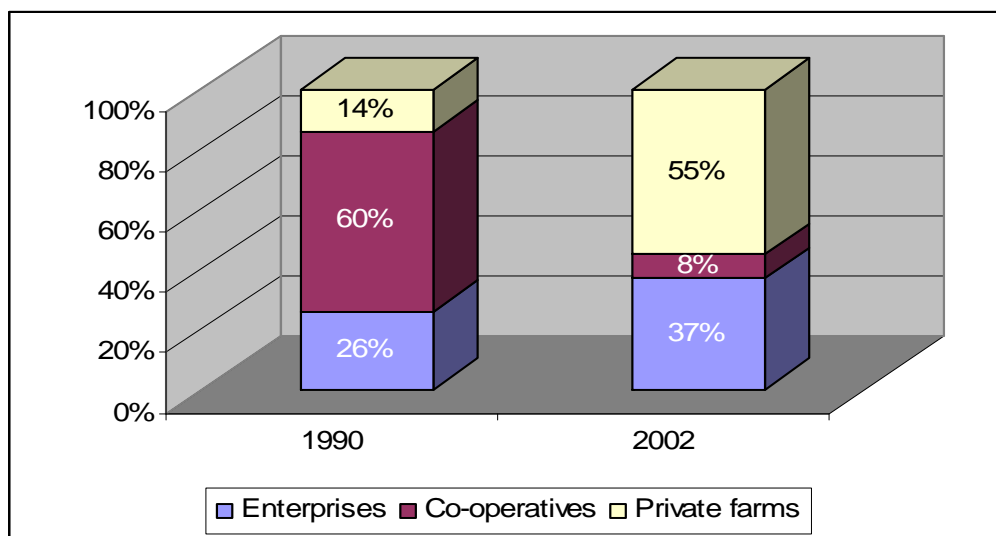
While analyzing the international tendencies and the Hungarian correlations I have come to the conclusion that in the near future the ownership and the usage will be closer to each other and the concentration of the land will be quicker. This land ownership concentration will consociate with the coordination of the lands, but it might happen only later. Rents could have a bigger role in the future. The basis of competitive farming will be the owned and the rental land.

In my opinion the structure of the ownership will have to react to the changes in economy in a flexible and constructive way. Conformation of the not so concentrated ownerships and the not too big farm sizes is better in critical situations than that of the big farms, but the conditions of efficient production might be better in big farms.

Analysing the land utilization we can see the following: at the beginning of the transition the ratio of the co-operatives were 60% and the ratio of the entrepreneurs were 26%, so they were dominant. In that time the ratio of the private farms was only 14%, but it has totally changed by the end of the transition.

Afterwards, the ratio of the co-operatives was the lowest (8%) and the private farms ratio was the highest with 55%. This ratio is not the same which we can find in the first figure, because after the transition a lot of new landlord rent out the land for the entrepreneurs and does not cultivate alone. (Figure 2)

Figure 2: Changes of the land utilization (1990-2002)



Source: Hungarian Statistical Yearbook (1990-2003)

Liberalization on land markets

Hungary had restrictions on the ownership of agricultural land by foreigners, and also on ownership by domestic companies. The lifting of restrictions on foreign companies acquiring agricultural land also implies that any barriers to domestic companies purchasing land must also end. A Hungarian act of 1994 limited the ownership of arable land by private individuals to 300 hectares in size, or 6 000 Gold Crowns in quality rating. The issue of ownership of agricultural land and natural resources by foreigners is a contentious question. The Hungarian Government argued that lifting the ban on the purchase of agricultural land by foreigners “would lead to speculative land purchases and impede the development of viable family farms”. There may also be fears that the opening up of land markets could reopen past disputes. In the aftermath of the Second World War, there were large-scale movements of populations as particular ethnic groups, nationalities and political dissidents were expelled, fled or dispossessed of their land. Some of these prospered in their new homelands. They are now in a position to take advantage of the relatively low prices of their ancestral lands to purchase their lost heritage, even though they may have been frustrated in their attempts to reclaim it under restitution laws.

CONCLUSION

The transition at the beginning of the 1990's notably restructured the land use in Hungary. These changes have continued in the past one and a half decades, but not to such a great extent than before.

Between 1990 and 2005 the territory of the agricultural land has decreased nearly 7%. The reason for this is that before the transition among cultivation, animal husbandry had an important role, reaching – in some years exceeding – 50% in the mechanism of production, but it was rapidly decreasing in the last 15 years.

But changes could be found in other parts of land utilisation too and also in the ownership. After the transition it has totally changed, because the ratio of the private farms more than 80%, which was only 35% before.

After the changing of the structure, the ratio of uncultivated land has increased. The challenge for the country in the future is to find the best way of the utilisation of these fields. One of the key methods could be the production and reproduction of alternative energy sources such as biogas, bio-diesel and bio-ethanol. And the other way is to find the solution for how we can increase the ratio of animal husbandry in the agricultural structure.

REFERENCES

1. AGRICULTURE STATISTICAL YEARBOOK 2001 (EUROSTAT);
2. AGRICULTURE IN THE EUROPEAN UNION, Statistical and economic information 2002 (3.5.4.1.)
3. BALAND, J.-M., PLATTEAU, J.-P. (1998): Division of the commons : a partial assessment of the new institutional economics of land rights. *American Journal of Agricultural Economics* , 80, 2, 204-10
4. BARDHAN, P. (1989): "The Economic Theory of Agrarian Institutions", Clarendon Press, Oxford.
5. BINSWANGER, H., DEININGER, K., FEDER, G. (1995): Agricultural Land Relations in the Developing World. *American Journal of Agricultural Economics*, 75,1242-1248
6. BROWN, D.L., SCHAFFT, K.A. (2002): Population déconcentration in Hungary during the post-socialist transformation. *Journal of Rural Studies*, 18: 233–44.
7. CASE, K. E. – FAIR, R. C. (1999): Principles of microeconomics. New Jersey: Prentice-Hall, Inc. Simon & Schuster Company, 1999. p. 566
8. COMMISSION OF THE EUROPEAN COMMUNITIES (2002): *Towards the enlarged Union: strategy paper and report of the European Commission on the progress towards accession by each of the candidate countries*. COM(2002) 700 final. Brussels.
9. CSAKI, CS. MODOS, GY. (1998): et al, *Summary of Hungary Country Case Study, Annex A*, in ace project p2128r (1998).
10. CSAKI, CS., FOCK, A. (1999): The Agrarian Economies of Central and Eastern Europe and the Commonwealth of Independent States 105 (ECSSD Working Paper No. 13, 1999). [hereinafter Csaki & Fock].
11. DALE P., BALDWIN, R. (1999): *Emerging Land Markets in Central and Eastern Europe*, in Structural Change in the Farming Sectors in Central and Eastern Europe 83 (Csaba Csaki and Zvi Lerman eds., 1999).
12. DEININGER, K., & JIN, S. (2003): Land Sales and Rental Markets in Transition: Evidence from Rural Vietnam. *Policy Research Working Paper* No. 3013, World Bank, Washington, DC.

13. DE JANVRY, A. (1981): "The Role of Land Reform in Economic Development: Policies and Politics", *American Journal of Agricultural Economics*, May 1981, 385-392.
14. MATHIJS, E.(1997): *Process and Politics of Agrarian Reform in Hungary*, in political economy of agrarian reform in central and eastern europe 237 (Johan F. M. Swinnen, ed., 1997).
15. HEADY, E. O. (1964): *Economics of Agricultural Production and Resource Use*. New Jersey: Prentice-Hall, Inc., Englewood Cliffs, 1964. p. 850
16. HUNGARIAN STATISTICAL YEARBOOK, (1990-2006) Hungarian Central Statistical Office, Budapest
17. KOTOV, P., LINGARD, J. (2002): Subsistence farming in transitional economies: lessons from Bulgaria. *Journal of Rural Studies*, 18: 83–94.
18. LERMAN, Z., CSAKI, C., FEDER, G. (2004): *Agriculture in Transition: Land Policies and Evolving Farm Structures in Post-Soviet Countries*. Lanham, MD: Lexington Books.
19. MAGDA, R. (2007): Land utilisation and competitiveness in Hungary at the beginning of the 3rd millennium LICOS work shop, Leuven
20. O'CALLAGHAN, J. R.(1996): *Land Use, The interaction of economics, ecology and hydrology*. London: Chapman & Hall, 1996. p. 249
21. PARKIN, M. (1996): *Microeconomics*. Ontario: Addison-Wesley Publishing Company, Inc. 1996. p. 592
22. REMBOLD, F. (2003): Land fragmentation and its impact in Central and Eastern European countries and the Commonwealth of Independent States. *Land Reform, Land Settlement and Cooperatives*, 2003/1: 83–88.
23. SWINNEN, J. (1997): "Does Compensation for Disruptions Stimulate Reforms ? The Case of Agricultural Reform in Central Europe." *European Review of Agricultural Economics*, 24(2):249-266.
24. SWINNEN, J. (1999): "Political Economy of Land Reform Choices in Central and Eastern Europe", *The Economics of Transition*, 7(3):637-664.
25. SWINNEN, J. (2001): Transition from Collective Farms to Individual Tenures in Central and Eastern Europe. In A. de Janvry, G. Gordillo, J.-P. Platteau, & E. Sadoulet (Eds.), *Access to Land, Rural Poverty, and Public Action* (pp. 349-378), New York: Oxford University Press.
26. SWINNEN, J. (2002): Political Reforms, Rural Crises, and Land Tenure in Western Europe. *Food Policy*, 27(4), 371-394.
27. VRANKEN, L. AND J. SWINNEN (2007): "Patterns of Land Market Developments in Transition", *LICOS Discussion Paper 179/2007*.
28. <http://www.fao.org/DOCREP/005/Y4307E/y4307e05.htm#bm05>
29. http://portal.ksh.hu/pls/ksh/docs/hun/agrar/html/tabl1_3_1.html
30. http://portal.ksh.hu/pls/ksh/docs/eng/agrar/html/tabl1_4_1_1.html

