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REVIEW OF THE TRANSITIONAL RESTRICTIONS BY NEW MEMBER STATES ON THE ACQUISITION OF AGRICULTURAL REAL ESTATE

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BRUSSELS

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This study has been commissioned by and prepared for the Internal Market and Services Directorate-General of the European Commission under contract ETD/2006/Internal Market/F1/57.

ISBN: 978-92-9079-827-9

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PREFACE & ACKNOWLEDGEMENTS

This publication represents the final report of a study carried out on behalf of the European Commission, Directorate-General for Internal Market and Services under contract ETD/2006/IM/F1/57.

The study draws substantially from background country reports by Jerzy Wilkin and Jan Falkowski (Poland), Jan Pokrivcak and Pavel Ciaian (Slovakia), Tomas Doucha and Ladislav Jelinek (Czech Republic), Raul Omel and Rando Varnik (Estonia), Daina Saktina and Sarmite Barvika (Latvia), Istvan Feher and Szabolcs Biró (Hungary), and Pranas Aleknavicius and Marius Aleknavicius (Lithuania).

Pavel Ciaian provided important additional input on the conceptual framework and data analysis. Eleni Kaditi contributed valuable assistance with the management and administration of the study.

Overall guidance and comments on the design and approach of the study were provided by European Commission officials at the Directorate-General for Internal Market and Services, the Directorate-General for Agriculture and Rural Development, and Eurostat.

None of the previously mentioned experts or officials is responsible for the content of this publication. The opinions expressed in this study and the analysis and arguments are the sole responsibility of the main authors, Johan F.M. Swinnen and Liesbet Vranken.

EXECUTIVE SUMMARY

Efficient land transactions and a functioning land market play an important role in economic development and growth. The exchange of land, including the purchase of land by foreigners, will improve productivity, enhance access to capital, technology and knowledge, and hence stimulate economic development. These insights underpin the principle that accession to the EU implies the integration of the accession countries into a single free market, also with respect to land.

During the negotiations for the 2004 accession, however, candidate countries requested the possibility to maintain existing national provisions restricting the acquisition of agricultural land or forests by foreigners. They considered these derogations necessary in order to protect the socio-economic agricultural structure of the countries from shocks that might arise from the differences in land prices and incomes with the rest of the Union, and from the problems in the local rural credit markets. The combination of these factors was expected to lead to a massive sale of land to foreigners.

Seven new member states – the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland and Slovakia (hereafter the NMS-7) – were granted transitional periods during which they could maintain existing provisions of their legislation restricting the acquisition of agricultural land or forests, in derogation of the freedom of capital movement. In that context, a mid-term review of the transitional measures was stipulated, to determine whether the transitional periods should be shortened or terminated.

This study reviews these transitional measures and their impact.

The following **restrictions** are in place:

- After accession to the EU, foreigners generally cannot purchase agricultural land for a transitional period in the NMS-7.
- The transitional period is 7 years for the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Slovakia, and 12 years for Poland.
- There are differences among the NMS-7 in the implementation of these restrictions, for example in the way 'foreigners' are defined in the legal restrictions, and in the conditions that foreigners have to fulfil in order to (exceptionally) obtain ownership of agricultural real estate.

- There are several exceptions. For example in Lithuania, land ownership by foreign companies is not restricted. In several of the NMS-7, there are no restrictions on foreign ownership of land for intensive animal husbandry.
- There are generally no restrictions on foreigners renting agricultural land.

This study puts the analysis of the land ownership restrictions into a broader perspective by addressing two questions:

- To what extent do the restrictions on foreign ownership affect the efficiency of land exchanges, land allocation and productivity growth?
- To what extent are the factors underlying the concerns of the NMS-7 – that there would be a massive takeover of NMS-7 land by foreigners if these restrictions were not in place – still influential?

Based on the analysis, the study draws the following **conclusions**:

1) Restrictions on foreign ownership have affected the efficiency of land exchanges, land allocation and productivity growth. Yet, the impact is mitigated by several factors.

   First, the restrictions do not fully constrict activities by foreign citizens in the agricultural and rural land markets of the NMS-7, because there are exceptions (differing by country) to the restrictions on foreign ownership of agricultural land. Furthermore, in several countries informal arrangements have emerged. Although it is difficult to obtain representative information on these, they appear to suggest that a greater amount of land is acquired by foreigners than is shown by official figures, and to vary strongly by region. Crucially, there are no restrictions on renting land to foreigners. This aspect of the transitional arrangements is of major importance since land rental is widespread in the NMS-7 as well as in the EU-15 – notably among larger family farms and corporate farms in the NMS-7, which are the kinds of farms in which one would expect foreign investment.

   Second, the restrictions are only one element constraining the functioning of the land markets in the NMS-7. Several other impediments are affecting the development of the land markets. In most of the NMS-7, the privatisation of state-owned land and the finalisation of the land reform process are continuing and the development of the land markets is still inhibited by high transaction costs.

   Third, while the restrictions have held back the direct benefits of foreign investment, agriculture in the NMS-7 has benefited extensively from large foreign investments in the food industry and agribusiness. These investments have had significant, positive spillover effects on the farms, as foreign companies have introduced technology, know-how and capital into the food chain, which has contributed to greater investment and enhanced product quality in the NMS-7 agricultural sector.

   Fourth, there has been strong growth in agricultural productivity along with land exchange and reallocation in the NMS-7, despite the restrictions.

Still, it is unclear how much more growth in productivity and land markets would have resulted from liberalising NMS agricultural land with respect to foreign ownership.

2) The factors underlying the concerns of the NMS-7 – that there would be a massive takeover of NMS-7 land by foreigners if restrictions were not in place – have diminished, but they have not fully disappeared.

   The gap between the NMS-7 and the EU-15 in terms of incomes, productivity and land prices has narrowed considerably over the past few years. Nonetheless, sizeable disparities between the NMS-7 and the EU-15 remain with regard to land prices, incomes and subsidies from the common agricultural policy (CAP). Despite the marked increase, NMS-7 land prices are significantly below those in the EU-15. The same holds for the average income per capita and value added per worker in the agricultural sector.

   Finally, the evolution of social attitudes and political opposition vis-à-vis foreign ownership restrictions appears mixed. For example, surveys indicate that in Poland the negative attitude towards foreign ownership has noticeably subsided over recent years, while in Hungary there is still strong opposition to fully liberalised land markets.

In view of the analysis, this study offers the recommendations below.

If the full liberalisation of land turns out to be politically impossible in the mid-term review process, changes that are more moderate could be considered. The most effective proposals for change would be those that would have limited effect on the social and political frameworks and would be most successful in stimulating economic benefits.

Two recommendations are to i) increase the maximum amount of agricultural land that foreign citizens and legal entities can acquire without restrictions and ii) allow foreign citizens and legal entities to acquire farm buildings and the land on which these are built without restrictions.

Both proposals should have minimal impact on the amount of land owned by foreigners in the NMS-7, since it would still prevent the purchase of large areas by foreigners. Yet the proposals could result in substantial, positive economic effects because they would allow those foreign citizens and legal entities interested in investing in NMS-7 agriculture to do so by combining renting and owning land in their farm operations, as do many farms in the EU-15 and the NMS-7.

1. INTRODUCTION

During the negotiations for the 2004 accession candidate countries requested the possibility to maintain existing national provisions restricting the acquisition of agricultural land or forests by foreigners. They considered these derogations necessary in order to protect the socio-economic agricultural structure of the countries from shocks that might arise from the differences in land prices and incomes with the rest of the Union, and to be able to pursue an effective agricultural policy. The derogations were also deemed necessary because of the unfinished process of privatisation and restitution of agricultural land to the farmers in some countries. Some candidate countries provided detailed arguments justifying the transitional periods in the framework of the common positions expressed by the European Council during the negotiations.

Seven new member states – the Czech Republic, Estonia, Latvia, Lithuania, Hungary, Poland and Slovakia (hereafter the NMS-7) – were granted transitional periods during which they could maintain existing provisions of their legislation restricting the acquisition of agricultural land or forests, in derogation of the freedom of capital movement enshrined in Art. 56 of the EC Treaty, as detailed in Annexes V, VI, VIII, IX, X, XII and XIV of the Act of Accession of 2003. In that context, a mid-term review of the transitional measures was stipulated, to determine whether the transitional periods should be shortened or terminated.

The objective of this study is to review these transitional measures and their effects. To that end, the study analyses the agricultural sector in the NMS-7 and its evolution since the period of negotiation and accession. It compares these findings with the situation in the EU, especially among the 'old' member states. The study takes stock of the transitional restrictions effectively maintained by the NMS-7 and reviews the conditions that led to an agreement on transitional measures at the time of accession. It analyses the impacts of the restrictions on the sector and draws conclusions about their relevance and usefulness, and the necessity of maintaining them throughout the transitional periods.

2. CONCEPTUAL FRAMEWORK

Efficient land transactions and a functioning land market play an important role in economic development and growth for several reasons. First, they provide access to land for the farmers who are the most productive but who own less land than they require. Second, they allow the exchange of land as the off-farm economy develops. Third, they facilitate the use of land as collateral to access credit markets.[1]

These insights underpin the principle that accession to the EU implies the integration of the accession countries into a single free market, also with respect to land. The exchange of land, including the purchase of land by foreigners, will improve productivity, enhance access to capital, technology and knowledge, and thus stimulate economic development in the NMS-7 – and in the EU as a whole. Hence, in this framework, restrictions imposed by the NMS-7 that constrain land exchanges and the optimal functioning of the land market will also inhibit the positive development effects that could result from land exchanges.

On the other hand, proponents of the restrictions have claimed that their early removal would result in unfavourable short-term outcomes, particularly if large portions of rural land in the NMS-7 were acquired by foreign citizens or companies, because of structural imbalances at the time of accession. Such structural imbalances especially concern a) the sizeable income differences between the EU-15 and the NMS-7, b) the marked differences in land prices between the EU-15 and the NMS-7, and c) the problems in the rural credit markets in the NMS-7. The combination of these factors has been expected to lead to a massive sale of the NMS-7 land to foreigners.

To understand the current and future impact of the land ownership restrictions from these two viewpoints, we need to put these issues into a broader perspective by addressing two questions:

1) **To what extent do the restrictions on foreign ownership really affect the efficiency of land exchanges, land allocation and productivity growth?** To address this question, it is critical not only to study the effectiveness of current restrictions on foreign ownership of land, but also to put these

[1] See Deininger & Feder (2001) for a review of these issues.

restrictions into the wider context of a variety of other circumstances that affect the functioning of land markets in the NMS-7.

2) **To what extent are the factors underlying the NMS-7 concerns – that there would be a massive takeover of NMS-7 land by foreigners if these restrictions were not in place – still influential?** Here it is necessary to assess how land market prices have evolved, how the income gap has changed and how capital markets have developed.

As a general basis for addressing these questions, it is essential initially to identify the restrictions maintained in the NMS-7 and to deal with the issue of obtaining relevant data describing the developments concerned. More specifically, the approach used in this study consists of the following steps:

- systematic documentation and comparative analysis of the regulations in the NMS-7 on the transitional land restrictions (chapter 3);
- identification of other factors that affect land transactions besides legal restrictions, such as constraints and imperfections in other markets, transaction costs in land markets and imperfect property rights (chapter 4);
- documentation of foreign investments in the agricultural and food sectors in the NMS-7 and a discussion of their implications (chapter 5);
- analysis of the indirect impact of EU accession on the rural land markets of the NMS-7, i.e. through channels other than access to agricultural land (chapter 6);
- survey of how the land markets (in terms of transactions as well as prices and values) have evolved over the past few years in the NMS-7 based on the collection of basic information/data and the construction of a comparative dataset and relevant indicators (chapter 7); and
- analysis of key indicators of agricultural performance in the NMS-7 over the past decade (both before and after accession) and a comparison of these with EU-15 indicators. The data have been drawn from Eurostat, complemented by other data sources where necessary (chapter 8).

The final chapter summarises the main conclusions arising from the analysis. It is important to point out, however, that a major contribution of this study is the collection of basic information and data on what is happening in the land markets in the NMS-7 and the processing of these data into a comparative (to the extent possible) dataset. Appendix I provides more detailed information about the data sources and the construction of the indicator variables.

3. LEGAL RESTRICTIONS MAINTAINED BY THE NEW MEMBER STATES ON THE ACQUISITION OF AGRICULTURAL LAND BY FOREIGNERS

3.1 Overview of the restrictions

1) Even after accession to the EU, foreigners generally cannot purchase agricultural land for a transitional period in the NMS-7.
2) The transitional period is 7 years for the Czech Republic, Estonia, Hungary, Latvia, Lithuania and Slovakia, and 12 years for Poland.
3) There are differences between the NMS-7 in the implementation of these restrictions, for example in the way 'foreigners' are legally defined, and in the conditions that foreigners have to fulfil in order to (exceptionally) obtain ownership of agricultural real estate. These differences stem from the fact that the various restrictive regimes existing before accession were largely permitted to be maintained during the transitional periods.
4) For the most part, there are no restrictions on foreigners with respect to renting agricultural land.

3.2 Country-specific restrictions

Table 1 summarises the differences among the NMS-7 in the legal restrictions on the acquisition of agricultural land.

Poland

After 1 May 2016, nationals of the EU member states or a state that is part of the European Economic Area (EEA) will be allowed to purchase agricultural land without restriction, while the rules laid down in the Act of 24 March 1920 on the acquisition or sale of agricultural real estate will be maintained for foreigners from outside the EU or EEA.

*Table 1. Legal restrictions on the acquisition of agricultural land in the NMS**

	Czech Republic	**Estonia**	**Hungary**	**Latvia**	**Lithuania**	**Poland**	**Slovakia**
Can EU citizens buy agricultural land despite the restrictions?	Yes, if o married to a Czech partner o residing and farming in the country for at least 3 years (then s/he can purchase any parcel in the country)	*Plots < 10 ha* Yes – with no additional conditions to fulfil *Plots > 10 ha* Yes, if o married to an Estonian partner o residing and farming in the country for at least 3 years (then the plot that s/he has been renting can be bought)	Yes, if o married to a Hungarian partner o residing and farming in the country for at least 3 years (then the plot that s/he has been renting can be bought)	Yes, if o married to a Latvian partner, but only as a co-owner o residing and farming in the country for at least 3 years (then the plot that s/he has been renting can be bought)	Yes, if o married to a Lithuanian partner o residing and farming in the country for at least 3 years (then s/he can buy any parcel in the country)	*Plots < 1 ha not located in border zones* Yes, if o married to a Polish citizen o residing in the country for at least 5 years *Other plots* o if married to a Polish citizen o if s/he has been residing and farming in the country for at least 3 years (then the plot that s/he has been renting can be bought)	Yes, if o married to a Slovakian partner o residing and farming in the country for at least 3 years (then the plot that s/he has been renting can be bought)
Can a legal entity buy agricultural land?	Yes	Yes	No	Yes	Yes	Yes	Yes
Can a legal entity that is registered in the country but owned by foreigners buy agricultural land?	Yes, if a minority of shares is owned by foreigners	Yes	No	Yes, if a minority of shares is owned by foreigners	Yes	Yes, if a minority of shares is owned by foreigners	Yes

* The table provides a broad overview of the main rules. For details, including discretionary permits by the authorities, see the main text.

Source: Authors' compilation.

During the transitional period, sales to foreigners are subjected to a specific procedure whereby special permission needs to be granted by the Ministry of Interior and Administration and the Ministry of Agriculture and Rural Development (Act of 24 March 1920 on the acquisition of real estate by foreigners, Art. 1(1)). Even then, the Agricultural Property Agency has a pre-emptive right to purchase the land that is offered for such a transaction (Act of formation of the agricultural system, Art. 3(4)). The same rules apply if a foreigner seeks to purchase or take over stocks in a company owning or perpetually using real estate in Poland and if the company, as a result of this purchase, will become controlled by foreigners or if the company is already controlled by foreigners and the foreigner wanting to purchase or take over the stocks is not yet a share or stakeholder in the company (Act of 24 March 1920 on the acquisition of real estate by foreigners, Art. 3e).[2]

Legal restrictions forbidding foreigners from acquiring agricultural real estate apply not only to natural persons having non-Polish citizenship, but also to corporate bodies based abroad, as well as partnerships of such persons or corporate bodies (irrespective of whether they hold legal status). It furthermore applies to corporate bodies based in Poland but controlled by natural persons having non-Polish citizenship or corporate bodies based abroad, or partnerships of both.

Nevertheless, there are some exceptions for which permission from the Ministry of Interior and Administration and the Ministry of Agriculture and Rural Development are not needed. Foreigners can acquire agricultural real estate if they are married to a Polish citizen and after, in addition, they have been residing in Poland for at least two years and on the condition that the purchased property will become the joint property of wife and husband. Foreigners can also acquire land if they have been residing in Poland for at least five years after they have obtained permanent resident status (Act of 24 March 1920 on the acquisition of real estate by foreigners, Art. 8(1)). Still, it is important to note that these exceptions do not hold for land located in border zones or parcels of agricultural land exceeding 1 ha (ibid., Art. 8(3)). Finally, the transitory period does not apply to EU or EEA citizens who decide to purchase real estate once they have rented it for three years in the regions of Lubelskie, Łódzkie, Małopolskie, Mazowieckie, Podkarpackie, Podlaskie, Śląskie and Świętokrzyskie, or for seven years in the regions of Dolnośląskie, Kujawsko-pomorskie, Lubuskie, Opolskie, Pomorskie, Warmińsko-mazurskie, Wielkopolskie and Zachodniopomorskie (ibid., Art. 2a). In these cases, the rental contract should have been made with a certified date and the foreigners should have personally used the land for agricultural production and have legally stayed in Poland. The rental period preceding the purchase of land shall be calculated individually for each national of a member state or of a state that is part of the EEA who has been renting land in Poland from the certified date of the original rental agreement. Self-employed farmers who have been renting land as legal persons can transfer the rights of the legal person under the rental agreement to themselves as natural persons. For

[2] Published in the Polish official journal *Dziennik Ustaw,* 2004, No. 167, p. 1758.

calculating the rental period preceding the right to purchase, the rental period of the contracts as legal persons shall be counted. Rental agreements by natural persons can be provided with a certified date retroactively and the entire rental period of the certified contracts will be counted. There shall be no deadlines for self-employed farmers to convert their current rental contracts into contracts as natural persons or into written contracts with a certified date. The procedure to convert rental contracts shall be transparent and shall under no circumstances form a new obstacle.

The documents that a foreigner is obliged to submit to purchase agricultural real estate comprise, among others, a statement by a seller that s/he is willing to sell the property, an extract from the zoning plan and, in cases where a foreign purchaser is not a natural person, proof of the purchaser's financial situation. This last requirement aims at checking whether the purchaser is able to finance the purchase of a given piece of real estate and refers to bank account statements as well as the purchaser's creditworthiness. Therefore, buying land with credit should not count against the purchaser.

Czech Republic

In the Czech Republic foreigners, defined as physical (henceforth 'natural') persons not having Czech nationality or as legal entities based abroad, cannot acquire agricultural land until 2011 (Collection of Laws Act No. 219/1995).[3] There are some exceptions, however. First, foreigners can acquire land if they have Czech citizenship or if they are married to a Czech partner. In addition, foreigners can acquire land through inheritance or if they exercise pre-emptive rights that emerge from co-ownership. They can also acquire land if the land cannot be separated from another asset that is already owned by the foreigner or in exchange for domestic land.

Finally, EU-citizen farmers can also acquire agricultural land if they are registered as self-employed farmers and if they have been permanently staying in the Czech Republic for at least three years. This means that natural persons permanently staying and farming for at least three years in the Czech Republic on rented land, as well as Czech legal entities combining Czech and foreign capital, are eligible to buy private agricultural land. The farmers have to prove their integrity, professional knowledge in farming and knowledge of the Czech language (Collection of Laws Act No. 252/1997).[4] No other special procedures or conditions are required for eligibility,

[3] See the Collection of Laws (1995), Act No. 219/1995 establishing the rights and obligations of Czech nationals and foreigners with regard to capital ownership and other financial transactions, 'Foreign Exchange Law', Vol. 60, amended by 159/2000 Col., 362/2000 Col., 482/2001 Col., 126/2002 Col., 257/2004 Col., 354/2004 Col. and 444/2005 Col.

[4] See the Collection of Laws (1997), Act No. 252/1997 about agriculture and its role in society, 'Agricultural Law', Vol. 85, amended by 62/2000 Col., 307/2000 Col., 128/2003 Col., 85/2004 Col., 317/2004 Col., 94/2005 Col. and 441/2005 Col.

except to be officially registered as a farmer or a Czech company and to use the purchased land in a 'proper way' according to the Land Protection Law (Collection of Laws (1992), Act No. 334/1992).[5] There are no limits to the amount of land that can be bought by eligible foreigners, but it should be noted that only natural persons are eligible to buy state land.

In 2007, the Czech government adopted a proposal to amend the Foreign Exchange Law (and subsequently also the Law on Land Privatisation)[6] to ease the eligibility conditions for foreigners who want to buy private and state land. According to the amendments, the requirement to stay permanently and to farm for at least three years in the Czech Republic and other conditions (professional knowledge of farming and knowledge of the Czech language) are to be abolished. The only condition for the purchase of land is to be the official registration of a foreign natural person as a farmer. By the end of 2008, however, the parliament had still not voted on the approval of the amendment, so it seems rather unlikely that the amendment will be put on the parliament's agenda and that it will ever be approved.

Finally, there are no restrictions on EU citizens seeking to rent and use land in the Czech Republic.

Estonia

While there are restrictions related to the acquisition of agricultural land by foreigners until 2011, there are some exceptions (Restrictions on Acquisition of Immovables Act).[7] First, the law does not forbid foreigners from acquiring agricultural land if the plot of land is less than 10 ha. Only the acquisition of agricultural land of more than 10 ha entails restrictions for foreigners.

Second, restrictions on buying more than 10 ha are not fully applicable to an EU citizen who has permanently resided in Estonia for at least the last three years, who is

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[5] See the Collection of Laws (1992), Act No. 334/1992 about agricultural land and its protection, 'Law Protection Law', Vol. 68, amended by 10/1993 Col., 98/1999 Col., 132/2000 Col., 76/2002 Col., 320/2002 Col., 444/2005 Col., 186/2006 Col. and 222/2006 Col.

[6] See the Collection of Laws (1999), Act No. 95/1999 about the transmission of agricultural and forest land owned by the state to other persons, 'Law on Land Privatisation', Vol. 36, amended by 253/2001 Col., 253/2003 Col., 354/2004 Col., 94/2005 Col., 342/2005 Col., 179/2005 Col., 178/2006 Col. and 186/2006 Col.

[7] The Act, *Riigi Teataja* [State Gazette] I 2003, 23, 145, entered into force 1 April 2003, and was amended by the following Acts: *Riigi Teataja* I 2005, 26, 192 of 17.05.05, which entered into force 18.06.06; *Riigi Teataja* I 2005, 37, 284 of 15.06.05, which entered into force 01.07.05; and *Riigi Teataja* I 2003, 88, 591 of 17.12.03, which entered into force 01.01.04.

a sole proprietor listed on an Estonian register and has been engaged in farming[8] during at least the last three financial years. Nor do they fully apply to a legal entity that is listed on the Estonian commercial register or register of non-profit associations and foundations and that has been engaged in farming in Estonia during at least the last three financial years. The same pertains to subsidiaries of EU companies if the subsidiary is registered in Estonia. These individuals or legal entities are allowed to buy agricultural land that they have been renting for three years prior to the acquisition.

Third, if the person or the legal entity does not meet the requirements stated above, s/he can acquire land but only after receiving consent from the county governor. The decision to grant consent is based on the business plan of the applicant for the use of the land and its accordance with agricultural and forestry requirements, the (financial) assets of the applicant and his/her experience in agricultural production and forestry. The governor can issue permission only if the applicant has been in Estonia for at least six months or has experience in agricultural production for at least one year.

Finally, any person who is not an Estonian citizen or a legal person of Estonia is prohibited from acquiring agricultural land in the following small islands and border areas:

1) the sea islands, except Saaremaa, Hiiumaa, Muhu and Vormsi;
2) in the county of Ida-Virumaa, the cities of Narva, Narva-Jõesuu and Sillamäe and the rural municipalities of Alajõe, Iisaku, Illuka, Toila and Vaivara;
3) in the county of Tartumaa, the rural municipalities of Meeksi and Piirissaare;
4) in the county of Põlvamaa, the rural municipalities of Mikitamäe, Orava, Räpina and Värska; and
5) in the county of Võrumaa, the rural municipalities of Meremäe, Misso and Vastseliina.

Yet, the government may grant authorisation for the acquisition of agricultural land in the above-mentioned areas to other persons for reasons of significant state interest.

Hungary

In Hungary, exceptions to the restrictions relate to EU nationals who want to establish themselves as self-employed farmers and who have been legally staying and farming in Hungary continuously for at least three years (Act LV of 1994,

[8] The sole proprietor should be engaged in the manufacture of agricultural produce within the meaning of para. 6 of the Rural Development and Agricultural Market Regulation Act in Estonia.

Acquisition of Ownership of Arable Land, Section 7).[9] These EU nationals are not subject to any rules and procedures other than those to which nationals of Hungary are subject and the upper limit on the amount of land the foreigners can acquire is the same as for domestic private persons (300 ha). Pre-emptive rights in the acquisition of ownership also apply to foreign individuals.

EU nationals are required to provide proof of eligibility for acquiring agricultural land in the form of official certificates. More specifically, they have to obtain the following documents:

- an official certificate issued by the immigration authority to verify that s/he has been legitimately residing in Hungary for three consecutive years, or for any EU national who does not have a permanent residence permit, the authorisation to reside in the country or a certificate as proof of having submitted an application for such authorisation; and
- a certificate from the county agricultural bureau verifying that the applicant has been engaged in agricultural activities in Hungary in his/her own name and at that person's own risk for three consecutive years prior to the acquisition of ownership. The certificate shall be supported by an environmental study consisting of an examination of the agricultural activities.

There are two further exceptions applying to the ownership of farmsteads (i.e. the farmhouse and the land on which it is built) and farm buildings for intensive livestock breeding, as follows:

- Foreign nationals may acquire a farmstead formed as an independent real property (parcel of land) of 6,000 m^2 or less, in accordance with the provisions of specific other legislation on other real properties not classified as arable land.[10]
- Non-resident legal entities or private individuals may acquire real estate that is not qualified as arable land so that they can acquire farm buildings necessary to set up intensive livestock breeding and production systems. EU nationals and legal persons and unincorporated entities established in any member state of the EU, in a member state that is a party to the Agreement on the EEA, or in other similar states may acquire non-agricultural land under the same conditions applicable to resident persons (without special permission).[11]

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[9] See Act XXXVI of 2004 on the amendment of Act LV of 1994 on Arable Land (2004, évi XXXVI, Törvény a termőföldről szóló 1994. évi LV. törvény módosításáról), *Official Journal of Hungary*, No. 61, 1 May 2004, Hungarian Official Journal Publisher, Budapest, pp. 6408–10.

[10] Derived from Act LV of 1994 on Acquisition of Ownership of Arable Land, Section 8, *Official Journal of Hungary*, No. 69, 27 June 2004, Hungarian Official Journal Publisher, Budapest, pp. 2533–45.

[11] Derived from Act LV of 1994, Transitional Provisions Pertaining to State Property and

Latvia

Latvia has a number of restrictions on citizens and legal entities of EU member states wishing to acquire agricultural and forest land. Foreigners are not allowed to acquire non-agricultural land in areas along the state borders, nature reserves or in the territories of other natural parks. This stipulation also applies to the land of the Baltic Sea, the protected zones of beach dunes in Riga's bay area and land in protected zones of public waters, excluding territories for the purpose of construction according to the territorial plans of municipalities and land with public federal mines. These restrictions are described in the Law on Land Privatisation in the countryside (3 April 2003).[12]

There are some exceptions to these restrictions, however.

First, EU citizens can buy agricultural land provided they have been farming and living in Latvia for at least three years without interruption. But they are only allowed to acquire the particular parcel of agricultural land they have been renting for at least three years prior to the acquisition. Also, before actually receiving ownership rights, they need to obtain consent from the local municipality.

Second, legal entities of EU member states cannot obtain agricultural and forest land during the transitional period. At the same time, there is no restriction on the ownership of agricultural land by legal entities provided at least 51% of the share capital is owned by citizens of Latvia, the state of Latvia or a Latvian municipality.

Finally, it is worth mentioning that in practice there is no official investigation regarding the practical application of the above-mentioned legal norms in land transactions, such that foreigners can buy agricultural land with hardly any restrictions.

Lithuania

Lithuania was also granted a transitional period during which foreigners cannot acquire agricultural real estate.[13]

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to the Acquisition of Ownership by Foreign Entities, Section 88/A and its amendment in Act XXXVI of 2004 on amendment of Act LV of 1994 on Arable Land, *Official Journal of Hungary*, No. 61, 1 May 2004, Hungarian Official Journal Publisher, Budapest, pp. 6408–10.

[12] The Law on Land Privatisation in Rural Areas entered into force on 01.09.1992 (published in the official journal *Ziņotājs*, No. 32/34, 20.08.1992). Amendments to the Law on Land Privatisation in Rural Areas regarding restrictions on purchasing rural land entered into force on 15.04.2003 (published in the official journal (LV) *Latvijas Vēstnesis*, No. 58 (2823)).

[13] See the Provisional Law on Acquisition of Agricultural Land, 15.07.2004, No. IX-2406. Amendments to this law were published in the Lithuanian official journal *Valstybės žinios*, 2003, Nos. 15-600; *Valstybės žinios*, 2004, Nos. 124–4490; and *Valstybės žinios*, 2006, Nos. 182–3259.

Nonetheless, there are exceptions for those foreigners[14] who have been permanently living and farming in Lithuania for at least three years. Such individuals can buy not only the parcel s/he has been renting, but also any parcel in the country. Since 2003, the same exception has applied to foreign legal persons and other foreign organisations that have set up representative offices or branches in Lithuania.[15]

A Lithuanian company may buy agricultural land only if its income from agricultural activities during the last two years constitutes at least 50% of its total income. It is also worth noting that there are no restrictions on the foreign ownership of such land-owning companies.

A foreigner who marries a Lithuanian citizen cannot formally own the land unless s/he also becomes a Lithuanian citizen. Such persons can become a 'co-owner' in joint ownership, however, and can claim compensation for the land parcel in case of divorce.

Slovakia

In Slovakia, there is a restriction on the ownership of agricultural land by foreigners, defined as a natural person who has no permanent residence in Slovakia or a legal person not established in Slovakia (Foreign Exchange Act No. 312/2004 Col. Art. 2 and Art. 19a).[16] At the same time, there are some specific exceptions and some practical limitations.

First, foreigners with a residence permit in Slovakia who rent and farm the land for at least three years after Slovakia's EU accession can buy and own land in Slovakia (Foreign Exchange Act No. 312/2004 Col., Art. 19a).[17] In such cases, a rental contract between the landowner and the tenant (foreign individual) duly signed by both parties is necessary.[18] In addition, foreigners can acquire agricultural land through inheritance and by exercising pre-emptive rights in the case of co-ownership (Civil Code No. 40/1964 Col.[19] as amended by later regulations; and Foreign

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[14] The derogation holds for foreigners who meet the European and transatlantic integration criteria, referring to nationals of member states of the EU, the Organisation for Economic Cooperation and Development, and the North Atlantic Treaty Organisation states that signed the EEA Agreement.

[15] See the Constitutional Law on Implementation of the 3rd part of Article No. 47 of the Constitution of the Lithuanian Republic 20.03.2003, No. I-1381, and the amendment to this law (published in the Latvian official journal *Valstybės žinios*, 1996, Nos. 64-1503; and *Valstybės žinios*, 2003, Nos. 34–1418).

[16] See *Zbierka zákonov* [Official Journal] 2004, Čiastka [Section] 131, pp. 2974–84.

[17] The same holds if a foreigner is married to a Slovak citizen.

[18] Additionally, other standard documents are necessary when buying land in Slovakia (e.g. a purchase agreement and ID card) but there is not difference in this respect between a Slovak and a non-Slovak buyer.

[19] See *Zbierka zákonov* [Official Journal] 1964, Čiastka [Section] 19, pp. 1–40.

Exchange Act No. 312/2004 Col.). On the other hand, foreigners from non-EU member states cannot own agricultural land in Slovakia (Foreign Exchange Act No. 312/2004 Col., Art. 19a).

Furthermore, foreigners can establish legal entities (a joint stock company or a limited liability company) registered in Slovakia and buy land through that legal entity. According to Act No. 513/1991 Col.[20] as amended by later regulations of the Commercial Code, the procedure and requirements for setting up a legal entity in Slovakia are the same for Slovak and foreign individuals. A legal entity registered in Slovakia and owning land in Slovakia can later sell that land without any restrictions to a company registered in another country (Act No. 220/2004 on Protection and Use of Agricultural Land).[21]

3.3 Actual foreign land ownership

Since there are differences among the NMS-7 in the implementation of these restrictions, it is worth looking at the extent to which foreigners have actually been able to buy agricultural land.[22]

In Poland, where we observe a rather strict implementation of the restrictions, foreigners bought around 1,400 ha of land between 1999 and 2005, and the amount of land transacted on a yearly basis has increased slightly (Figure 1). This represents far less than 1% of total agricultural land. Still, it should be taken into account that these figures represent only the official statistics and are likely to underestimate the actual demand for and foreign ownership of agricultural land. There are undocumented reports of foreigners acquiring agricultural land by using Polish citizens as intermediaries, in order to avoid the restrictions. There are also significant regional differences as foreigners are more active in the western regions of Poland.

In Hungary, foreigners only bought 700 ha of agricultural land between 2005 and 2006, which represents less than 0.2% of the total turnover. The share of foreigners is slightly larger when it comes to buying farmsteads: between 1% and 1.5% of the farmsteads that changed ownership were bought by foreigners. These low figures seem to indicate that foreigners do not really pose a threat to land purchase opportunities for Hungarian farmers. Nevertheless, it should be taken into account that the above figures only refer to official statistics. Many agricultural land parcels are sold using so-called 'pocket contracts', which are illegal but still used.[23]

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[20] See *Zbierka zákonov* [Official Journal] 1991, Čiastka [Section] 98, pp. 1–84.

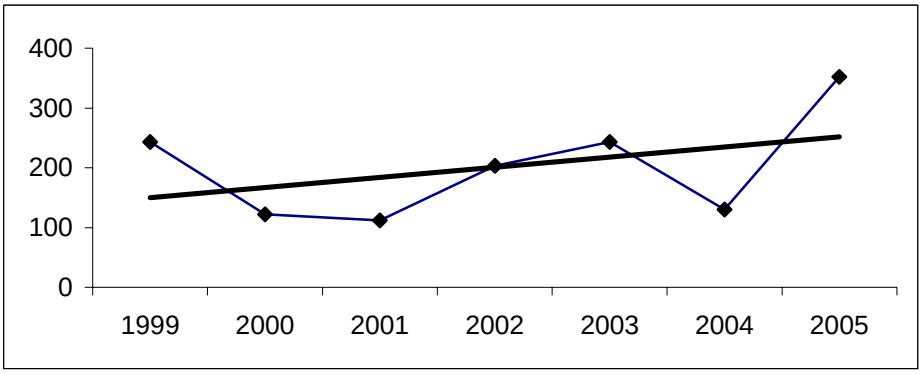
[21] See *Zbierka zákonov* [Official Journal] 2004, Čiastka [Section] 96, pp. 2278–2315.

[22] There are no official data or estimates on this for Estonia.

[23] Pocket contracts are signed sales contracts that are not recorded in the land register so that, although the official record shows that a Hungarian citizen owns the land, in practice a foreign person owns the property.

According to land experts, foreigners currently own around 400,000 ha (about 6%) of agricultural land (including land bought by foreigners in an unofficial way).

*Figure 1. Agricultural land (ha) sold to foreign investors in Poland between 1999 and 2005**



*

Regional data on land sold to foreigners in Poland can be found in appendix II (Table AII.3).

Source: Ministry of Interior and Administration.

In Slovakia, where foreigners can buy agricultural land relatively easily by setting up a legal entity, foreigners own approximately 20,000 ha or 1% of the utilised agricultural area (UAA).

According to a survey carried out by the Czech Union of Agricultural Businesses, in 2006 foreigners owned 90,000 ha of agricultural land (or 2.1% of total agricultural land) and rented around 400,000 ha of the same (corresponding to 9.5% of total agricultural land).

In Lithuania, official statistics indicate that foreign natural persons or legal entities presently use 30,000 ha of agricultural land (corresponding to 1% of agricultural land). Experts estimate that in 2007, foreigners owned 12,000–15,000 ha of agricultural land (i.e. about 0.5% of agricultural land), with some 30 foreign legal persons owning 10,000–12,000 ha and around 20 natural persons owning 1,000–3,000 ha.

In Latvia, 427 and 512 land sales transactions in 2005 and 2006 respectively involved a foreign party, according to the unified computerised State Land Register. These figures correspond to approximately 2% of the sales transactions that took place in those years. In the first eight months of 2007, 341 land sales transactions involved a foreign party, which again corresponds to 2% of all transactions in that period.

4. OWNERSHIP RESTRICTIONS AND LAND MARKETS

The first question we have to address is **the extent to which these restrictions on foreign ownership, as described in chapter 3, really affect the efficiency of land exchanges, land allocation and productivity growth.** To address this question, it is essential to put the effect of the restrictions on foreign ownership of land into a broader perspective, alongside a variety of other factors that influence the functioning of land markets in general and those of the NMS-7 in particular. More specifically, two (sets of) factors need to be taken into consideration:

a) The restrictions that have been imposed by the NMS-7 solely concern restrictions on *ownership* of agricultural land by foreigners. *They do not constrain land transactions in the form of renting land*.

b) Other factors that affect land transactions (besides legal restrictions on foreign ownership) include mainly constraints and imperfections in other markets, such as (rural) capital markets, insurance markets and other input markets. Transaction costs in land markets and imperfect property rights can also play an important role.

In the rest of this chapter, we explain how these other factors can have a bearing on land transactions and hence how they would shape the impact of the transitional restrictions imposed in the NMS-7. We start by comparing renting versus sales transactions and then move on to discuss the second set of factors.

4.1 Land sales versus rental transactions

As previously noted, the restrictions imposed by the NMS-7 concern the ownership of agricultural land by foreigners. They do not prevent foreigners from accessing land through rental.

Renting land is a very widespread form of agricultural land transaction in many developed countries, including the US and several EU-15 countries, where sometimes more than half of all agricultural land is rented by farms, although there are large differences among countries. Table 2 presents aggregate indicators of the prevalence of renting as a share of the total land used. Among the EU-15 member states, we observe substantial variations in the proportions of land rented. For example, in Belgium, where tenants are highly protected by the land rental policy,

almost 70% of the cultivated land area is rented, while in Italy, where the policy aims at stimulating owner-cultivation, only 26% of the cultivated land is rented.

Table 2. Share of rented land in total land used (%), 2003 and 2005

	Share of rented land in total UAA, 2003	Share of rented land in total UAA, 2005
Slovakia	**95**	**91**
Czech Republic	**89**	**86**
France	71	73
Belgium	68	68
Germany	65	64
Hungary	**56**	**59**
Estonia	**57**	**54**
Lithuania	**54**	**53**
Sweden	45	40
Netherlands	39	39
Greece	34	36
Finland	33	34
Norway	32	34
UK	35	31
Spain	31	31
Portugal	29	30
Slovenia	24	30
Austria	26	29
Italy	29	26
Latvia	**26**	**24**
Poland	**na**	**22**

Source: Eurostat.

Land renting is also very prominent in the NMS-7, but with even larger variations among countries. In the Slovak and Czech Republics, around 90% of the cultivated land area is rented. In Hungary, Estonia and Lithuania, between 50% and 60% of the cultivated area is rented. In Latvia and Poland, the figures fall to around 25%. The share of rented land in the total utilised land is lowest in Poland, mostly for historical reasons – albeit the average number hides major regional variations. In contrast to the other NMS-7, family farms continued to operate under the Communist regime in Poland. Only in the western and north-western regions of Poland were state farms significant. In central Poland as well as in the southern and eastern regions, small-scale owner-cultivated farms were the predominant farm structures in the pre-

transition era. This pre-transition difference in land ownership and land use structure is still reflected in the current land rental pattern, in which small farms continue to operate on owned land in central, southern and eastern Poland while land rental is much more common in the western and northern regions on land that was formerly used by the state farms. In those regions, which include the border regions with the EU-15, the share of land rental (and the average size of the farms) is considerably higher than the average for Poland.

4.2 The efficiency of land sales and rental transactions

Does the form of these land transactions (rental or sales) matter for efficiency? The sale of land is often considered a superior form compared with renting it. The arguments supporting the optimality of land sales are that a) land sales transfer full rights to the new user; b) they are more likely to increase access to credit, as owned land can be used for collateral purposes; and c) they provide optimal incentives for investment by entailing a permanent security of rights (Binswanger et al., 1995).

These conclusions rely on a number of simplifying assumptions, however, which are not always consistent with reality, and especially not with reality in transition countries – or in the EU for that matter.

Imperfections in input, product, credit and insurance markets all affect the functioning of land markets. Credit or capital market imperfections play a crucial role, especially for land **sales** transactions.

Capital market imperfections may hamper the efficiency of land sales markets in several ways. First, where capital markets work imperfectly, land purchases typically have to be financed out of own savings. Second, where financial markets do not work well or where confidence in money as a repository of value is low, land may be used to store wealth and may be acquired for speculative purposes. Third, land may be purchased or retained as a hedge against inflation, or as an investment asset in the absence of alternative investments or hedging options. Fourth, with constrained access to credit, investment in land ties up much needed capital, which prevents farmers from using these savings for investment in technology, equipment or quality inputs. Finally, people hold land for many reasons other than for production, such as prestige, lifestyle and family traditions, leading wealthy and politically connected households to accumulate large tracts of land. Some of these factors also make the sales price of land typically higher than its productive value.

Moreover, transaction costs in land sales can be high – not only with respect to the notary fees and so forth, but also the costs of enforcing property rights and obtaining access to the necessary documents and approval from local officials, which may be costly owing to corruption or inefficient administration. Transaction costs imply that a premium needs to be paid by the buyer and that significant losses can be incurred by buying and re-selling land, and hence they prevent flexible adjustments of land use through land sales.

All this has important implications for efficiency. An efficient land market would transfer land from users who are less productive to those who are more so. The arguments outlined above indicate that it is expensive and difficult for efficient producers to buy land; they also reduce the incentives for less efficient producers to sell their land. These factors suggest that land markets require a premium over the expected production value to be included in the sales prices. As these constraints on the land market limit the transfer of land from less efficient to more efficient users, efficiency losses incur. For example, as transaction costs in land sales are large, owners and farmers have a difficult time adjusting their land to their other production factors and to changed market conditions. This situation leads to suboptimal land allocation. Similarly, as owners hang on to land for reasons of speculation, insurance or hoarding wealth, land will not be used in the most productive way.[24]

In such environments, land rental may have advantages over sales:

- allowing more flexible adjustments of the land area used with relatively low transaction costs;
- requiring only a limited capital outlay, thereby leaving more liquidity available for productive investments rather than locking it all up in land;
- facilitating an easy reallocation of land towards more efficient users than the current owners; and
- providing the possibility of a stepping stone towards increased land use and ownership by the poorest.

These issues were highly relevant for the NMS-7 in the 1990s. Transaction costs for land sales were very high during the transition period, where sales were permitted at all. Also, flexible exchange options were particularly important in times of uncertainty. During the transition, farms and landowners were often uncertain about how market conditions would evolve and how institutions and laws would change. In such conditions, flexible and short-term rental contracts may be better choices than sales or long-term contracting – for both sides of the transaction.

That being stated, rental markets are not perfect. There can be problems with a) investment incentives owing to the lack of long-term security; b) access to credit, as one cannot use rented land as collateral; and c) segmentation of land rental markets with insecure property rights.

[24] It should be noted that these constrictions on land sales markets are not only significant for the efficiency of the land market, but also for **equity** and **poverty reduction**. In many cases, the poor are disproportionately affected by imperfect credit and insurance markets. Also, the role of land as a source of hedging and wealth is more important for them. Consequently, these imperfections tend to reduce disproportionately the benefits that the poor could obtain from participation in the land markets.

Several of these potential problems depend heavily on the provisions of the rental contracts, the institutional environment affecting property rights and enforcement costs, and on the government regulation of rental contracts. For instance, in several Western European countries, governments have introduced legislation stipulating a minimum duration of rental contracts of several years in order to guarantee tenants sufficient security of land operation. Yet, problems of overregulation have also occurred (Swinnen, 2002).[25]

The investment disincentive effect depends crucially on the nature of the required investments, and one should expect the length of the investment depreciation to be correlated with the length of the tenure security required. This factor helps to explain why farms may prefer a combination of owned and rented land.

One of the main advantages of rental in comparison with sales transactions in capital-intensive agricultural systems – such as those in the EU and the US – is that with the possibility of using other assets as collateral, farms prefer investing in new technology and farm-specific assets rather than tying up large sums of capital in land purchases. Many farms use both owned and rented land in their operations. According to the US Department of Agriculture, commercial farms rent on average about half the land they use in the US. In Western Europe, many farms both own and rent land, and the proportion of such mixed land use increases with the size of the farm (Feenstra, 1992). In this way, farms in these countries combine tenure security (with their assets and long-term investments concentrated in owned land) and flexibility in land allocation on the one hand, with freeing up capital for other investments (by renting additional land rather than buying it) on the other.

We find evidence that the same process is happening in the NMS-7. Data from Hungary (Figure 2) suggest that farms combine buying and renting land as their preferred strategy, with larger family farms in Hungary both buying and renting more land.

A key point to emphasise in this discussion is that the larger farms are presumably those in which foreigners would most probably be investing, and more precisely that the vast majority of agricultural land used for these farms is rented, rather than owned. Still, most farms would prefer a combination of renting and owning land, and the balance between the two is likely to depend on the characteristics of the farm activity.

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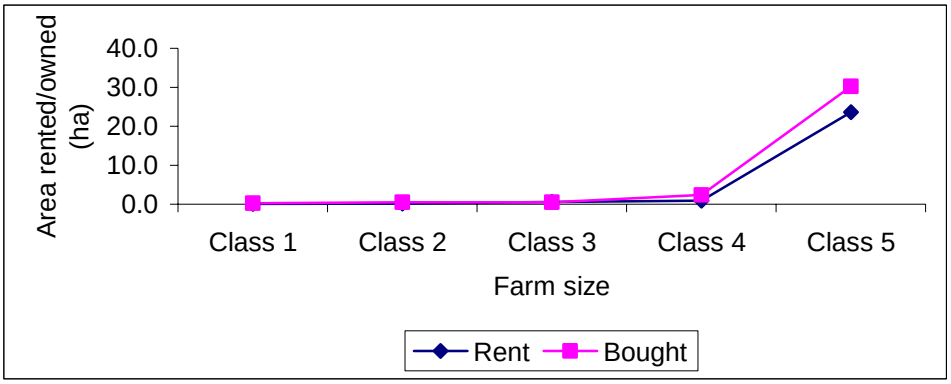
[25] In most Western European countries, the extensive regulation of land rental contracts has created tensions, as it has constrained the dynamic use of land and growth. Moreover, it has led to perverse effects, as landowners are no longer interested in renting land to farmers and prefer to sell it (see Swinnen et al., 2006, for an overview of these regulations).

Figure 2. Land rented and owned (ha) by farm size (quintiles) – Hungarian family farms



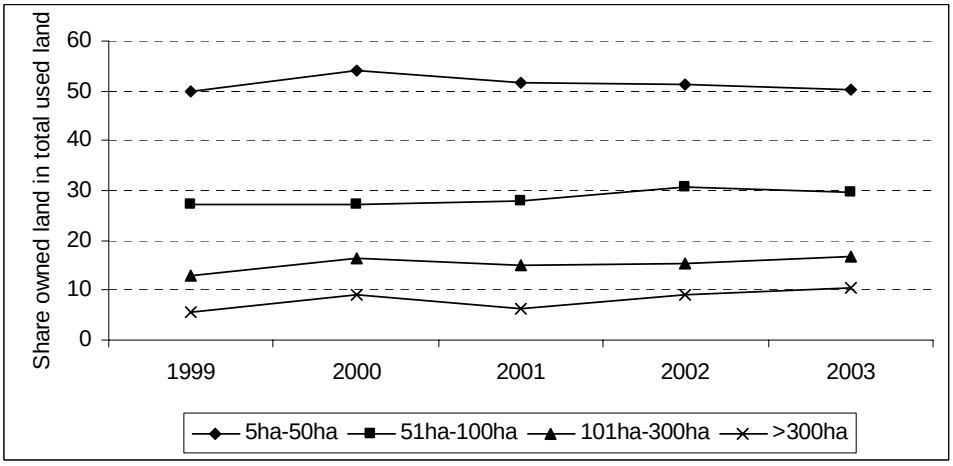
Note: Class 1 = 0-0.1 ha; class 2 = 0.1-0.3; class 3 = 0.3-1; class 4 = 1-3; class 5 = >3

Source: Leuven ACE Survey Datasets.

4.3 Land tenure and farm structures

Data from the Czech Republic suggest that there is a limit to this combination of buying and renting land. Renting becomes a more common feature as the farms become (much) larger: Figure 3 shows how renting increases from around 50% of the land used by farms of between 5 and 50 ha to more than 90% for farms of more than 300 ha.

Figure 3. Share of owned land in the total amount of land used, Czech Republic, 1999–2003 (%)



Source: VUZE.

This observation that renting increases with farm size captures two effects: the one just described above that capital constraints shift the preferences of farms beyond a certain size towards renting land over buying it, and a second effect that stems from a combination of the history of land relations in the NMS-7 and transaction costs in land markets.

There is a striking correlation between the prevalence of land rental at the country level and the proportion of corporate farms in total land use. While corporate farms own little land, they use a lot of land in some countries, almost all of which is rented. In the Czech and Slovak Republics, 75% of the total agricultural land area or more is used by corporate farms (Table 3). Also in Hungary, corporate farms still use around half of all land. The presence of high transaction costs reduces the incentives for landowners to change the allocation of a plot, so a large share is still rented to the organisations that have taken over the former cooperatives and state farms. The strong correlation between the share of corporate farms in land use and the incidence of land rental is demonstrated in Figure 4.

The land reform process in the 1990s in the NMS created a class of new (sometimes absentee) landowners while the land is used by a mix of smaller individual farms and large-scale corporate farms. These corporate farms continue to use large portions of the land for a variety of reasons. A major underlying factor is that historically, the large-scale farms have been the primary users of the land. New landowners may face significant transaction costs if they want to withdraw their land from the farms and reallocate it.[26]

[26] While the withdrawal procedure is usually stipulated by law, it is also determined by the willingness of the corporate farms to implement it (Mathijs & Swinnen, 1998). Interviews with country experts confirm that the difficulty of withdrawing land is highly dependent on the location of the plot. The withdrawal of a plot that is situated in a consolidated field makes the process more problematic and costly. The cooperative farm and the landowners have to agree on the physical demarcation of the plot. If the plot is located in the middle of a consolidated field, they will typically try to agree on a comparable parcel along the border of that field. In this context, it is important that the farm management is accommodating with respect to the withdrawal procedure. According to the legislation, corporate farms have no right to block such withdrawals. Yet in practice, they are not always so supportive. Although the difficulties between the withdrawal of physical land plots and land shares are not that dissimilar, there are indications that the withdrawal of land shares is even more challenging, especially for land owned by individuals who are not connected with the corporate farms (non-members/non-partners). In general, these problems increase the costs for the landowner, since s/he can be deterred from withdrawal by being offered a plot located far from his/her operation or a plot of lower soil quality.

Table 3. Percentage of agricultural area used by 'single holder' (individual or family) farms

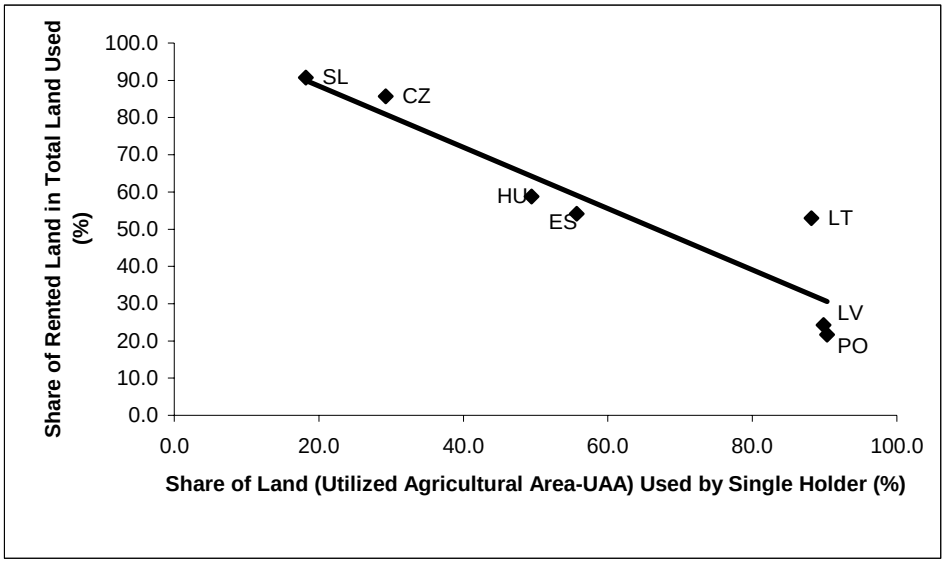
	2003	**2005**
Ireland	100	100
Greece	100	100
Luxembourg	100	100
Denmark	97	98
Slovenia	94	95
Norway	96	95
Cyprus	93	93
Malta	92	93
Belgium	92	92
Netherlands	92	92
Finland	93	92
Latvia	**89**	**90**
Poland	**88**	**90**
Lithuania	**88**	**88**
UK	89	85
Austria	83	83
Italy	88	82
Sweden	81	82
Portugal	77	75
Germany	69	69
Spain	69	69
Estonia	**59**	**56**
France	54	50
Hungary	**50**	**49**
Czech Republic	**27**	**29**
Slovakia	**13**	**16**

Sources: Eurostat and country statistical offices.

Corporate farm managers typically had more information than landowners did about the economic situation of the farm and about regulations governing local land transactions.[27] This was especially true for landowners who had not been involved in agriculture or who were living outside the village where their land is located, or for pensioners. For example, in Hungary 'passive owners' (a category that includes village-based pensioners, landowners who are not active in the cooperatives and those living outside the village in which their land is located) received around 71% of privatised agricultural land (Swain, 1999) in the land reform process.

[27] For example, Swain (1999) describes how pensioned members of cooperatives in Slovakia were 'forced' to rent the land to the cooperative under the threat of losing their pensions.

Figure 4. Correlation between land rental and the prominence of corporate farms in the NMS-7



Source: Swinnen et al. (2006).

Not surprisingly, the dominance of large corporate farms in the land market also leads to imperfect competition. Large farm corporations use their market power in local or regional land markets to influence land prices and rental contract conditions in their favour. In countries such as Slovakia, among some villages almost the entire village is renting land from a single corporate farm.

In Hungary, there is an additional important reason for the high correlation between renting and the presence of corporate farms: legal restrictions on land ownership. Legal restrictions in Hungary not only prohibit land purchase by foreigners (as explained in chapter 3) but also by corporate farms (see also section 4.4.5). Only Hungarian family farms can own agricultural land.

Box 1. Causes of differences in farm structures in the NMS-7

Why does the share of corporate farms differ so greatly among countries? This question is somewhat beyond the scope of this report and has already been the topic of several studies (e.g. Lerman et al., 2004; Mathijs & Swinnen, 1998; Rozelle & Swinnen, 2004). Key reasons are relative factor endowments (corporate farms have disappeared in labour-intensive agricultural systems), commodity characteristics (with scale economies being larger in grains than in vegetable and dairy production, for example) and market imperfections (family farms face disadvantages in accessing inputs and output markets if supporting institutions are not present). There is also the orientation of the land reform – restitution and share distribution have helped corporate farms to survive, while land distribution in kind (plots) has contributed to their disappearance.

Box 1. cont'd

Different land reforms in transition countries have resulted in alternative ownership structures. The main land reform choices were restitution, distribution in kind (actual plots), distribution of land shares or a combination of these policies (first by distribution in shares, then in kind) (Swinnen, 1999). These choices can have important implications for the role of rental markets in these countries. A central difference between the restitution of land to former owners and the distribution of plots or shares to farm workers and rural households is that with restitution (such as in the Czech and Slovak Republics, Bulgaria, the Baltic States and large parts of Romania and Hungary) a significant share of the land is (potentially) allocated to individuals who are not (or no longer) active in agriculture. They may be retired or living in urban areas. This has several potential consequences for the development of land markets. First, there is probably more need for an exchange of land, since retired and urban households are less likely to use land than are rural households that are active in agriculture. Second, restitution is more likely to lead to a consolidation of the large-scale farming structures (collective and state farms in the past, now corporate farms) because corporate farm management, which was the historical user of the land, has transaction cost advantages in dealing with the new owners (Mathijs & Swinnen, 1998). For both reasons, the restitution of land is associated with more land exchanges, including rental.

All these circumstances have had, often indirectly, a major impact on the development of land rental markets.

4.4 Property rights imperfections, transaction costs and (other) legal restrictions

In addition to market imperfections, other constraints impede both land sales and rental transactions, and hence reduce the potential to transfer land from the least to the most productive users and prevent the efficient allocation of agricultural land.

It is well known that property rights imperfections as well as transaction costs related to the identification and delineation of land plots, the enforcement of land rights, etc., are significant constraints on the development of land markets. In fact, the NMS-7 are well-known examples of how these factors affected land markets in the 1990s.

Property rights for most of the land in the NMS-7 were privatised in the 1990s. While these land reform processes have largely been finalised, this does not necessarily mean that all the land reforms have been completed and that all the issues concerning property rights have been resolved. There are several cases in which problems with property rights and transaction costs continue to influence land markets.

4.4.1 Unfinished privatisation

In the NMS-7, a substantive share of agricultural land is still owned by the state and may be subject to future privatisation and restitution. The current decision-making

and the uncertainty about the future ownership has an effect on the (lack of) transactions associated with this land and its use.

This situation is found in Poland for example, where the Agricultural Property Agency of the State Treasury, which was later replaced by the Agricultural Property Agency, took over 4.72 million ha of agricultural land, of which 1.58 million ha had been sold by the end of 2005. This means that the Agency still owns around 3 million ha of agricultural land, corresponding to circa 19% of all agricultural land in Poland. Sales by the Agency are to some extent still limited by restitution claims. Since 1997, there has been a ban on the sale of state property claimed by former owners or their successors, with the result that around 0.5 million ha of land (or 18% of the agricultural land owned by the Agency) has been withheld from the sales market.

In the Czech Republic, up to 0.34 million ha (or approximately 10% of the Czech UAA) had been privatised by 2006 by the Land Fund, the institute that administers state agricultural land. By 1 January 2007, about 0.45 million ha (or 13% of the Czech UAA) remained under the administration of the land fund, although around 0.26 million ha of this will be privatised in the near future. Not surprisingly, this sale of state agricultural land has had a substantial impact on the average land sales price as the administrative prices, which are used for privatisation, are considerably lower than the market prices. Owing to the increased supply of land for sale, the latter prices have fallen in the last few years.

In Lithuania, the share of privately owned land increased by more than 60% from 2000 to 2006. About 1 million ha of land was privatised from 2002 to 2006. By 2011, an additional 0.9 million ha will be privatised by restoring ownership rights or selling state-owned land to its users.

In Slovakia, the state owned 13,816 ha (or 7% of the UAA) in 2006 while the owners of 437,665 ha (23% of the UAA) were not known. Land that is state-owned or of unknown ownership is managed by the land fund and might be subject to restitution or privatisation. State-owned land might also be subject to sale, while this is not the case for land of unknown ownership.

In Hungary, the state owned 2 million ha (around 22% of total agricultural land) in 2006. Currently, it is managed by the national land fund, which rents it out on a long-term basis. But according to the land policy, it might be subject to privatisation.

In Latvia, ongoing land privatisation programmes have no or hardly any influence on the agricultural land sales market. The state and municipalities own respectively 30.1% and 4.8% of the total agricultural land. State and municipal land is used by forest organisations, educational and research institutions, the army and other governmental bodies. This type of land is of minor importance for the agricultural sector, and it is highly unlikely that this land will be subject to any privatisation process in the near future. Around 0.2% of the total agricultural area is ‘free’ state and municipal land. This status refers to rural land upon which the ownership rights were not restituted during the land reform. This free land was transferred into either private ownership or a long-term lease to natural persons or legal entities and it might still be subject to privatisation in the future.

In Estonia, the land reform and privatisation process is basically finished. This does not mean that all restitution and privatisation transactions have been entered into the cadastre, however. The cadastral register has information on 83% of the total agricultural area. According to the information currently available from the cadastre, around 40% is owned by the state or municipalities, but it is unlikely that this land will be subject to privatisation processes in the near future. Thus, it has little impact on the development of the land market.

4.4.2 Unknown ownership and co-ownership

Other problems follow from co-ownership of land and the difficulty of unknown owners. In many NMS, land ownership registration was poorly maintained, if at all, and in many areas a process of land consolidation occurred, wiping out old boundaries and relocating natural identification points (such as old roads and small rivers). The loss of information on registration and boundaries resulted in a large number of unknown owners in some transition countries (Dale & Baldwin, 2000). In addition, unsettled land inheritance within families during the socialist regime gave rise to widespread fragmentation in land ownership and a high number of co-owners per plot of land.

For example, according to the OECD (1997), in 1993 approximately 9.6 million plots were registered in Slovakia, roughly 0.45 ha per plot, and each plot was owned on average by 12 to 15 people. As Dale & Baldwin (2000) put it, "a single field of twenty hectares may have hundreds of co-owners". In the Czech Republic, there were 4 million ownership papers registered in 1998 for 13 million parcels, with an average parcel size of 0.4 hectares.[28] Many of these co-ownership issues still have not been resolved.

Not surprisingly, all this raises the costs of land exchanges, for both sales and rentals, as land withdrawal from the corporate bodies normally requires agreement from the co-owners. While as far as we know there is no systematic evidence on the effects of these ownership problems in the NMS-7, a study we did in Bulgaria is likely to provide relevant information. In a detailed and survey-based assessment of co-ownership problems in Bulgaria (where 50% of the plots are co-owned in some regions), we found that co-owned plots of land are more likely to be used by corporate farms and less likely to be used by or rented out to other farms (Vranken et al., 2007). Furthermore, the probability of land being used by a cooperative or being abandoned increases with the number of owners, and the impact of co-ownership

[28] Also in Bulgaria, another NMS but not the focus of this study, a recent assessment found that 50% of the plots were co-owned, often by several people (Vranken et al., 2007). The average number of co-owners was more than two (excluding husband and wife co-ownership). Some co-owners were unknown, while some were no longer living in the country and some had moved to other villages and cities throughout the country.

depends on whether the co-owners are living within or outside the village. Coordination problems worsen when co-owners are living farther away.

4.4.3 Transaction costs

Several studies document that the land markets in the transition countries, even among the most advanced such as those in Central Europe, were characterised by the existence of substantial transaction costs in rural land markets, hindering land exchanges in the years leading up to EU accession (Dale & Baldwin, 2000; Lerman et al., 2004). Transaction costs include those related to bargaining costs, the enforcement of withdrawal rights, asymmetric information, co-ownership and unknown owners, and unclear boundaries. Uncertainty and high costs in the identification of land property rights may lead to soaring transaction costs and constraints on land transactions in general.

While there is no good evidence on how significant transaction costs are or how they have changed over recent years, indirect evidence based on data on the differences in land prices paid by various farms in the Czech and Slovak Republics suggests that the land transaction costs have reduced greatly over recent years. Table 4 shows how the difference in rental prices between corporate farms and individual farms – which one could consider an indicator of transaction costs (as discussed above) – has fallen from 73% in 1997 to 15% in 2005 in the Czech Republic and from 229% in 2001 to 45% in 2005 in Slovakia. The country study on the Czech Republic concludes that land transaction costs have fallen as a result of improved awareness and information among owners along with land consolidation, which has led to more rental transactions and increased prices for owners.

Table 4. Agricultural land rental prices by legal entity (€/ha)

	1997	**2001**	**2005**
Czech Republic			
Individual farms (€/ha)	16	23	35
Corporate farms (€/ha)	9	17	30
Price gap in € (P_{IF}-P_{CF})	7	6	5
Price gap in % (P_{IF}-P_{CF})/ P_{CF}	73	37	15
Slovakia			
Individual farms (€/ha)	–	18	24
Corporate farms (€/ha)	–	6	17
Price gap in € (P_{IF}-P_{CF})	–	13	7
Price gap in % (P_{IF}-P_{CF})/ P_{CF}	–	229	45

Sources: FADN for Slovakia and VUZE for the Czech Republic.

Nevertheless, Czech and Slovak land experts indicate that barriers continue to hamper a well-functioning land market. First and most importantly, there are considerable problems with determining the ownership of parcels, especially in the Czech border regions, where German citizens were expelled after World War II and where the special allotment system was applied to newcomers. Second, problems stemming from the lack of physical identification of parcels persist. After 1970, during the formation of the large-scale state and collective farms, agricultural land parcels were merged into extremely large fields. This move erased almost all of the natural physical boundaries, making the demarcation of and physical access to the small parcels assigned to the former and new owners difficult.

4.4.4 Other costs

Other costs related to land transfers include notary fees, taxes and assorted administrative charges. For instance, the studies on Poland, Bulgaria, Lithuania and Romania estimate these costs at between 10% and 30% of the value of the land transaction (OECD, 2000; Prosterman & Rolfes, 2000; World Bank, 2001).

4.4.5 Other legal restrictions

As explained above, in some of the NMS-7 there are other legal restrictions on land ownership. In Hungary, legal restrictions not only prohibit land ownership by foreign natural persons but also by legal entities (both domestic and foreign). Resident legal persons and unincorporated organisations, with the exception of the State of Hungary, local governments and public organisations, may not acquire a title of ownership of arable land. Exceptions to this rule are church organisations with a legal personality that acquired land ownership titles by virtue of testamentary disposition or based on a contract of donation. A mortgage loan company may also acquire ownership of arable land for a limited period (as provided by the Act on the Acquisition of Ownership of Arable Land, Section 6).

In several countries, there is also an upper limit on the amount of land that can be owned by one person (e.g. 300 ha in Hungary and 500 ha in Lithuania).

4.4.6 Summary

Although transaction costs and imperfections in property rights have diminished over the past decade, they remain consequential and still have a significant impact on the allocation of land.

It should be noted that problems with property rights are not only an issue for sales markets, but also for rental markets. Weak property rights – often in combination with the absence of reliable conflict-resolution mechanisms – may result in substantial costs for owners seeking to enforce their rights on the land once they rent it out to tenants. This reduces the incentives for owners to rent out their land.

The impact of capital constraints on land markets also remains significant. With growth in the NMS-7 in the 2000s and accession to the EU, more credible institutional environments and the development of capital and insurance markets, these constraints and their effects have reduced. Yet, they continue to be influential even in well-developed economies, as reflected by the fact that in both the US and several EU-15 countries agricultural land rental remains very pronounced. This tendency is especially the case for larger farms in the US – which is also consistent with observations that land rental is more important for large corporate farms in the NMS-7.

5. FOREIGN INVESTMENT, MARKET IMPERFECTIONS AND LAND

Foreign investment in agriculture could have a major impact on the agricultural sector and the functioning of land markets in the NMS. Foreigners interested in investing in agriculture in the NMS-7 are most likely less credit-constrained and probably have better access to general market information and technology than do some of the local farms from which they would take over the land. The direct effects of foreign investment would be the enhancement of average agricultural productivity.

Indirectly, investments in agriculture through land purchases by investors who are less capital-constrained than existing farmers may improve agricultural productivity by increasing land value, thus reducing capital constraints for all farms (as higher land values would increase farm valuations and collateralisation options) and by horizontal spillovers (e.g. of technology and information) for the sector as a whole.

To assess foreign direct investment (FDI) in this context, it is crucial to understand a) the current importance of FDI in farming (directly) and its potential and b) the influence of FDI on NMS-7 agriculture and its performance. We also consider the significance of other forms of FDI (which affect NMS-7 agriculture directly or indirectly through spillover effects) in comparison with FDI in farming (directly) and its performance.

FDI inflows have been extensive in the NMS-7 over the past 15 years, but not in all sectors. Table 5 shows the proportions of FDI in these countries in 2004. One has to be careful in drawing conclusions from these data since the restrictions on foreign ownership of land are likely to have affected these numbers. Still, there are some interesting observations that are relevant for our study.

First, the inflow of FDI in the NMS over the past 15 years has been large. Table 5 shows how the stock of overall FDI had grown to around €200 billion in investment in the NMS-7 by 2004.

Second, less than €1 billion has gone into agriculture and forestry. This figure is much smaller than the amount of FDI that has gone into the food industry, for example.

At the same time, FDI in agriculture has been substantial, and much more than one would expect given the restrictions on land ownership that have been imposed.

For instance, in Poland, the country with the strictest restrictions on foreign land ownership, FDI in agriculture and forestry still amounts to almost €300 million.[29]

Table 5. FDI stock in the NMS in 2004 (€ million)

	Total	Food industry*	Agriculture**
Czech Republic	42,035	1,799	79
Estonia	7,381	181	39
Hungary	40,397	2,093	179
Lithuania	4,690	484	37
Latvia	3,358	100	61
Poland	62,687	3,778	284
Slovakia	10,272	499	44

* Food products, beverages and tobacco

** Agriculture, hunting and forestry

Source: WIIW Database on FDI in Central, East and Southeast Europe (May 2006).

Third, a far larger amount, around €10 billion, has been invested in the food industry and agribusiness. It is well known by now that FDI in the food industry and agribusiness in the NMS-7 has had major, positive vertical spillovers on the farms. Vertical spillovers have come through improvements in access to inputs, technology, credit and output markets as a result of FDI and the restructuring of the NMS-7 food sector. All this has resulted in higher investment, productivity growth and enhanced competitiveness of the NMS food chain as a whole, including the farm sector.[30]

In summary, given the likelihood that the observed FDI flows have themselves been affected by the ownership restrictions, one should be careful in drawing conclusions from these data. Nevertheless, the data suggest that there has been a substantial inflow of FDI in agriculture despite the restrictions on land ownership. In addition, while some of the positive FDI effects (direct and indirect through horizontal spillovers) in the NMS agricultural sector may have been limited by the land ownership restrictions, there have been widespread vertical spillovers from FDI in the food industry and agribusiness. Together these spillovers have culminated in increased investment, productivity and competitiveness of the overall NMS food chain, including farms.

[29] There are no data on the specific nature of the FDI in agriculture and forestry, e.g. on whether this investment has gone into farming in general or into capital-intensive activities (e.g. hog and chicken farms) and technology-intensive activities.

[30] See e.g. Gow & Swinnen (1998), Dries & Swinnen (2004), World Bank (2006) and Swinnen (2007) for evidence.

6. EU ACCESSION AND NMS-7 LAND MARKETS

EU accession was to affect land markets directly by freeing them and integrating them into the single EU market. While this process has been held back by the ownership restrictions, EU accession has had several other effects on the NMS-7 land markets.

EU accession has influenced the NMS-7 rural land markets indirectly through various interactions. Chiefly, EU accession has affected the NMS-7 land markets through the following channels:

- It has improved the functioning of other factor markets (including credit and technology) and output markets. As discussed in chapter 4, these other market imperfections were major limitations on the functioning of land markets in the NMS-7. With improvements in these other markets, farm productivity, investment and profits have grown, leading to a rise in the demand for land and in land values in the NMS-7.
- It has stimulated foreign and domestic investment in the food industry and agribusiness, with sizeable spillovers on farming and land. As outlined in chapter 5, these spillover effects have implied substantial positive impacts on productivity, investments and the competitiveness of the whole agrifood chain, including agriculture.
- It has led to a large increase in subsidies for NMS-7 farmers through the CAP. Although for a transition period the NMS-7 farms only receive a proportion of the subsidies given to EU-15 farms (Table 6),[31] the subsidies represent an appreciable share of NMS-7 farm incomes.

[31] NMS-7 farms receive the same price support as EU-15 farms do, but at the time of accession (2004) they only received 25% of the equivalent amount received by EU-15 farms of direct payments (which make up an increasing share of the CAP subsidies). This share increases every year, in a linear way, and is to reach 100% by 2013. In addition, NMS-7 governments are allowed to 'top up' these subsidies with national payments of another (additional) 30%, but the combined subsidies cannot be larger than 100%.

Moreover, since most of the subsidies are linked to either output or land, they tend to stimulate a rise in land prices.[32] Theoretical analyses show that, even in the presence of land market transactions and imperfect competition, most of the subsidies that are linked to land would ultimately go to landowners through increased land prices (Ciaian & Swinnen, 2006). Furthermore, if credit market imperfections feature prominently, the increase in land prices may even be larger than the increase in land subsidies.[33]

The impact of the CAP subsidy system on the incentives for local farmers and foreigners to purchase agricultural land in the NMS is mixed. The CAP subsidies received by farmers in the NMS are only a fraction of the payments received by the EU-15 farmers. Table 6 illustrates that in 2005, the NMS received on average a direct payment of €38 per ha, while farmers in the EU-15 obtained on average €265 per ha. If NMS farms have credit constraints, this difference in subsidies affects their competitiveness in the land market.

Yet as noted above, a substantial portion of these subsidies ultimately go to the landowners, by stimulating the demand for land and thus increasing land values. This situation may provide an additional incentive for investors to purchase agricultural land. In the short run, since the subsidies are lower in the NMS, for a given price differential between NMS and EU-15 land prices, the incentive for EU-15 farmers to buy agricultural land in the NMS is less than if the amount of the subsidies were equal. Nonetheless, potential EU-15 investors are generally less credit-constrained than are the NMS farms and investors, and they know that the magnitude of the direct payments will continue to increase in the NMS. Together, these aspects may make buying agricultural land in the NMS an attractive investment in the longer term.

The combination of these factors has led to strong growth in farm incomes, land transactions and land prices with EU accession. These evolutions are documented in the next chapters with data.

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[32] Price support is linked to output and drives up the demand for land indirectly, as land is an input in farm production. Direct payments are linked to land use in the NMS-7 (which is different from the current implementation of the direct payments in the EU-15) and thereby directly increases the demand for land.

[33] In the presence of credit constraints, land subsidies will not only drive up demand directly (by subsidising land use) but also indirectly (by increasing productivity). In combination, these factors lead to an even greater rise in land prices (Ciaian & Swinnen, 2007).

*Table 6. Direct payments per hectare in 2005 (€/ha)**

	2005
Austria	200
Belgium	330
Denmark	339
Finland	213
France	261
Germany	294
Greece	478
Ireland	281
Italy	273
Luxembourg	218
Netherlands	288
Portugal	146
Spain	181
Sweden	209
UK	na
EU-15	265
Czech Republic	59
Estonia	25
Hungary	54
Latvia	14
Lithuania	29
Poland	44
Slovakia	43
NMS-7	38

* Direct payments per hectare are calculated as total direct payments by country divided by the total UAA by country.

Note: The calculated values may be lower than the actual payments per hectare because, first, the calculated direct payments per hectare do not include top-ups (for the NMS-7), and second, not all land qualifies for area payments.

Sources: Total direct payments (in €) from European Commission (2006); UAA from Eurostat.

7. EVOLUTION OF LAND MARKETS IN THE NMS-7 AND COMPARISON WITH THE EU-15

In this chapter we first analyse the evolution of NMS-7 land markets in terms of the volume of land sales and rentals. Next, we analyse changes in prices and contract terms, and compare land price movements with those in the EU-15.

7.1 The development of land sales and rental markets

One can identify the following main trend in the land markets of the NMS-7: *the amount of land exchanged through land rental is considerably higher than that exchanged through land sales.*

Earlier, in chapter 4, we discussed the importance of land rental in all of the NMS-7, especially in Slovakia, Hungary, the Czech Republic, Estonia and Lithuania, where the share of the total agricultural land rented by farms is more than 50%. Only in Latvia (24%) and Poland (22%) is it less.

Below we look in more detail at the trends in sales and rental transactions.

7.1.1 Land sales

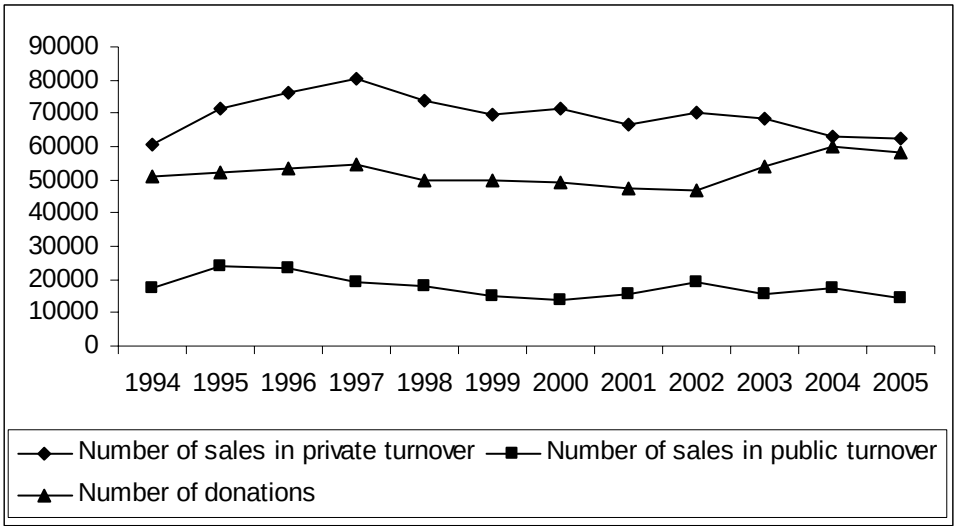
In some of the NMS-7, the land sales market has been strongly affected in recent years by public sales under ongoing land privatisation programmes. This is notably the case in Poland, the Czech Republic and Lithuania, but less or not so in the other NMS-7.

In Poland, about half the area sold over the period 1994–2005 was through public sales, accounting for around 10% of the total agricultural area, and equivalent to an annual turnover of around 0.9% of agricultural land – a figure that is similar to that of private sales. The number of public sales transactions has been rather constant over this period (Figure 5).

In the Czech Republic, there has been an increase in the number and volume of public sales in recent years (in addition to the growth in private sales). The rise in public sales has resulted from the privatisation of the remaining state land, which started in 2000. Especially since 2002, a large amount of state land has 'entered' the

market (annually about 70,000 ha or around 1.7% of the Czech Agricultural Land Fund (ALF)),[34] and it represents a sizeable segment of the Czech land market at present.

Figure 5. The number of land sales transactions in Poland



Sources: ANR and IERiGŻ.

In Lithuania, the amount of land in private ownership has grown substantially over the past few years owing to the privatisation process, which is still underway. The area in private ownership increased by 60% (on average 8.5% per year) between 2000 and 2006.

The recent impact of privatisation on land sales is much smaller in the other NMS. As explained in section 4.4.1, land privatisation is largely finished in Estonia and Latvia, and while public land may still be privatised in the future in Hungary and Slovakia, it currently does not significantly affect the land sales market.

Private sales of land vary over time and between countries.

In Poland, the country in which a large part of the land has always been in private ownership, more than 100,000 transactions of agricultural land ownership occurred per year in the period 1994–2005. In that same period, private land sales in Poland covered 1.7 million ha. This corresponds to 10% of the total agricultural area or an average annual turnover of 0.8% of the agricultural land through private sales.

[34] According to the Czech Cartography Authority, the sum of the parcels amounts to about 4.3 million ha of agricultural land. This area is defined as the Czech ALF.

Yet interestingly, the number of private sales of agricultural land has decreased consistently since 1997, and the number of land sales transactions in 2005 was almost 25% less than in 1997.

In the Czech Republic, the total amount of land exchanged through private land sales has grown in recent years. The annual turnover of privately purchased land amounted to about 0.2–0.3% of the total agricultural area during the period 1993–2001. From 2002 to 2004, however, the annual turnover of private land increased to 1.5% and even to 3.3% in 2005. This surge in more recent years has stemmed from (among other things) the launch of mortgage loans supported by interest subsidies through the SGFFF.[35]

In Slovakia, the overall size of the land sales market remains small. Land sales as a share of the total agricultural land was less than 1.5% in the 1990s (Dale & Baldwin, 2000), but it seems to have grown since then, albeit with some marked variations: sales of agricultural land decreased between 2001 and 2003 but increased again from 2004 (Table 7). Arable land sales were stable over the 2001–03 period, but grew robustly with accession – the number of hectares sold more than doubled over the 2003–05 period.

Table 7. Number of hectares of land transacted through sales in six representative Slovakian regions

	Agricultural land	Arable land
2001	2,110	822
2002	1,451	962
2003	912	874
2004	1,853	1,476
2005	2,754	1,899

Source: VUEPP.

In Hungary, a bit less than 3% of the productive land changed owners in 2004, but only half of the land transfers, corresponding to 1.5% of the productive land, occurred through sales. The majority of sales involved persons exercising their pre-emption rights.

In Lithuania, the number of sales of privately owned land was constant over the 2000–03 period, with around 3% of privately owned land being transferred through either sales or donations. There was a strong rise in 2004, the year of EU accession, with the share of private land being transferred up by 5-7% (Table 8). The largest increase was in 2005, followed by a reduction.

[35] In the period 2004–05, the amount of private agricultural land sold under the programme was nearly 21,000 ha.

Table 8. Evolution of land sales in Lithuania

	Area of land transferred through sales or donations/ gifts (thousand ha)	Private agricultural land (thousand ha)	Change in private agricultural land (2000=100)	Percentage of private land that has been transferred through sales or donations/gifts
2000	58	1,706	100	3
2001	58	1,930	113	3
2002	59	2,089	122	3
2003	59	2,269	133	3
2004	127	2,538	149	5
2005	169	2,605	153	7
2006	139	2,727	160	5

Source: State Enterprise Centre of Registers.

Other means of transferring land ownership, such as donations, inheritance and land swaps, are significant in the turnover of private land (at least in the NMS for which we have the relevant data).

In Hungary, land ownership transfers through ways other than sales (e.g. land swaps, donations or inheritance) were almost equal to land sales: they accounted for 1.5% of the change in productive land in 2004.

Also in Poland, the number of land donations was close to the number of private land sales over the period 1994–2005, and the gap has been closing since 2003. The number of transactions through private sales and that of donations were almost equal in 2004 and 2005.

7.1.2 Land rental

Land rental remains important in almost all the NMS-7, although it has declined slightly in recent years. In some of the NMS-7 (such as Poland and the Czech Republic), the number of rental agreements involving public land fell with continued progress in the land privatisation process.

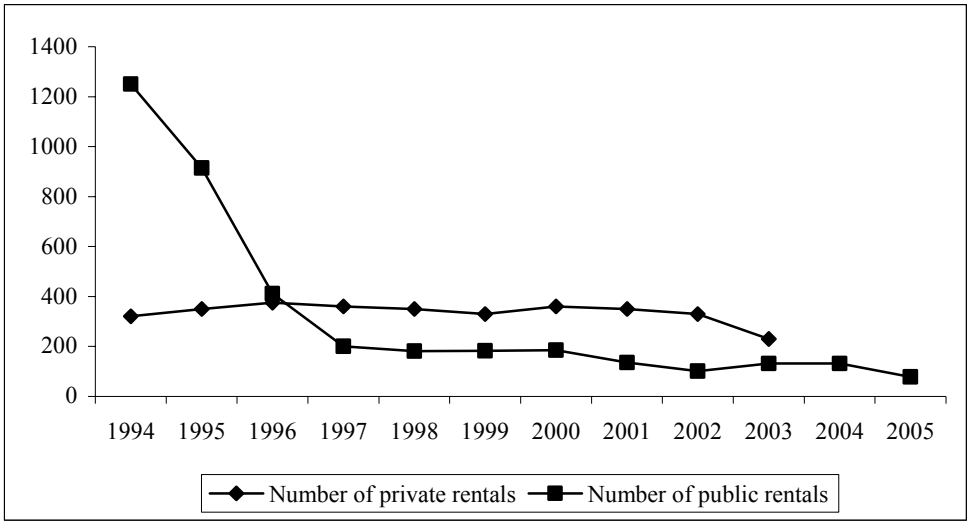
Land rental is widespread in all the NMS-7, and particularly so in Slovakia, Hungary, the Czech Republic, Estonia and Lithuania, where the share of total agricultural land rented by farms is more than 50%. Between 2003 and 2005, the share of rented land in total land use fell slightly (1–4%) in all the countries except Hungary, where it grew by 3% (see Table 2 above).

In Poland, land rental was the basis for transactions involving more than 1 million ha of public agricultural land in 1994, which decreased to less than 100,000 ha in 2005 with the continuing privatisation of public agricultural land.

The annual volume of farmer-to-farmer rentals remained fairly stable from 1994 to 2002, ranging between 320,000 and 375,000 ha. But in 2003, it fell to 230,000 ha

(see Figure 6). This means that between 1994 and 2002, the average annual turnover of agricultural land through private rentals had been slightly more than 2%, which decreased to 1.4% in 2003. Meanwhile, between 1994 and 2005, the annual turnover of land through private sales (0.8%) was much smaller than through rental (1.9%).

Figure 6. Number of land rental transactions in Poland



Sources: IERiGŻ and ANR (data from ANR are rentals of public land).

In the Czech Republic, 90% of the UAA (or approximately 3.3 million ha) is annually exchanged through rental. A considerable amount of land in the Czech Republic is still owned by the state, but even if we look solely at private land rentals, it becomes clear that 74% of the UAA is rented by private individuals.

In Slovakia, more than 90% of the UAA is rented. Corporate farms rent slightly more of the UAA than individual farms, which has not changed significantly in this respect since EU accession.

In Hungary, more than half of the cultivated land is rented by farmers. Between 2001 and 2003, the share of rented land declined by 4.2%, but by 2005 it had increased again by around 3%. On average, rental was the basis for the exchange of more than 3 million ha of land, which is 30 times the amount of land that was exchanged through sales.

7.2 Trends in land prices

The evolution and comparison of land prices is summarised in Tables 9 and 10. Key findings are presented below.

Table 9. Evolution of land sales prices in the NMS-7

Sales		1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Nominal price	Czech Republic (CZK/ha)	134,800	164,700	196,000	182,600	280,100	318,400	254,200	271,200	348,500	212,400	239,000	195,900	188,900	269,900	245,800
	Poland (PLN/ha)	–	2,021	2,187	2,901	3,655	4,119	4,265	4,584	4,857	4,700	5,375	6,211	7,753	8,950	11,736
	Slovak Republic (SKK/ha)	–	–	–	–	–	–	–	–	80,935	141,407	148,022	195,402	193,907	179,500	241,400
	Hungary (1,000 HUF/ha)	–	–	–	–	–	–	–	–	–	–	–	–	–	380,000	395,000
	Estonia (EEK/ha)	–	–	–	–	–	–	–	–	3,417	–	4,647	–	7,255	10,706	13,026
	Latvia (LVL/ha) [a)]	–	–	–	–	–	–	–	111	114	133	170	195	487	558	–
	Lithuania (LTL/ha)	–	–	–	–	–	–	–	–	–	317,000	337,000	686,000	1,602,000	2,500,000	1,750
Real price [b)]	Czech Republic (CZK/ha)	–	–	–	–	–	–	–	1,200	1,300	1,400	1,400	1,500	2,000	2,533	2,869
	Poland (PLN/ha)	134,800	145,238	156,842	132,474	187,462	191,805	148,960	156,573	191,803	113,714	126,813	100,430	101,600	135,108	120,513
	Slovak Republic (SKK/ha)	–	2,021	1,709	1,922	2,126	2,157	2,105	2,108	2,159	2,044	2,328	2,584	3,144	3,583	4,566
	Hungary (1,000 HUF/ha)	–	–	–	–	–	–	–	–	80,935	135,188	135,160	168,324	163,121	147,031	192,912
	Estonia (EEK/ha)	–	–	–	–	–	–	–	–	–	–	–	–	–	380	373
	Latvia (LVL/ha) [a)]	–	–	–	–	–	–	–	–	3,417	–	4,543	–	6,793	8,714	9,754
	Lithuania (LTL/ha)	–	–	–	–	–	–	–	111	112	126	156	167	379	390	–

Table 9. cont'd

Euro	Czech Republic (€/ha)	–	–	–	–	–	–	–	1,200	1,304	1,403	1,416	1,477	1,861	2,286	2,457
	Poland (€/ha)	3,945	4,823	5,649	5,299	7,796	8,832	6,892	7,618	10,230	6,895	7,505	6,143	6,342	9,523	8,854
	Slovak Republic (€/ha)	–	748,000	690,000	848,000	984,000	1,052	1,009	1,144	1,323	1,218	1,222	1,372	1,927	2,297	3,102
	Hungary (€/ha)	–	–	–	–	–	–	–	–	1,869	3,312	3,568	4,882	5,024	4,820	7,147
	Estonia (€/ha)	–	–	–	–	–	–	–	–	–	–	–	–	–	1,512	1,495
	Latvia (€/ha) [a)]	–	–	–	–	–	–	–	–	218	–	297	–	464	684	833
	Lithuania (€/ha)	–	–	–	–	–	–	–	198	203	229	266	293	700	801	–

[a)] Price of agricultural land parcels larger than 3 ha.

[b)] The basis year for each country is always the earliest year for which land sales price information was available.

Notes: For the Czech Republic and Lithuania – price for agricultural land in private turnover; for Poland – price for arable land in public and private turnover; for the Slovak Republic, Hungary, Estonia and Latvia – price for agricultural land in private and public turnover.

Sources: VUZE for the Czech Republic; GUS, ANR and Zagorski for Poland; VUEPP for Slovakia; FADN for Hungary; the Estonian Land Board for Estonia; State Land Service for Latvia; for Lithuania, 2000-02 from State Enterprise Centre of Registers, 2003-04 from the Lithuanian Institute of Agricultural Economics and 2005-06 from the State Enterprise Centre of Agricultural Information and Rural Business.

Table 10. Evolution of land rental prices (yearly average) in selected new member states

Rental		**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**	**2007**
Nominal price	Czech Republic (CZK/ha)	–	–	–	–	442	460	496	543	678	732	756	853	960	1121	1302
	Poland (PLN/ha)	–	57	71	104	92	96	68	115	96	95	115	196	141	175	465
	Slovak Republic (SKK/ha)	–	–	–	–	–	–	–	–	297	386	434	547	684	774	808
	Hungary (HUF/ha)	–	–	–	–	–	–	–	–	10,546	11,050	13,440	14,370	15,720	17,790	21,870
	Lithuania (LTL/ha)	–	–	–	–	–	–	–	–	–	65	65	–	90	114	143
Real price *	Czech Republic (CZK/ha)	–	–	–	–	442	414	434	468	558	586	599	653	730	838	954
	Poland (PLN/ha)	–	57	55	69	54	50	34	53	43	41	50	82	57	70	181
	Slovak Republic (SKK/ha)	–	–	–	–	–	–	–	–	297	369	396	471	575	626	773
	Hungary (HUF/ha)	–	–	–	–	–	–	–	–	10,546	10,502	12,281	12,295	13,021	14,156	16,284
	Lithuania (LTL/ha)	–	–	–	–	–	–	–	–	–	65	66	–	84	103	123
Euros	Czech Republic (€/ha)	–	–	–	–	12	13	13	15	20	24	24	27	32	40	47
	Poland (€/ha)	–	21	22	30	25	25	16	29	26	25	26	43	35	45	123
	Slovak Republic (€/ha)	–	–	–	–	–	–	–	–	7	9	10	14	18	21	24
	Hungary (€/ha)	–	–	–	–	–	–	–	–	41	45	53	57	63	67	87
	Lithuania (€/ha)	–	–	–	–	–	–	–	–	–	19	19	–	26	33	41

* The basis year for each country is always the earliest year for which land rental price information was available.

Notes: For the Czech Republic, Slovak Republic and Hungary – price for agricultural land in private and public turnover; for Poland – price for agricultural land in public turnover; for Lithuania – price for agricultural land in private turnover.

Sources: VUZE for the Czech Republic; GUS, ANR and Zagorski for Poland; VUEPP for Slovakia; the Central Statistical Office for Hungary; for Lithuania, 2002–03 from the Lithuanian Institute of Agricultural Economics and 2005–06 from the State Enterprise Centre of Agricultural Information and Rural Business.

There have been significant increases in land prices over recent years, in both the land sales and rental markets.

Between 2000 and 2006, sales prices of agricultural land increased in real terms (i.e. deflated by the CPI) by around 50% in Poland and Lithuania, and by more than 250% in Latvia. Similarly, real rental prices grew by more than 100% in the Czech Republic between 2000 and 2007 and by more than 160% in Slovakia between 2001 and 2007.

The exception to these dramatic price increases in the NMS-7 is the Czech Republic, where land sales prices actually fell after 2001. The principal reason for this decline in land sales prices – in sharp contrast to the simultaneous increase of land rental prices – is that after 2001 there was a substantial rise in public sales as a result of the privatisation of the remaining state land, which had begun in 2000. Especially since 2002, a large amount of state land has entered the market and added to the supply of land for sale, thereby pulling down average land prices. Moreover, this land has been sold at administratively set prices below the market values, because it is less attractive.[36]

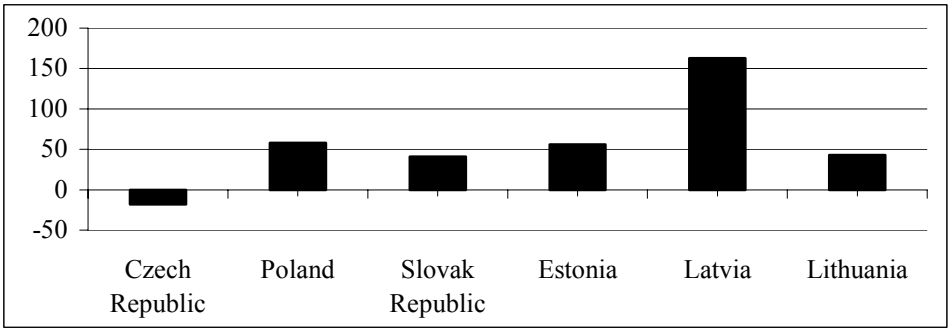
The increase in land prices was exceptionally strong around the time of EU accession.

If one compares prices just before accession (2003) with those one year after accession (2005), sales prices rose in real terms by 35% in Poland, 21% in Slovakia, 50% in Estonia, 31% in Lithuania and 143% in Latvia. Over the same period, rental prices grew by between 15% and 45% in Hungary, the Czech Republic, Poland, Slovakia and Lithuania. (The changes are similar when measured in €/ha terms, as illustrated in Figures 7 and 8.)

The striking impact of EU accession is illustrated in Figures 9 and 10. The former figure illustrates that in 2004 and 2005 combined, more than half of Slovak farmers were confronted by an increase in land rental prices. The evolution of sales prices in real terms in Poland, Latvia and Lithuania reveals that in each of these countries, real sales prices were relatively constant during the years preceding accession, but experienced strong growth with accession in 2004.

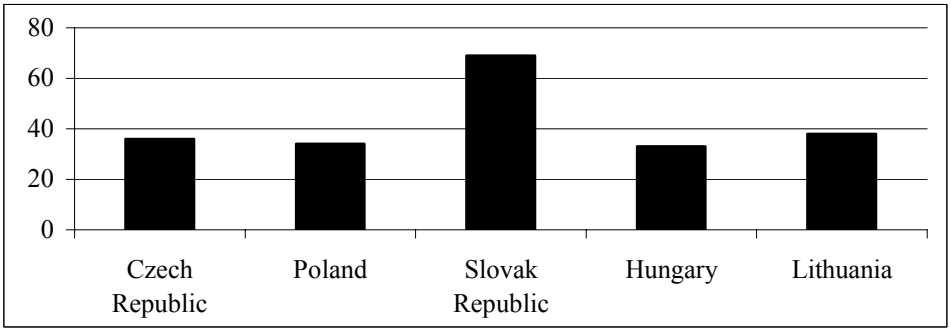
[36] The average market price of privatised land was 35,400 CZK/ha (€1,264) in the period 2001–05. The lower price reflects the fact that privatised state land is on average 'less attractive' than private purchased land in the sense it is more often used for agricultural purposes, while some of the other land may be used for non-farming purposes.

Figure 7. Change in land sales prices (€/ha) between 2003 and 2005 (%)



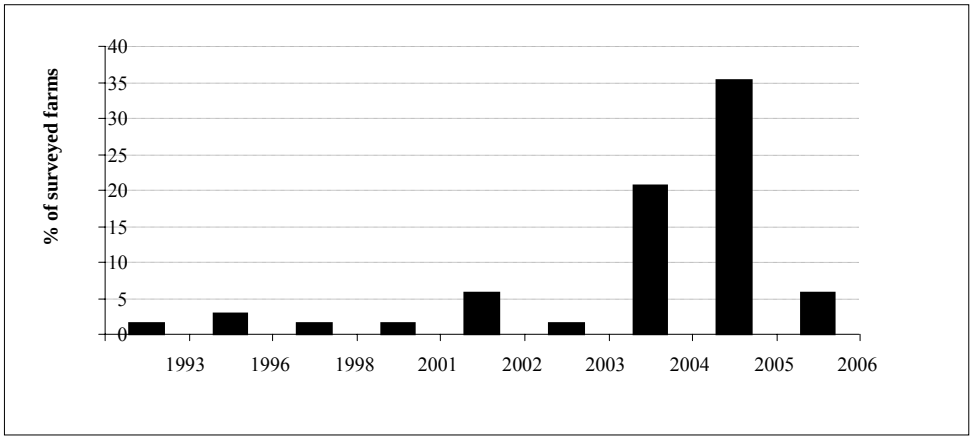
Source: See Table 9.

Figure 8. Change in land rental prices (€/ha) between 2003 and 2005 (%)



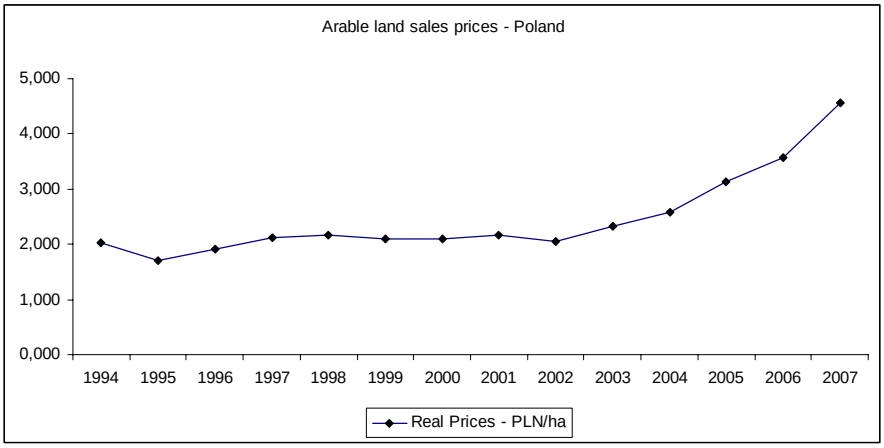
Source: See Table 10.

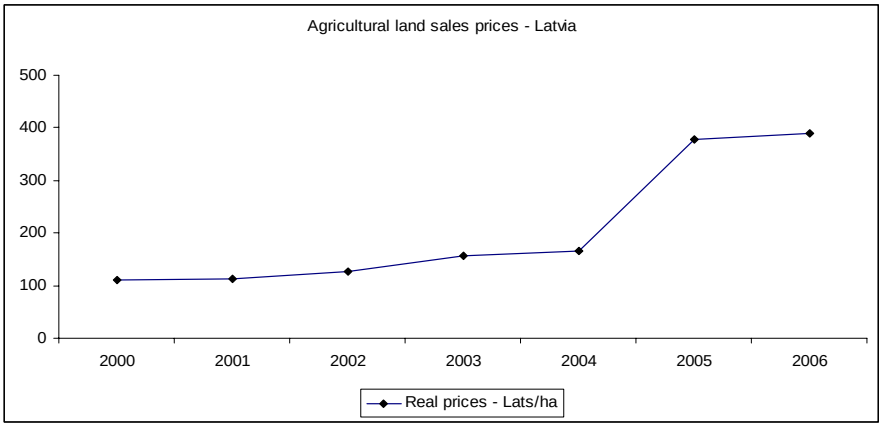
Figure 9. Share of farms with an increase in land rental price in Slovakia (per year)

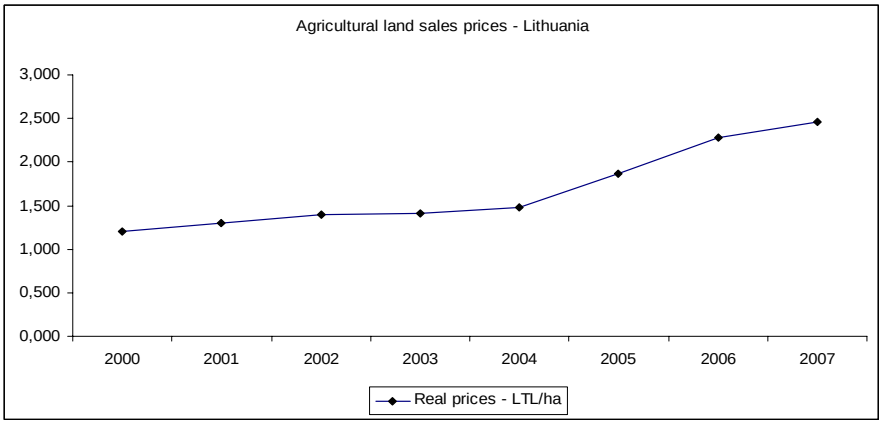


Source: VUEPP (based on a survey in 2006).

Figure 10. Evolution of land sales prices in Poland, Latvia and Lithuania (NAC/ha – Real prices)







Source: See Table 9.

Land prices vary strongly within the NMS-7.

The land prices in euros in Tables 9 and 10 allow us to compare prices across the NMS-7. These show major differences among the NMS. In 2007, the most recent year for which NMS prices are available, the lowest annual rental prices were in Slovakia (€24/ha in 2007), while rental prices in Lithuania (€41/ha) were somewhat below those in the Czech Republic (€46/ha). The highest rental prices were in Hungary (€87/ha) and Poland (€123).

Remarkably, a comparison of sales prices yields very different results. In 2007, average land sales prices in the Baltics (less than €850/ha) were much lower than in Poland (€3,100/ha), and only a fraction of the sales prices in the Czech Republic and Slovakia (more than €7,000/ha).

The ratio of land rental over land sales prices shows notable differences among the countries. In the Czech and Slovak Republics, the land rental price is only 0.5% of the land sales price. This ratio is considerably lower than in Poland, where the land rental price is around 2% of the land sales price and the disparity with Lithuania (6%) and Hungary (8%) is even larger. While there are also differences in the land rental–land sales price ratio among EU-15 countries, this ratio is never less than 2% in the EU-15 countries of our sample.

The fact that there is such a variation between the relative sales prices and relative rental prices (particularly in the cases of Slovakia and the Czech Republic) suggests that there are some structural differences in the rental and sales markets of the countries.

There are two possible hypotheses. One is that some of the agricultural land sold is being bought for non-farm purposes, which is thereby increasing prices. As an example, Table 11 presents data for assorted types of 'agricultural land sales' in Lithuania. These data show, first, that there was a sharp rise in agricultural land prices between 2003 and 2006, irrespective of the plots' purpose. Second, the prices of agricultural land that can easily be converted into non-agricultural use are much higher than the prices of land that is purchased for long-term farming. Third, this price comparison also shows that the price for (long-term) farmland is markedly lower, but it experienced a much greater increase with accession, which is consistent with the expected impact of EU subsidies on the NMS-7 land market.

Similarly, prices for larger plots are much lower in Slovakia and in the Czech Republic, at least partly suggesting that the differences in the purposes of sale versus rental in these countries may affect the price ratios (see the discussion on plot size and price in Box 2 at the end of this section).

A second hypothesis is that the average land-rental prices in Slovakia reflect a mixture of rental by farming companies, cooperatives and individual/family farms.[37]

[37] Differences in land rents may also reflect differences in the owner rather than the user. In Lithuania, as in some other NMS, the rent paid for state-owned land is significantly

Table 11. Agricultural land market prices in Lithuania, 2003–06 (1,000 LTL/ha)

Indicators	Year			
	2003	2004	2005	2006
Land purchased for long-term farming:				
1) close to administrative centres	2–4	2–4.5	3–5	3–8
2) in districts with fertile soil	1.5–2	2–3	2–3.5	2.5–4
3) in areas of average productivity	0.9–1.5	1.0–1.5	1.5–2	1.5–2.5
4) in areas of low productivity	0.6–0.9	0.7–1	0.7–1	0.7–1.5
Land bought for residential and economic/ commercial construction purposes:				
1) close to major cities				
– with installed infrastructure	300–	300–	300–	300–
– in other locations	1,500	1,500	1,500	1,500
2) other locations suitable for construction	10–200	10–200	20–200	30–300
Land bought for recreational construction:				
1) prestigious locations	20 –50	20 –50	20 –70	40–100
2) other locations	4–20	5–20	10–20	10–40

Source: LAEI.

The corporate farms, and especially the cooperatives, pay much less rent. Since farming companies have the vast majority of the rented land, the low average rental prices in Slovakia may reflect these factors (Box 2).

The gap in land prices between the NMS-7 and the EU-15 has narrowed, particularly for the Central European NMS-7.

Table 12 clearly indicates that the gap in land prices between the new and old member states is gradually diminishing over time. Land sales prices in the Central and Eastern European countries are getting close to those in France and East Germany, for example. Nevertheless, we should keep in mind that in the Czech Republic and Slovakia the price of agricultural land varies significantly with parcel size (Box 2). If we compare the prices of plots larger than 5 ha in the Czech Republic or Slovakia with the sales prices in Western European countries, we still observe considerable differences (Figure 11).

The land prices in the Baltic States remain far below the level of, for instance, East Germany, France or Italy. Yet, when we compare the land prices in the Baltic States with those in Sweden, an EU-15 country located much closer to the Baltics, the gap becomes considerably smaller.

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less than that paid to private landowners. Depending on the productivity of the soil, the annual amount of agricultural land rent is between 30 and 50 LTL/ha. Private landowners receive a rental payment of between 200 and 205 LTL/ha for good quality land and between 50 and 100 LTL/ha for poor quality land. For meadow and pastures, the price fluctuates between 30 and 180 LTL/ha depending on the quality.

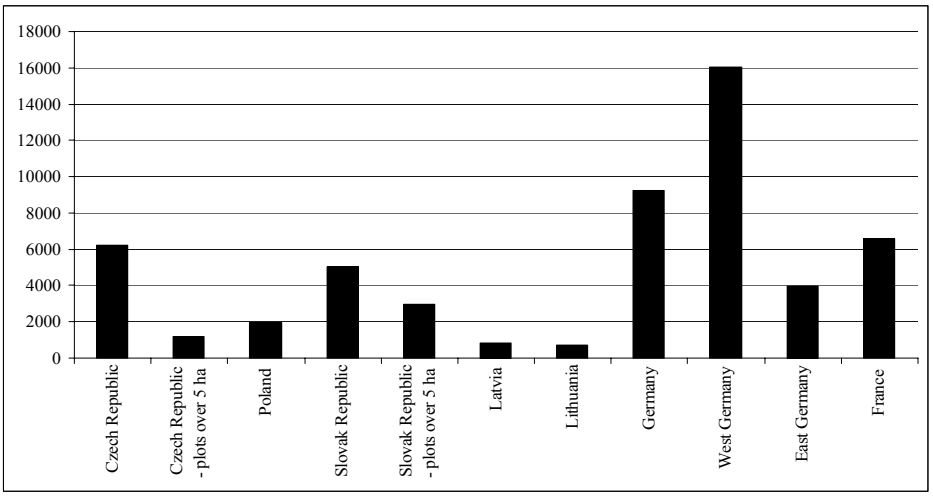
Table 12. Evolution of land sales and rental prices in the new and old member states (€/ha)

Sales	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
Czech Republic	3,945	4,823	5,649	5,299	7,796	8,832	6,892	7,618	10,230	6,895	7,505	6,143	6,188	–
Poland	–	748	690	848	984	1,052	1,009	1,144	1,323	1,218	1,222	1,372	1,927	–
Slovak Republic	–	–	–	–	–	–	–	–	1,869	3,312	3,568	4,882	5,024	–
Hungary	–	–	–	–	–	–	–	–	–	–	–	676	742	–
Estonia	–	–	–	–	–	–	–	–	218	–	297	–	464	–
Latvia	–	–	–	–	–	–	–	198	203	229	266	293	700	801
Lithuania	–	–	–	–	–	–	–	325	363	405	405	434	579	724
Germany	11,309	11,168	10,880	10,394	9,908	9,500	8,938	9,081	9,427	9,465	9,184	9,233	–	–
West Germany	15,227	15,402	16,452	16,285	16,458	17,194	16,530	16,830	17,246	16,966	16,489	16,035	–	–
East Germany	4,255	3,836	3,610	3,310	3,240	3,254	3,421	3,631	3,811	4,014	3,831	3,944	–	–
France	–	3,768	3,621	3,857	3,826	4,157	4,593	4,913	5,384	5,778	6,079	6,567	–	–
Italy	12,198	12,639	13,238	13,548	13,961	14,481	14,921	15,587	16,354	17,113	17,805	–	–	–
Sweden	–	–	–	–	–	–	–	1,989	1,988	2,019	2,127	2,455	3,351	–
Rental														
Czech Republic	–	–	–	–	12	13	13	15	20	24	24	27	32	32
Poland	–	21	22	30	25	25	16	29	26	25	26	43	35	41
Slovak Republic	–	–	–	–	–	–	–	–	7	9	10	14	18	–
Hungary	–	–	–	–	–	–	–	–	–	–	51	55	56	–
Lithuania	–	–	–	–	–	–	–	–	–	19	19	–	26	35
Germany	143	–	147	–	150	–	158	–	164	–	174	–	–	–
West Germany	217	–	216	–	218	–	221	–	225	–	261	–	–	–
East Germany	77	–	85	–	90	–	97	–	104	–	116	–	–	–
France	–	112	114	115	118	121	124	124	123	124	123	122	–	–
Italy	–	–	–	–	–	–	–	–	377	387	397	–	–	–
Sweden	–	–	–	–	–	–	–	107	104	108	110	110	–	–
Austria	–	–	–	251	245	243	244	236	–	–	–	–	–	–

Notes: For the Czech Republic and Lithuania – sales price for agricultural land in private turnover; for Poland – sales price for arable land in public and private turnover; for the Slovak Republic, Hungary, Estonia and Latvia – sales price for agricultural land in private and public turnover; for Germany – sales price for arable land and pasture; for France – sales price for agricultural land larger than 0.5 ha; for Sweden, Italy and Austria – sales price for agricultural land; for the Czech Republic, Slovak Republic and Hungary – rental price for agricultural land in private and public turnover; for Poland – rental price for agricultural land in public turnover; for Lithuania – rental price for agricultural land in private turnover; for Germany, France, Italy, Sweden and Austria – rental price for all agricultural land.

Sources: VUZE for the Czech Republic; GUS, ANR and Zagorski for Poland; VUEPP for Slovakia; the Central Statistical Office for Hungary; the Estonian Land Board for Estonia; LAEI for Lithuania; the State Land Service for Latvia; Idema, 2006 and Eurostat for the EU-15.

*Figure 11. Agricultural land sales prices in €/ha (EU-15, 2004 and NMS, 2005-06)**

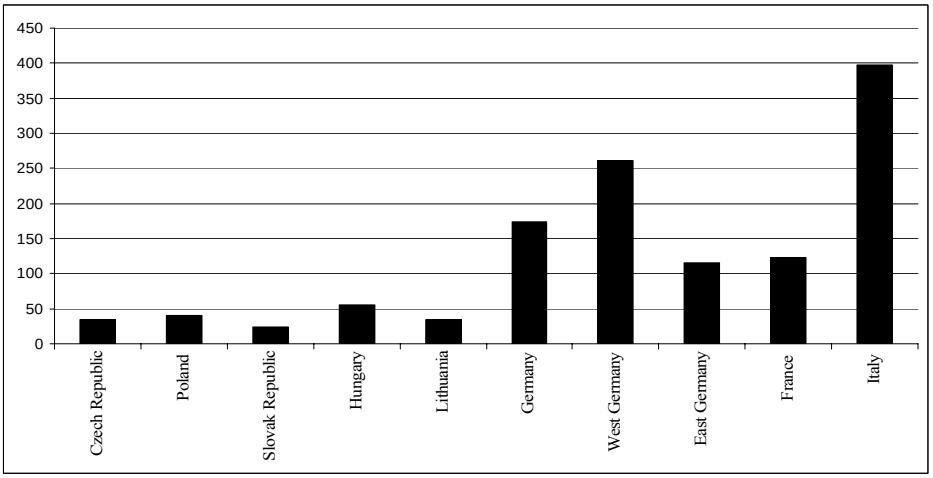


* 2006 for Latvia and Lithuania; 2005 for the Czech Republic, Poland and the Slovak Republic; and 2004 for Germany and France

Source: See Table 12.

Differences in land rental prices are also decreasing over time but remain considerably high (Figure 12). Land rental prices in East Germany are for example twice as high as those in Hungary and ten times the average land rental prices in the Slovak Republic.

*Figure 12. Agricultural land rental prices in €/ha (EU-15, 2003 and NMS, 2005-06)**



* 2005 for the Slovak Republic and Hungary; 2006 for the Czech Republic, Poland and Lithuania; 2004 for Germany, France and Italy

Source: See Table 12.

Box 2. Plot size and price

Small parcels are more expensive than larger parcels and their price increased much more than that of larger parcels.

Although one should be careful in interpreting the relationship between plot size and prices (which may be jointly determined – as later discussed), the differences in price evolution by plot size are remarkable. For example, in the Czech Republic, the average prices of parcels smaller than 1 ha have increased almost fourfold compared with 10 years ago and their price is currently 10 times as high as the price of a parcel between 1 and 5 ha, and 30 times higher than the price of a parcel of 5 ha or more. The price of the larger parcels has hardly risen over the last 10 years (see Table B2.1)

Table B2.1 Land sales prices by plot size in the Czech Republic (CZK/ha – Nominal prices)

	< 1 ha	1 to 5 ha	over 5 ha	Total
1993	275,000	129,600	36,800	134,800
1994	346,900	161,500	37,900	164,700
1995	544,300	140,900	46,600	196,000
1996	445,200	152,500	37,100	182,600
1997	1,249,400	146,400	65,300	280,100
1998	1,019,400	174,200	41,000	318,400
1999	794,500	96,000	65,700	254,200
2000	921,400	136,000	42,000	271,200
2001	1,087,800	199,500	55,700	348,500
2002	971,400	129,000	34,000	212,400
2003	1,166,800	132,300	35,700	239,000
2004	1,042,400	136,300	37,500	195,900

Source: VUZE.

In Slovakia, the average price of a parcel smaller than 1 ha is more than 600,000 SKK/ha, while the price of a parcel between 1 and 5 ha fluctuates between 400,000 SKK/ha and 200,000 SKK/ha. The largest parcels (of 5 ha or more) are by far the cheapest: the average price is 100,000 SKK/ha or less (Figure B2.1)).

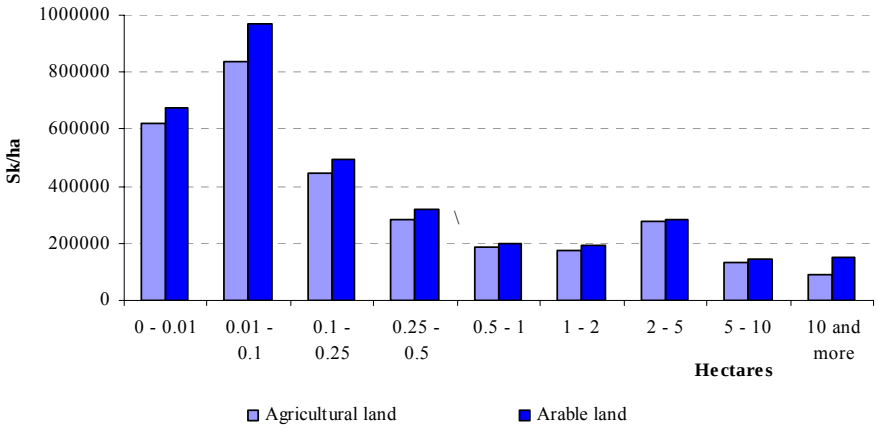
Several agricultural sector specialists claim that, in the NMS-7, land fragmentation is a major impediment for the development of the agricultural sector in general and especially for the efficient allocation of land. Therefore, one would expect that larger plots are more in demand and that this would push up the purchase price. If we look at the data, however, we can assume that the demand for small parcels is considerably higher, for several reasons.

First, the purpose of the purchase is an important factor. Small parcels of agricultural real estate are often purchased to convert the land for other purposes, notably for more lucrative non-agricultural use, and this is incorporated in the price. For example, Buday (2006) stresses the non-agricultural use of small parcels as a factor behind their higher demand and hence the higher price. Bandlerova (2006) also notes that agricultural land sales are often driven by non-agricultural demand, usually by foreign investors.

Box 2. cont'd

Most of the land transacted on the sales market is converted to non-agricultural use (for industrial parks or the construction of factories) and is located near large cities. This may also explain why Eurostat shows much lower agricultural land prices in Slovakia than VUEPP does. Eurostat reports prices of around 37,447 SKK/ha (€877/ha) in 2002 and 37,905 SKK/ha (€982/ha) in 2005, which is respectively four and five times less than that reported by VUEPP. This difference may result from the fact that the land sales prices of VUEPP do not distinguish the purpose for which the land is used after the purchase.

Figure B2.1 Land sales prices by size of parcel in 2005 in Slovakia (SKK/ha)



Source: VUEPP.

Second, the high demand for small parcels and the resulting high price might stem from capital market imperfections. Small family farms in particular still have limited access to capital and credit markets. These credit constraints restrict their demand to the smaller plot sizes. As a consequence, the demand for small parcels may be considerably higher.

Finally, the land market in transition countries is characterised by substantial transaction costs. These costs rise especially when a landowner wants to withdraw a parcel from large-scale farming enterprises, which are typically the direct successor organisation of the former collective and state farms and which continue to use the majority of land in several new member states (as discussed below). Many plots are located in (the middle of) large consolidated fields, such that costs may incur because of problems with the physical identification and physical access to the plot. Furthermore, numerous plots are owned by more than one owner, which raises the costs of changing the allocation and/or physically identifying the plot. Since many of these costs are fixed, it is logical that they have a higher impact on the absolute price per hectare of the smaller plots.

7.3 Changes in land contract terms

Rent is sometimes paid in kind, rather than in cash, and more likely so by corporate farms.

In Poland, more than 20% of the contracts involving private rentals in 2005 were paid in kind (goods and services) rather than in cash. This was notably the case in regions with a high degree of land fragmentation where agriculture is an additional source of income. Even so, the likelihood of paying rent in kind has been decreasing over time: in 2000, the share of land rental contracts paid in cash was still 30%.

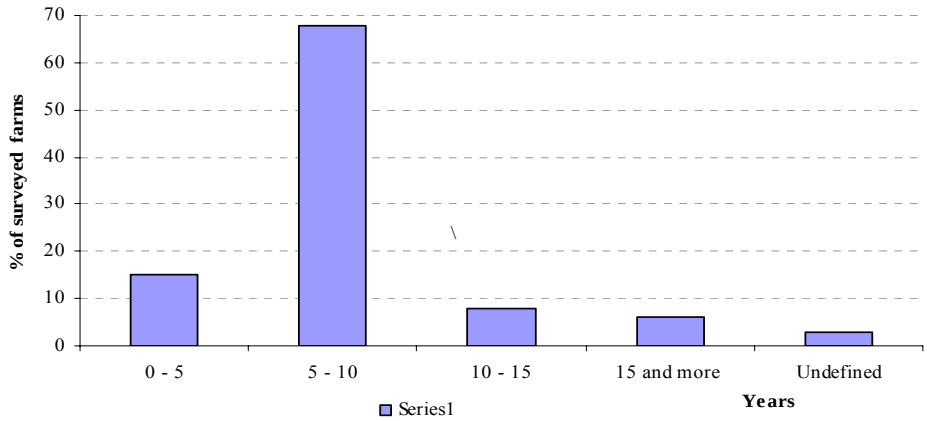
In Slovakia, only half of the farms reported paying rent exclusively in cash, while the other half of the farmers reported paying part of the rent in cash and part of the rent in kind.

There is some evidence that corporate farms reduce payments by paying in kind instead of in cash and that these in-kind payments by corporate farms are less transparent. The in-kind payments often depend on yields, which are difficult for landowners to control, and may result in lower effective rent payments. In several countries, experts indicate that less productive corporate farms often do not pay rents as contractually agreed.

With accession to the EU, the duration of the land rental contracts increased.

In Slovakia, contracts with a duration of between five and ten years dominate (68% of the farms surveyed by VUEPP in 2006), followed by five-year contracts (15%) (Figure 13). Before EU accession, contracts tended to be shorter – up to five years. After accession, contracts became longer to allow farms to use European funds such as those for rural development (but not direct payments). Renting land for at least five years is one of the requirements imposed by European funds for Slovakia. This motivates farmers to sign contracts with a longer duration, up to ten years.

Figure 13. Duration of contracts (years) in 2006, Slovakia



Source: VUEPP (based on a survey in 2006).

A significant rise in the number of long-term contracts involving private land has been observed in Poland in recent years (Table 13). Compared with the 1990s, when around 50% of rental contracts were for up to five years, there has been a substantial decrease in short-term transactions. At the same time, the number of undefined or hereditary tenancies has also fallen sharply. These latter forms of rental transactions have been used especially in regions with a great deal of land fragmentation and income coming mainly from non-agricultural sources.

Table 13. Duration of rental contracts in 2000 and 2005 (% of monitored transactions), Poland

	Up to 2 years	**2-5**	**5-10**	**10 and more**	**For an indefinite period of time**
2000	8.2	25.1	42	4.2	20.5
2005	4.9	24.2	58.3	7.8	4.8

Source: IERiGŻ surveys.

8. SOCIO-ECONOMIC STRUCTURE OF THE AGRICULTURAL SECTOR: DEVELOPMENT AND COMPARISON WITH THE EU

8.1 Unemployment and GDP

If we look at some general economic indicators, we see that the unemployment rates in most of the new member states are comparable to the average unemployment rate of the EU-15, except for Poland and Slovakia. In the latter countries, the unemployment rate is almost twice as high (Figure 14). The disparity between the employment rates in the EU-15 and the NMS-7 has decreased considerably since 2001. Notably, the unemployment rate in the Baltics has improved a lot and is now even less than the EU-15 average.

The GDP of the new member states is still lower than that of the old member states. The gap has been closing, however. Especially the difference between the GDP of the Baltic States and that of the EU-15 has been rapidly reducing over time. In 1998, the GDP of the Baltic States was around 30% of the EU-15 GDP, yet by 2005, it was 50% or more (Figure 15).

8.2 Share of agriculture in employment and gross value added

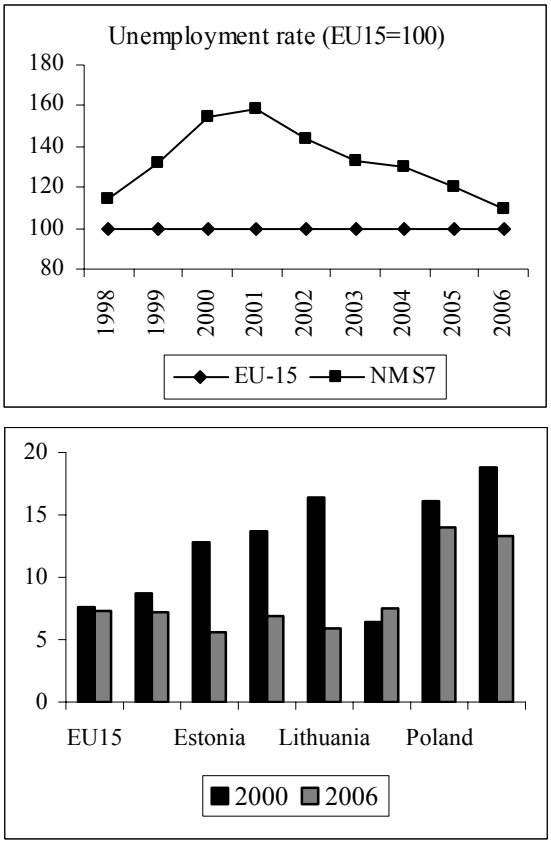
The share of agriculture in total employment and in total gross value added in the NMS-7 has declined in the last decade and is now approaching the level of the EU-15.

In the middle of the 1990s, the share of agriculture in total employment was much higher in the NMS-7 than in the EU-15. In Estonia, the share of agriculture in employment was 10%, in Latvia, it was 18% and in Lithuania and Poland, it was 19%. In the Czech Republic, Hungary and Slovakia the share was less than 10%, but it was still larger than in the old member states where it equalled 5% in 1995. Ten years later, the share of agriculture in total employment had decreased significantly in all the new member states and in the Czech Republic, Estonia, Hungary and Slovakia, its magnitude was comparable to the old member states (Figure 16).[38]

[38] According to Eurostat, the share of agricultural employment did not change in Poland between 1994 and 2004, while they do report that the absolute number of persons in

A similar evolution is observed for the share of gross value added of agriculture, including hunting and fishing, in total gross value added. In the new member states, the share of agriculture in gross value added is larger than in the old member states, but the difference is diminishing. In 1995, the share of agriculture in gross value added equalled 2.7% in the EU-15, while it was 5% in the Czech Republic and 11.4% in Lithuania, which are respectively the countries with the lowest and highest shares of agriculture in gross value added (Figure 17). By 2005, these shares were 1.8% in the EU-15, 2.9% in the Czech Republic and 5.7% in Lithuania).

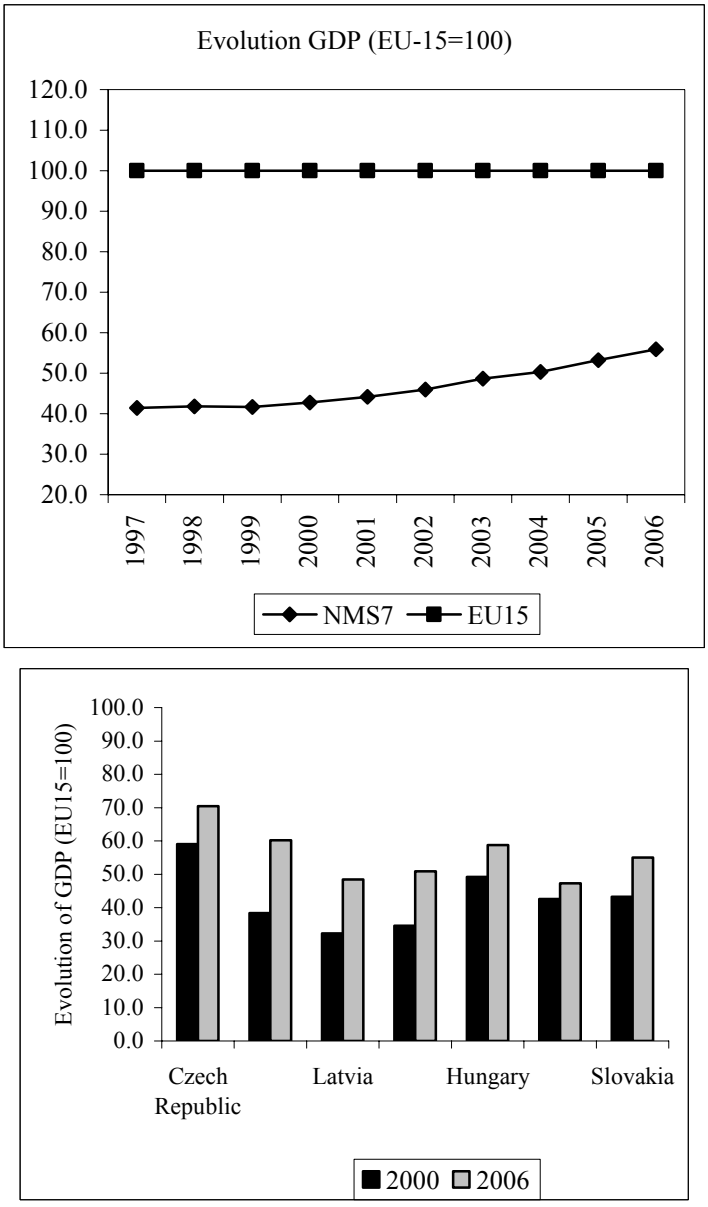
Figure 14. Unemployment rate in the NMS-7 relative to the EU-15



Source: Eurostat.

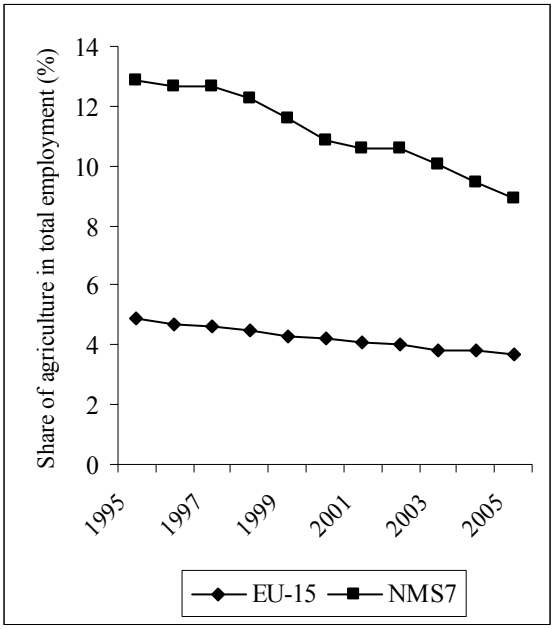
agricultural employment decreased by 5%. Yet according to the national statistics, the absolute number in agricultural employment fell by 30% between 1994 and 2004. This would mean that the share of agricultural employment decreased to 18.3% or to 13.6% depending on whether the absolute number of those in agricultural employment reported by Eurostat or by national statistics is used to calculate these figures.

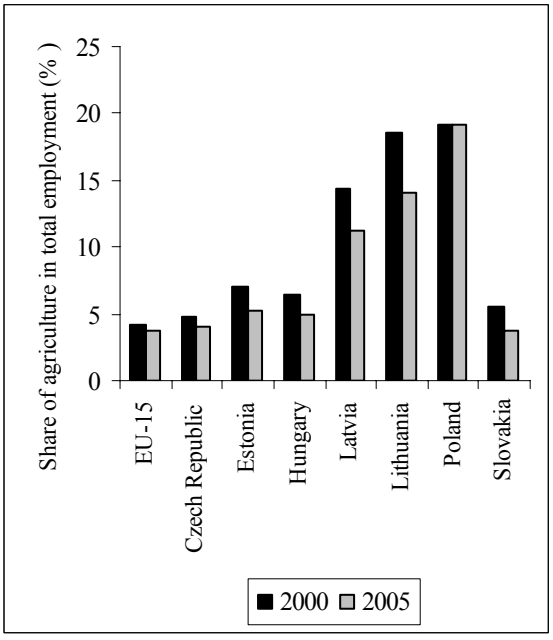
Figure 15. GDP in the NMS-7 and the EU-15



Source: Eurostat.

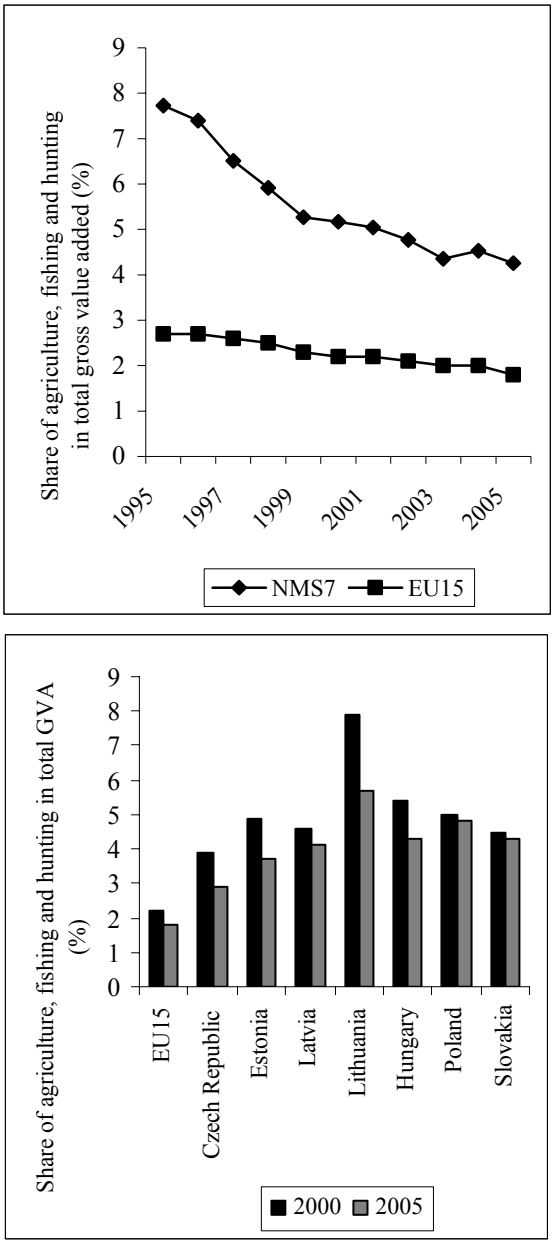
Figure 16. Share of agriculture in total employment in the EU-15 and NMS-7





Source: Eurostat.

Figure 17. Share of gross value added of agriculture, fishing and hunting in total gross value added (%)

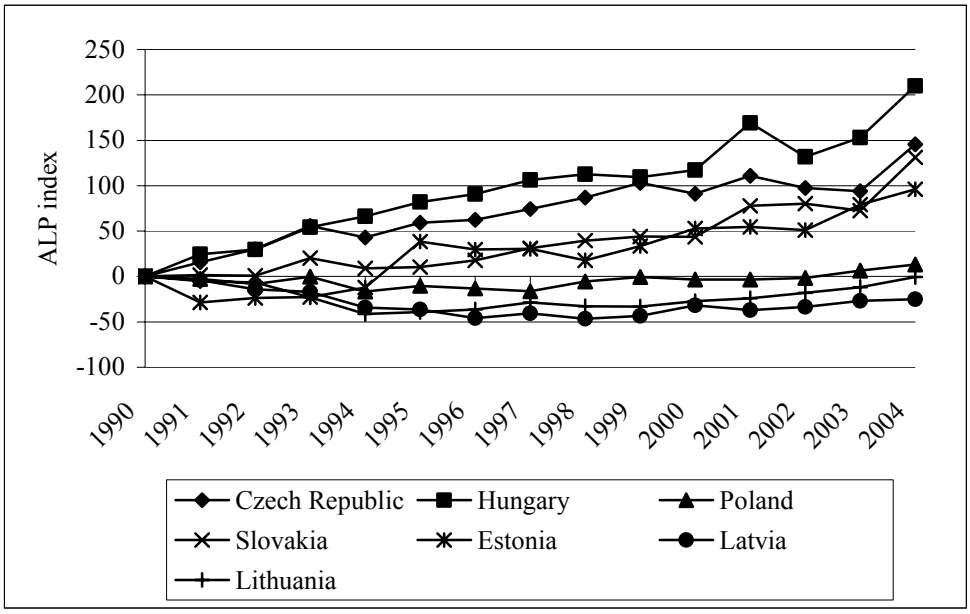


Source: Eurostat.

8.3 Labour productivity

Agricultural labour productivity (ALP) is measured as output per farm worker. Changes in ALP since the start of the transition are presented in Figure 18. As with most productivity indicators, ALP evolutions differ among the NMS-7.

Figure 18. Changes in agricultural labour productivity (output per farm worker)

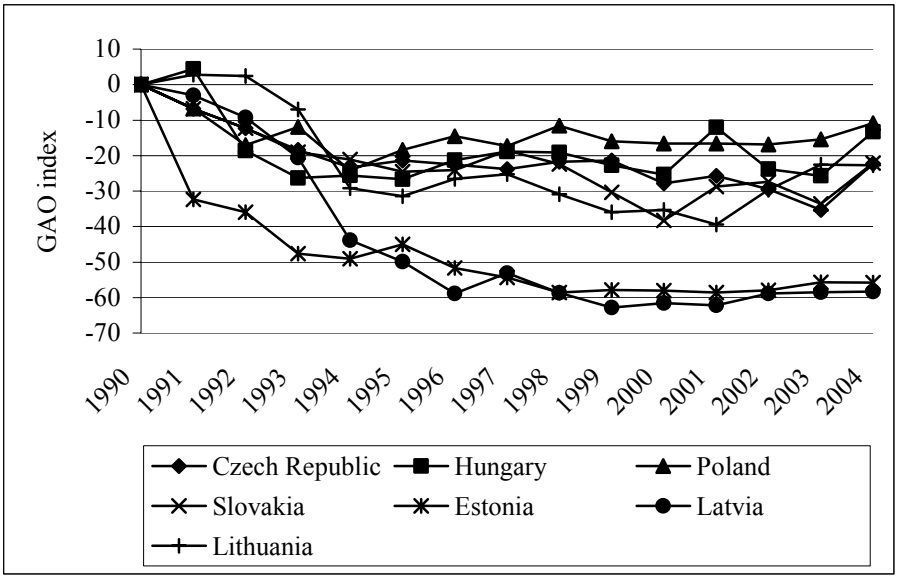


Sources: National statistics, ILO, World Bank and FAO.

Despite large falls in aggregate output (Figure 19 and Table 14), output per worker rose swiftly over the first decade of transition in new member states such as Hungary, the Czech Republic and Slovakia. The dramatic reduction in the use of agricultural labour is driving the rise of ALP in these countries (Figure 20). Official employment data show an average reduction of labour use of 35% during the first five years of transition. The sharpest reductions took place in Hungary (57%) and the Czech Republic (46%). The same process occurred in Estonia – an early and radically reforming country – where labour use declined by 58% in the first five years of reform, also stimulating an increase in ALP.

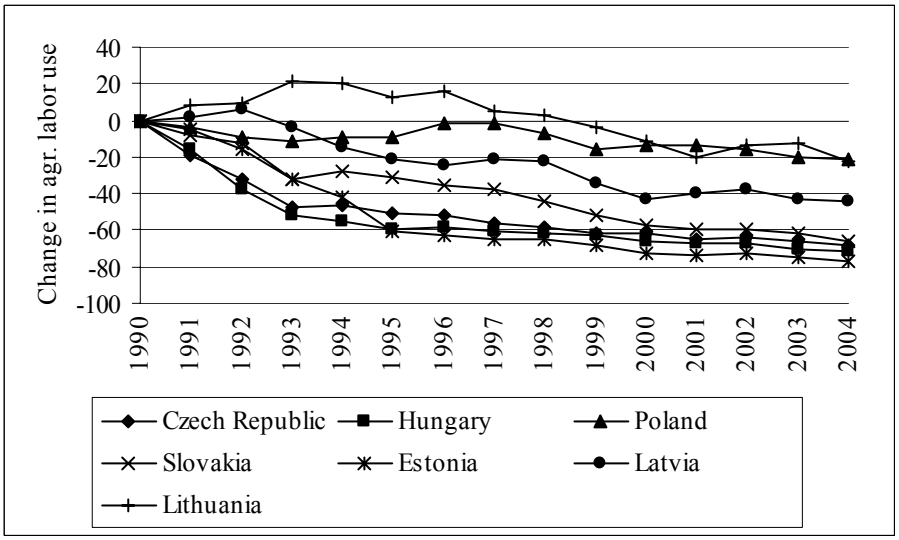
In other NMS, such as Poland, Latvia and Lithuania, ALP fell immediately after reform, but recovered and rose after the first four years. Since then, labour productivity growth has been consistently positive.

Figure 19. Changes in gross agricultural output



Source: FAO.

Figure 20. Changes in agricultural labour use



Sources: National statistics, ILO and World Bank.

Table 14. Agricultural output

Value at producer price (€ million)	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
EU-15	240,100	250,804	250,763	245,326	243,516	252,646	261,582	256,341	255,610	263,450	256,512	262,490
Austria	4,890	4,861	4,773	4,695	4,741	4,814	5,085	4,865	4,847	4,956	5,019	5,214
France	53,054	54,672	54,757	55,756	54,372	55,270	56,058	55,272	53,961	55,240	54,160	56,046
Germany	40,357	40,793	40,218	38,017	37,447	39,034	41,162	39,521	36,661	39,975	38,677	39,765
Czech Republic	–	–	–	2,924	2,549	2,819	3,219	3,237	2,856	3,394	3,286	3,272
Estonia	304	347	358	323	256	332	376	372	379	410	456	434
Latvia	–	–	–	432	361	425	501	498	465	529	612	641
Lithuania	834	1,101	1,282	1,216	1,052	1,124	1,137	1,147	1,169	1,191	1,355	1,312
Hungary	–	–	–	4,506	4,344	4,643	5,437	5,694	5,185	6,001	5,558	5,718
Poland	–	–	–	12,167	10,575	12,176	14,546	13,042	11,489	13,306	13,997	14,659
Slovakia	1,423	1,559	1,682	1,516	1,297	1,262	1,420	1,469	1,440	1,604	1,520	1,477

Change in agricultural output – 1998=100	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**2004**	**2005**	**2006**
EU-15	100	99	103	107	104	104	107	105	107
Austria	100	101	103	108	104	103	106	107	111
France	100	98	99	101	99	97	99	97	101
Germany	100	99	103	108	104	96	105	102	105
Czech Republic	100	87	96	110	111	98	116	112	112
Estonia	100	79	103	116	115	117	127	141	134
Latvia	100	84	98	116	115	108	122	142	148
Lithuania	100	87	92	94	94	96	98	111	108
Hungary	100	96	103	121	126	115	133	123	127
Poland	100	87	100	120	107	94	109	115	120
Slovakia	100	86	83	94	97	95	106	100	97

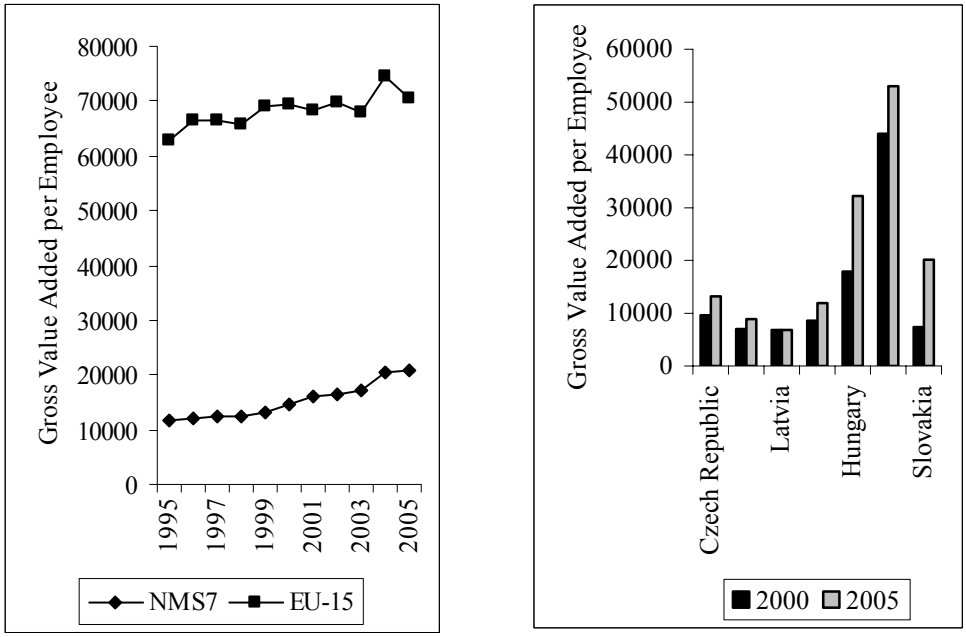
Source: Eurostat.

In recent periods, ALP growth has continued in the NMS-7 with a further outflow of labour from agriculture. In some countries, such as Hungary, Slovakia, the Czech Republic, Estonia and Lithuania, labour productivity growth has been very strong (between 7% and 20% on average per year). It should be noted that in all of these countries, a significant proportion of agriculture is undertaken by large-scale farming companies. In countries dominated by individual farms, such as Poland and Latvia, labour productivity growth is much slower – reflecting very different labour organisational models for the two types of farms (see e.g. Dries & Swinnen, 2002 and Swinnen et al, 2005).

Comparison with the EU-15

In the Baltic States and Slovakia, the gross value added per employee was only 7% of the level of the old member states in 1995 (Figure 21). The situation was slightly better in the Czech Republic and Hungary, where in the middle of the 1990s the gross value added per employee was respectively 12% and 21% of the EU-15 level. In Poland, a country dominated by individual farmers, the gross value added per employee was 70% of the level of the old member states.

Figure 21. Gross value added per employee at basic prices



Source: Eurostat.

The gap in the value added per employee between the old and the new member states is closing, although large differences persist. In the Baltic States and the Czech Republic, the share of value added per employee was a little less than 20% of the

EU-15 level by 2005. The situation was slightly better in Hungary and Slovakia, where it was respectively 46% and 29% of the level of the old EU-15.

8.4 Yields and land productivity

The changes in yields are reported in Table 15 for three five-year periods. The numbers in the tables are summaries of yield evolutions for selected commodities: grains, sugar beet and milk.

Average yields fell during the first few years after reform in all the NMS-7. As in the case of labour productivity, after the initial post-transition years, yields began to recover quickly (generally from the third year of transition onwards). Agricultural yields increased, on average, by 3.2% annually in the second half of the 1990s in Central Europe. A similar but more pronounced yield pattern can be observed in the Baltic States. Average yields in the Baltics dropped initially to almost 25% below their pre-reform levels. In the second half of the mid-1990s, however, they recovered, rising by an average of 3.8% annually. Since 1999, yields have continued to improve in the new member states, albeit at different growth rates. Yields growth has been somewhat higher (3.6% on average annually) in the Central European countries, while rather less so in the Baltic States (3.1%, which is down from 3.8% in the previous period).

Comparison with the EU-15

By 2006, the yields in the Baltic States were still less than 50% of the EU-15 level. Yet, the Central European countries – and particularly the Czech Republic, Hungary and Slovakia – managed to reach higher yields. This is not surprising given the fact that in these countries a large proportion of the agricultural land has continued to be utilised by large-scale farming corporations, which are typically the direct successors of the former collective and state farms. These large-scale farms mainly specialise in the cultivation of land-intensive products such as cereals in order to minimise the moral hazards they face and to benefit from economies of scale in mechanised production. In the Czech Republic, the wheat yields have even been at 91% of the EU-15 level, which means that the average wheat yield is better than in Austria (Figure 22).

The milk production per cow in all the NMS-7 is very close to the average partial productivity in the EU-15. Not only are the Central European countries relatively efficient producers in comparison with the EU-15, but also the Baltic States are doing very well. In Estonia and Lithuania, the milk yields equal respectively 87% and 97% of the average yield in the EU-15 (Figure 23). The relatively high production of milk per cow is important for the Baltic States, given the prominence of the dairy sector in their national agricultural sectors.

Table 15. Growth in the index of agricultural yields in the NMS-7 countries (index = 100 in the first year of reform)

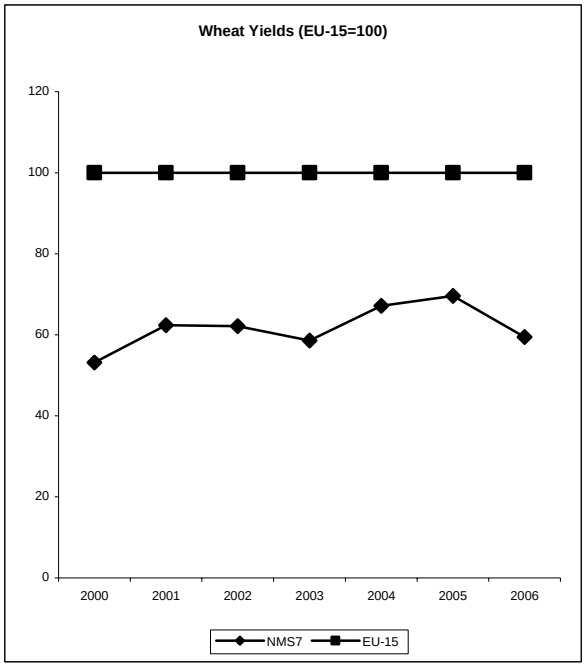
	Total grains[a)]			Sugar beet			Milk			Average agric. yields[b)]			Average agric. yields/yr		
	5	10	15	5	10	15	5	10	15	5	10	15	0-5	5-10	10-15
Central Europe															
Czech Republic	87.0	89.0	112.4	102.1	128.8	142.2	99.8	126.1	135.7	96.3	114.7	130.1	-0.7	3.7	3.1
Hungary	72.3	82.7	103.4	72.3	100.9	128.9	95.3	110.3	112.9	80.0	98.0	115.1	-4.0	3.6	3.4
Poland	79.7	93.3	110.0	85.7	99.4	125.9	95.7	107.7	128.4	87.1	100.1	121.5	-2.6	2.6	4.3
Slovakia	88.9	88.5	95.3	99.1	118.2	132.1	89.5	115.6	151.9	92.5	107.4	126.4	-1.5	3.0	3.8
Baltic States															
Estonia	69.0	88.1	111.2	102.7	na	na	86.2	111.9	131.9	86.0	100.0	121.6	-2.8	2.8	4.3
Latvia	71.3	94.0	118.0	88.3	107.4	128.8	89.4	116.5	129.6	83.0	105.9	125.5	-3.4	4.6	3.9
Lithuania	60.7	89.9	95.7	99.6	111.7	133.4	81.0	92.6	81.5	80.5	98.0	103.5	-3.9	3.5	1.1

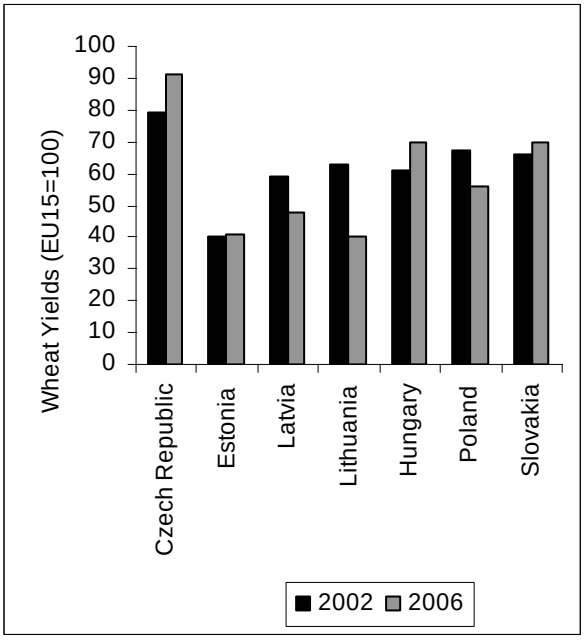
[a)] Grains include wheat, rice (milled weight) and coarse grains.

[b)] Average agricultural yields are calculated as a simple average of the yields of grains, sugar beet/cotton and milk.

Sources: USDA for grains; sugar beet yields are from FAO for Central Europe; milk yields are from ZMP and FAO.

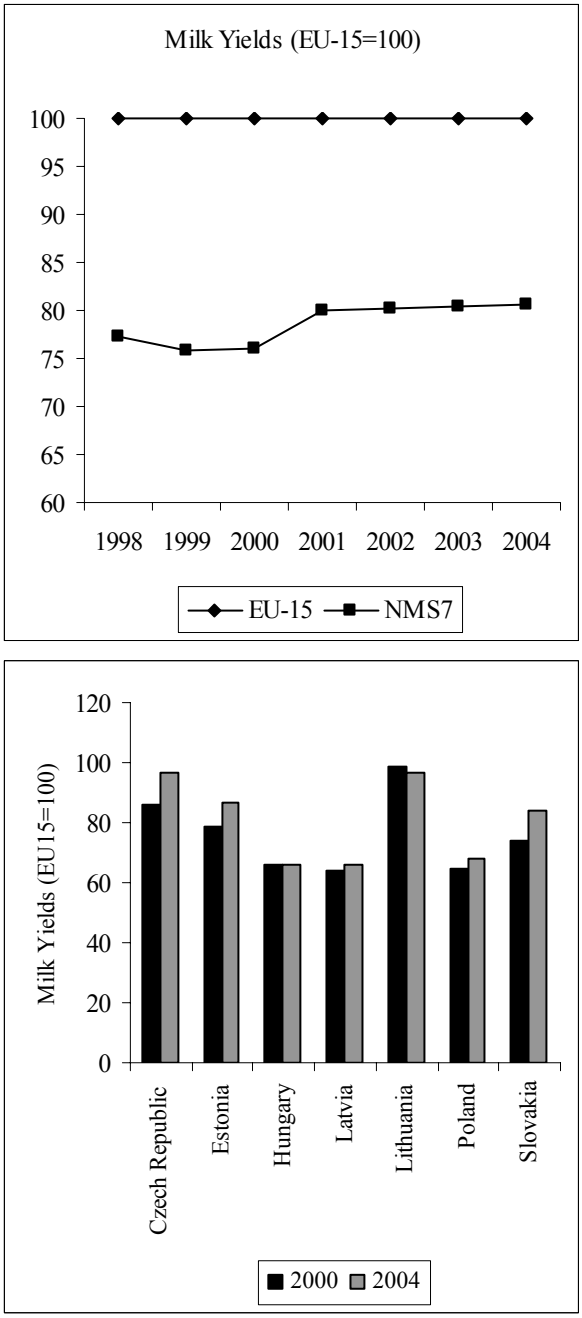
Figure 22. Indices of wheat yields – EU-15=100





Source: Eurostat.

Figure 23. Indices of milk yields – EU-15=100



Source: Eurostat.

8.5 Summary

There has been major growth in incomes and agricultural productivity in the NMS-7, despite the restrictions on foreign ownership of land. Yields and labour productivity in the NMS-7 agricultural sector have seen strong increases over the past few years. Productivity, incomes and profits in NMS-7 agriculture are considerably higher now than they were five years ago, before accession.

The rise in agricultural productivity and incomes stems from a combination of improvements in factor markets and institutions, investment in the food chain and spillover effects from the growth of the general economy.

The gap between the NMS-7 and the EU-15 in terms of incomes and productivity has also narrowed significantly over recent years. Various socio-economic indicators, such as agricultural productivity, unemployment, overall GDP and the share of agriculture in GDP and in employment show that the differences between the NMS-7 and the EU-15 are diminishing over time, and for some of the NMS, rapidly so.

The sharpest reduction in the gap between the NMS-7 and the EU-15 has been in production yields. For some commodities, such as grains in Central Europe and dairy throughout the NMS-7, the average NMS-7 yields are close to the EU-15 average.

In contrast, despite a marked increase, there are still significant disparities in terms of income per capita and labour productivity in agriculture (value added per worker) between the NMS-7 and the EU-15.

9. CONCLUSIONS

Restrictions on foreign ownership have affected the efficiency of land exchanges, land allocation and productivity growth. Yet, the impact is mitigated by several factors.

First, the restrictions do not fully constrict activities by foreign citizens in the agricultural and rural land markets of the NMS-7, for a number of reasons:

- There are exceptions to the restrictions on foreign ownership of agricultural land. In general, foreigners who have married a citizen of the respective NMS or who have stayed and farmed in the country for at least three years are allowed to purchase agricultural land. There are some country variations in the exceptions, however. For example, in Lithuania, Slovakia and Estonia, land ownership by foreign companies is not restricted. In Hungary, there is no restriction on the ownership of land for intensive animal husbandry (i.e. the physical infrastructure and the land on which it is located, without the surrounding land), but land ownership by legal entities is forbidden.
- In several countries, 'informal arrangements' have emerged. Although it is difficult to obtain representative information on these, they appear to **suggest that a greater amount of land is acquired by foreigners than is shown by official figures**, and to vary widely by region.
- Crucially, there are no restrictions on renting land to foreigners. This aspect of the transitional arrangements is of major importance since land rental is widespread in the NMS-7 as well as in the EU-15 – notably among larger family farms and corporate farms in the NMS-7, which are the kinds of farms in which one would expect foreign investment.

Second, the restrictions are only one element constraining the functioning of the land markets in the NMS-7. Several other impediments are affecting the development of the land markets and hence their potential to transfer land from the least to the most productive users, including the following:

- Privatisation of state-owned land and the finalisation of the land reform process are continuing. In almost all of the NMS-7, a considerable share of agricultural land is still owned by the state and is subject to planned privatisation and restitution processes. Therefore, it often remains locked in a certain, sometimes inefficient, land use pattern.

- The development of the land market is still affected by high transaction costs related to changes in plot allocation and transfer of the ownership title, along with co-ownership problems. Further obstacles are the high costs of withdrawing land from the large-scale corporations cultivating it as well as the difficulties of obtaining physical access to the land and identifying the boundaries.

Third, while the restrictions have held back the direct benefits of foreign investment, agriculture in the NMS-7 has benefited extensively from large foreign investments in related sectors. Foreign investment in agriculture (and the associated benefits) has been seriously inhibited through the restrictions on foreign land ownership. Yet at the same time, there have been substantial foreign investments in the NMS-7 food industry and agribusiness. These investments have had significant, positive spillover effects on the farms, as foreign companies have introduced technology, know-how and capital into the food chain, which has contributed to greater investment and enhanced product quality in the NMS-7 agricultural sector.

Fourth, there has been strong growth in agricultural productivity along with land exchange and reallocation in the NMS-7, despite the restrictions.

- In all of the NMS-7, we observe a sharp increase in agricultural land prices (both rental and sales) since 2000, and EU accession has reinforced this effect.
- EU agricultural subsidies, besides productivity increases, have induced a strong surge in NMS-7 land prices.
- Small parcels are more expensive than larger parcels and their price has risen considerably more than the price of larger parcels, probably owing to sales for non-farm purposes.
- Rental markets remain the dominant form of land exchange. While the number and volume of private land sales are still relatively small, especially given accession to the EU, the transfer of land through private sales and donations has grown appreciably, while the number and volume of public land sales has decreased over time.
- Yields and productivity have risen for a combination of reasons, such as improved factor markets and institutions, investment in the food chain and spillover effects of growth in the general economy.

Still, it is unclear how much more growth in productivity and land markets would have resulted from liberalising NMS agricultural land with respect to foreign ownership.

The issues underlying the concerns of the NMS-7 – that there would be a massive takeover of NMS-7 land by foreigners if restrictions were not in place – have diminished, but they have not fully disappeared.

The gap between the NMS-7 and the EU-15 in terms of incomes, productivity and land prices has narrowed significantly over the past few years.

- Various socio-economic indicators, such as agricultural productivity, unemployment, overall GDP, the share of agriculture in GDP and in

employment show that the differences between the NMS-7 and the EU-15 are reducing over time and swiftly so.

- Productivity, incomes and profits in the agricultural sector of the NMS-7 are considerably higher now than they were five years ago, before accession. Subsidies have also been increasing in the NMS-7.
- Additionally, land prices are rapidly rising in the NMS-7, closing the gap with the EU-15.

There nonetheless remains a sizeable disparity between the NMS-7 and the EU-15 in terms of land prices, incomes and subsidies. Despite the marked increase, NMS-7 land prices remain significantly below those in the EU-15. The same holds for the average income per capita and value added per worker in the agricultural sector.

Finally, the evolution of social attitudes and political opposition vis-à-vis foreign ownership restrictions appears mixed.

- In Poland, the negative attitude towards foreign ownership has noticeably subsided over recent years. Surveys show that in 1999, almost 90% of the farmers felt that foreigners should not be given the right to buy agricultural land. By 2004, only 30% opposed allowing foreigners to buy land without restrictions. This finding suggests that in Polish rural areas there is still opposition to foreign land ownership, but much less than before.
- By contrast, a farm survey in Hungary in 2007 revealed persistently strong resistance to fully liberalised land markets: more than 90% of those farmers interviewed wanted to extend the ban on the acquisition of agricultural land by foreigners because they consider Hungarian farmers less competitive than foreigners. They argue that lifting the ban would increase land prices and drive Hungarian farmers out of business.

If the full liberalisation of land turns out to be politically impossible in the mid-term review process, changes that are more moderate could be considered. The most effective proposals for change would be those that would have limited effect on the social and political frameworks and would be most successful in stimulating economic benefits.

Two recommendations are to

- increase the maximum amount of agricultural land that foreign citizens and legal entities can acquire without restrictions. One could think of using the 'Estonian model' in which foreigners can now buy up to 10 ha without restrictions; and
- allow foreign citizens and legal entities to acquire farm buildings and the land on which these are built without restrictions.

Both proposals could result in substantial economic benefits because they would allow those foreign citizens and legal entities interested in investing in the

agricultural sector of the NMS-7 to do so by combining renting and owning land in their farm operations, as do many farms in the EU-15 and the NMS-7. They could acquire land for long-term investment (such as stables, farmhouses and greenhouses) and rent the rest of the land.

Both proposals should have minimal impact on the size of the land parcels owned by foreigners in the NMS-7, since foreigners would still be prevented from purchasing hundreds or thousands of hectares.

GLOSSARY OF ABBREVIATIONS

ALF	Agricultural Land Fund (Prague)
ALP	Agricultural labour productivity
ANR	Agricultural Property Agency (Warsaw)
CAP	Common agricultural policy
CPI	Consumer price index
EEA	European Economic Area
FADN	Farm Accountancy Data Network
FAO	UN Food and Agricultural Organisation
FDI	Foreign direct investment
GUS	Central Statistical Office (Warsaw)
IERiGŻ	Institute of Agricultural Economics (Warsaw)
ILO	International Labour Organisation
NAC	National currency
LAEI	Lithuanian Institute of Agrarian Economics (Vilnius)
NMS	New member states
OECD	Organisation for Economic Cooperation and Development
UAA	Utilised agricultural area
USDA	US Department of Agriculture
VUEPP	Research Institute of Agricultural and Food Economics (Bratislava)
VUZE	Research Institute of Agricultural Economics (Prague)
WIIW	Vienna Institute for Economic Studies (Vienna)
ZMP	Central Statistical Office for Agricultural and Food Products (Bonn)

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APPENDIX I. DATA SOURCES

I.1 Data problems

The data problems encountered in addressing the key issues in this study were substantial. Ideally, we would have developed a complex econometric model using cross-border (both EU-15 and NMS-7) representative household and company survey data and panel estimates. Yet, hardly any of the data and information required for estimating such models on these issues were available at the start of the study.

Information about land markets and prices is limited in Eurostat, not just for the NMS-7 but also for the EU-15 (see Tables AI.1 and AI.2). Harmonised data were missing to a significant extent and there was no full coverage for the period under study.[39] The lack of harmonised land price and land market data was a serious limitation in our comparative analyses.

Thus, key data have been gathered as part of this study. In fact, a major contribution of the study has been the collection of basic information and data on the land markets in the NMS-7, and the processing of these data into a comparative dataset.

The country teams have assembled national and – to the extent possible – disaggregated regional data (see appendix II) on land rental and sales prices for different land use and quality categories. The information covers the evolution of these prices over a period of up to 10 years prior to accession and the years following accession.

Data have been collected by the country teams from official sources such as the national statistical offices and institutes for agricultural economics. This has been complemented by interviews with local experts. For reasons of consistency, we decided not to mix different data sources.

The land sales and rental prices gathered by the national experts are presented in the tables and figures in the main discussion (e.g. in the summary Tables 9, 10 and 12) and used in this study for the analysis.

I.2 Comparison with Eurostat data

Tables AI.1 and AI.2 present the available Eurostat data on land sales and rental prices. A comparison with Tables 9–12 presented earlier gives rise to a number of observations.

[39] For example, the Eurostat datasets do not contain either land sales or rental data for the Czech Republic and Estonia, nor are there are data on land sales for Hungary or land rental prices for Latvia.

Table AI.1. Eurostat data on "market value of agricultural land" (€/ha at current exchange rates)

		2000	2001	2002	2003	2004	2005
Czech Republic	–	–	–	–	–	–	–
Estonia	–	–	–	–	–	–	–
Hungary	–	–	–	–	–	–	–
Latvia	Agricultural land	–	–	551	527	1,044	–
Lithuania	Agricultural land	315	333	469	390	406	–
Poland	Arable land	1,194	1,415	1,307	1,308	1,463	2,049
Slovakia	Agricultural land	895	878	888	912	945	982
France	Arable land	–	–	3,860	3,970	4,100	–
Italy	–	13,654	14,266	–	–	–	–
Sweden	Agricultural land	1,989	1,988	2019	2127	2455	3,351

Source: Eurostat.

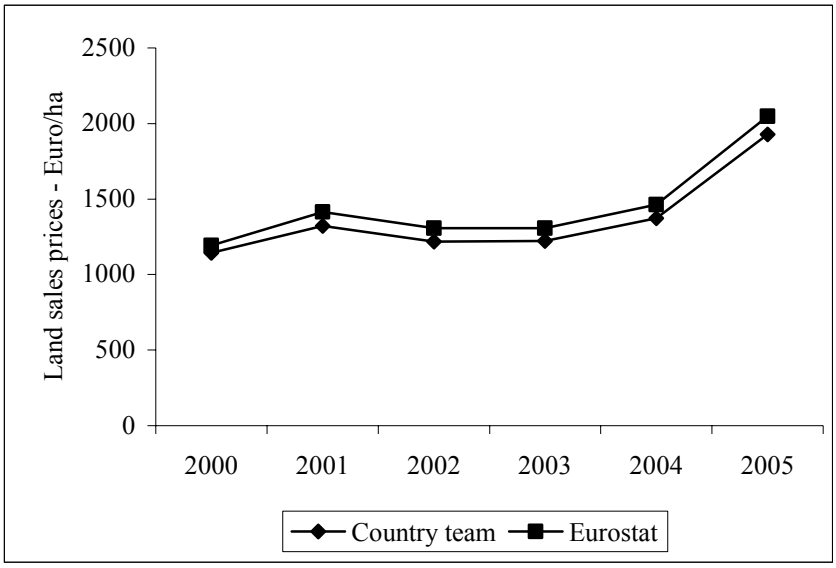
Table AI.2. Eurostat data on "rents for agricultural land" (€/ha at current exchange rates)

		2000	2001	2002	2003	2004	2005
Czech Republic	–	–	–	–	–	–	–
Estonia	–	–	–	–	–	–	–
Hungary	Agricultural land	–	–	45.48	52.99	57.1	63.4
Latvia	–	–	–	–	–	–	–
Lithuania	Agricultural land	9.54	12.41	13.44	13.5	–	–
Poland	Arable land	–	–	–	–	–	68.9
Slovakia	Agricultural land	13.43	13.16	13.33	13.67	14.18	14.7
France	Arable land	131.16	130.84	131.49	130.71	130.31	–
Italy	–	–	–	–	–	–	–
Sweden	Agricultural land	106.57	103.94	107.85	109.7	109.93	–

Source: Eurostat.

1) It would have been impossible to do the analysis based on the Eurostat data alone. It has been crucial to obtain data with a longer time series and data that are more recent in order to assess the impact of accession, along with data for more countries.
2) The dataset collected through our national experts and local sources is considerably more comprehensive than the Eurostat dataset, in terms of country coverage (data from more countries) and the period covered (longer time series), which goes back in time along with including more recent years.
3) Where the data collected through our country experts and those from Eurostat have overlapped, the data have generally been consistent and shown the same levels and trends. Differences have tended to be small (with two exceptions – Slovakia and Latvia – as discussed below).
4) For example, Figure AI.1 illustrates the similarity between the Eurostat data and our data for land sales prices in Poland, for the period in which they overlap. The Eurostat data are only available for the period 2000–05, while the data gathered by the country team cover the period 1994–2005. For the overlapping period (2000–05), the Eurostat data and the data provided by the country team are very close and indicate the same trend. The minor differences between the sources may relate to different weighting in calculating averages. In this study, we have used a weighted average of the land price for land publicly and privately turned over with the number of transactions being the weighting factor.

Figure AI.1 A comparison of data on land sales prices from Eurostat and from the country team (Poland)



5) The two exceptions where the price differences concern land sales prices in Slovakia and Latvia. In both cases, it is because of different samples.

In the case of land sales prices in Slovakia, our average price data series is for all agricultural land parcels. The average prices are much higher than are those of Eurostat, since Eurostat excludes the smallest plots (on the argument that sales of plots smaller than 1 ha can be for purposes other than agricultural production). Still, we do have data for some years on how the prices differ by plot size. As discussed earlier in Box 2, we analysed the variation of sales prices by plot size and found that the prices of small plots (especially those of less than 0.5 ha) are considerably higher (by up to five times) than those larger than 1 ha, which may indeed reflect their use after sales (Figure B2.1 and Table B2.1). For this reason, we have used both the average sales price (for all agricultural land) and the average sales price for plots larger than 5 ha in our comparative analysis – see e.g. Figure 11. (We did the same thing for the Czech Republic, where similar variations were observed.)

Both data series are consistent in that they show a substantial increase in the sales prices of agricultural land in Slovakia with EU accession.

Finally, it is important to emphasise that in Slovakia land sales are limited and the vast majority of transactions are conducted through rental markets (over 90% of agricultural land is rented). The data series on land rental prices are much more consistent and the price differences between our series and the Eurostat data are relatively small. (A similar comment applies to the Czech Republic, although Eurostat has no land price data on this country.)

In the case of land sales prices in Latvia, our data series is for agricultural land parcels larger than 3 ha, because this is the series for which we could obtain consistent price data for a longer period. The prices are considerably higher than the sales price data in the Eurostat dataset (a difference of about 30–40%), which most likely stems from the fact that the Eurostat data also include smaller parcels. Both price series show a sharp increase in sales prices in Latvia (100–130%) around the time of EU accession, but according to our data, this surge happened in 2005, while the Eurostat data have the increase occurring earlier in 2004.

In summary, we emphasise that the conclusions drawn in this study do not depend on the differences in these data series but rather make use of the variations in the data where these can be explained, in order to strengthen the arguments and insights.

APPENDIX II. ADDITIONAL TABLES

Table AII.1 Land prices in public turnover in selected Polish regions, 1999–2006 (PLN/ha)

	1999	2000	2001	2002	2003	2004	2005	2006 I	2006 II
Dolnośląskie	3,389	4,253	3,107	3,765	3,692	4,683	5,941	8,781	8,130,
Kujawsko-pomorskie	4,336	4,253	4,298	5,347	5,853	6,268	7,643	9,055	8,775
Lubelskie	2,303	2,501	1,760	2,267	2,735	4,214	5,464	5,520	6,159
Lubuskie	2,722	2,879	2,904	3,210	3,516	3,729	4,250	5,586	5,584
Łódzkie	3,209	3,770	3,846	3,586	4,693	5,723	6,208	7,533	8,043
Małopolskie	5,035	7,047	7,743	3,829	3,858	5,683	7,749	7,952	7,393
Mazowieckie	8,283	11,451	3,950	6,513	4,409	5,663	7,393	5,599	5,990
Opolskie	4,600	3,754	5,216	5,083	5,818	6,364	7,466	8,284	7,757
Podkarpackie	2,150	2,302	2,665	2,424	3,432	3,338	4,583	5,090	4,780
Podlaskie	2,061	1,660	2,128	2,324	2,404	3,083	4,500	4,509	4,829
Pomorskie	3,631	3,146	3,389	3,760	3,724	4,038	6,243	6,851	7,049
Śląskie	3,094	7,543	6,046	6,499	7,598	7,701	8,300	8,843	7,824
Świętokrzyskie	2,150	2,560	2,665	2,797	2,715	4,421	4,862	8,405	6,453
Warmińsko-mazurskie	3,798	3,197	3,104	2,893	3,035	3,927	4,405	5,278	6,123
Wielkopolskie	5,013	4,975	4,634	5,137	5,046	7,432	8,295	10,496	11,450
Zachodniopomorskie	3,980	2,916	3,547	3,019	3,740	4,131	5,731	5,704	6,120
Average in Poland	3,684	3,554	3,414	3,438	3,736	4,682	5,607	6,519	6,645

Source: ANR.

Table AII.2 Prices of arable land in private turnover in selected Polish regions, 1999–2006 (PLN/ha)

	1999	2000	2001	2002	2003	2004	2005	2006 I	2006 II
Dolnośląskie	3,735	3,940	4,319	4,062	4,868,	4,875,	6,941	7,340	8,525
Kujawsko-pomorskie	5,053	5,385	5,744	5,587	6,549	7,721	12,209	13,684	15,058
Lubelskie	3,968	4,187	4,478	4,155	4,963	5,386	6,361	6,978	7,114
Lubuskie	2,606	2,959	3,160	2,950	3,092	3,561	4,364	4,452	4,887
Łódzkie	3,839	4,221	4,684	4,711	5,339	6,820	8,982	9,645	9,893
Małopolskie	6,651	7,069	7,719	7,163	7,269	8,451	8,644	8,939	10,043
Mazowieckie	4,345	4,917	5,524	5,517	6,717	7,805	9,557	9,895	11,175
Opolskie	5,813	6,209	6,372	5,603	5,454	6,262	7,100	7,512	8,026
Podkarpackie	3,119	3,431	3,883	3,818	4,249	4,522	4,318	4,430	4,867
Podlaskie	4,032	4,494	4,796	5,078	5,575	6,697	9,410	10,412	11,560
Pomorskie	3,157	3,533	4,120	4,854	5,488	6,906	9,137	8,865	10,452
Śląskie	3,828	4,343	5,007	5,264	7,273	8,416	8,224	8,630	9,589
Świętokrzyskie	4,792	5,190	5,674	4,879	5,406	5,950	6,062	6,246	6,312
Warmińsko-mazurskie	2,978	3,240	3,485	3,291	3,499	4,691	5,737	6,771	6,917
Wielkopolskie	5,237	5,776	6,287	6,276	7,457	8,568	13,107	15,319	15,201
Zachodniopomorskie	2,830	3,235	3,780	3,658	4,073	4,901	5,057	5,978	6,142
Average in Poland	4,390	4,786	5,197	5,042	5,753	6,634	8,244	8,953	9,339

Source: ANR.

Table AII.3 Area of agricultural land and forests (ha) sold to foreign investors in Poland, by region

	2000	2001	2002	2003	2004	2005	In total
Dolnośląskie	7	12	43	62	35	16	175
Kujawsko-pomorskie	3	4	1	1	2	1	12
Lubelskie	0	1	0	3	1	10	15
Lubuskie	0	11	2	3	6	42	64
Łódzkie	5	4	23	4	4	7	47
Małopolskie	4	2	2	2	8	11	29
Mazowieckie	24	27	16	18	12	24	121
Opolskie	15	7	10	63	10	13	118
Podkarpackie	0	4	0	46	3	2	55
Podlaskie	0	2	1	0	0	3	6
Pomorskie	11	16	3	2	4	96	132
Śląskie	22	4	64	5	31	7	133
Świętokrzyskie	1	1	5	7	2	23	39
Warmińsko-mazurskie	19	9	12	1	1	15	57
Wielkopolskie	11	6	4	4	9	15	49
Zachodniopomorskie	0	1	15	24	1	67	108
Total	122	111	201	245	129	352	1,160

Source: ANR.

Table AII.4 Average price of agricultural land in Latvia (€/ha), by region in 2000–06

	2000	2001	2002	2003	2004	2005	2006
Aizkraukles	228	163	256	285	306	405	811
Aluksnes	171	49	78	170	170	327	284
Balvu	121	64	106	57	164	206	306
Bauskas	313	327	355	405	491	1,565	1,351
Cesu	213	178	241	320	256	804	1,138
Daugavpils	156	114	170	227	270	604	611
Dobeles	320	362	334	370	426	1,231	2,163
Gulbenes	100	142	106	135	263	448	185
Jekabpils	128	164	156	156	170	455	420
Jelgavas	341	362	356	413	415	1,330	2,419
Kraslavas	100	171	121	149	157	292	349
Kuldigas	142	178	228	270	256	626	624
Liepajas	156	249	306	299	320	804	946
Limbazu	185	249	242	291	249	768	1,032
Ludzas	107	121	100	142	135	306	462
Madonas	128	64	121	277	377	391	455
Ogres	199	313	370	362	441	782	612
Preilu	185	164	171	163	149	292	199
Rezeknes	213	178	163	163	242	334	562
Rigas	426	398	562	839	612	2,234	1,750
Saldus	199	256	192	228	306	690	1,010
Talsu	170	341	241	228	228	697	647
Tukuma	185	178	249	306	362	968	1,110
Valkas	206	170	241	156	178	356	306
Valmieras	263	178	220	228	327	633	384
Ventspils	170	170	277	228	325	669	675
Territory of Latvia	198	203	229	266	293	700	801

Source: State Land Service.

Table AII.5 Share of agriculture in total employment (%)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU-15	4.9	4.7	4.6	4.5	4.3	4.2	4.1	4	3.8	3.8	3.7
France	4.6	4.5	4.4	4.3	4.1	4	3.8	3.7	3.7	3.6	–
Germany	2.9	2.6	2.5	2.5	2.5	2.4	2.4	2.3	2.3	2.2	2.2
Czech Republic	6.4	6.1	5.9	5.6	5.2	4.8	4.6	4.3	4.2	4	4
Estonia	10.1	9.7	9.1	8.8	8	7.1	6.8	6.8	6.1	5.8	5.3
Hungary	8.2	8.4	8	7.6	6.9	6.4	6.2	6.1	5.4	5.1	4.9
Latvia	17.7	17.2	21	18.7	16.5	14.3	14.8	15.1	13.3	12	11.2
Lithuania	19.3	20.1	17.6	19.1	19.3	18.6	17.2	17.8	17.8	15.8	14
Poland	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2	19.2
Slovakia	8.9	8	7.6	7	6.2	5.6	5.3	5	4.5	4.4	3.7

Source: Eurostat.

Table AII.6 Share of gross value added of agriculture, hunting and fishing in total gross value added (%)

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU (15 countries)	2.7	2.7	2.6	2.5	2.3	2.2	2.2	2.1	2	2	1.8
Austria	2.7	2.4	2.4	2.3	2.2	2.1	2.1	2	1.9	1.9	1.6
France	–	–	–	–	3	2.8	2.9	2.7	2.5	2.5	2.2
Germany	1.3	1.3	1.3	1.2	1.2	1.3	1.4	1.1	1.1	1.2	1
Czech Republic	5	4.7	4.2	4.2	3.9	3.9	3.9	3.3	3.1	3.3	2.9
Estonia	8	7.6	7.1	6.5	6	4.9	4.7	4.2	3.7	3.8	3.7
Latvia	9.1	7.4	5.1	4	3.9	4.6	4.5	4.6	4.1	4.4	4.1
Lithuania	11.4	12.5	11.4	9.8	8.3	7.9	7.1	7	6.4	5.8	5.7
Hungary	6.7	6.6	5.9	5.5	4.8	5.4	5.3	4.7	4.3	4.8	4.3
Poland	8	7.5	6.6	6	5.2	5	5.1	4.5	4.4	5.1	4.8
Slovakia	5.9	5.5	5.3	5.4	4.8	4.5	4.7	5.1	4.5	4.5	4.3

Source: Eurostat.

Table AII.7 Indices of wheat yields (EU-15=100)

	2000	2001	2002	2003	2004	2005	2006
EU-15	100	100	100	100	100	100	100
Austria	76	96	86	83	95	87	84
France	121	121	129	118	121	121	116
Germany	124	144	119	123	131	129	124
Czech Republic	72	89	79	77	93	87	91
Estonia	36	41	40	41	40	53	41
Latvia	46	49	59	53	47	62	48
Lithuania	57	56	63	68	64	65	40
Hungary	–	–	61	50	82	78	70
Poland	55	65	67	64	68	68	56
Slovakia	53	74	66	57	76	74	70

Source: Eurostat.

Table AII.8 Milk yields (EU-15=100)

	1998	1999	2000	2001	2002	2003	2004
EU-15	100	100	100	100	100	100	100
Austria	74	78	85	91	90	92	91
France	99	97	98	97	99	97	97
Germany	104	104	102	103	103	104	103
Czech Republic	85	89	86	92	98	96	97
Estonia	82	78	79	87	85	83	87
Hungary	69	67	66	66	64	66	66
Latvia	63	59	64	64	64	63	66
Lithuania	97	96	99	102	101	104	97
Poland	66	66	65	67	65	67	68
Slovakia	79	76	74	82	84	84	84

Source: Eurostat.

Table AII.9 Gross value added per employee at basic prices and relative to the EU-15

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU-15	62,800	66,400	66,500	65,800	69,200	69,300	68,200	69,700	68,000	74,500	70,500
Austria	–	–	–	–	–	–	–	–	–	–	153,000
France	–	–	–	–	105,300	105,700	105,100	112,500	95,300	115,700	–
Germany	44,800	48,800	50,400	46,800	52,400	53,400	56,900	53,600	51,600	61,300	61,000
Czech Republic	7,300	7,100	6,200	7,100	8,500	9,600	9,700	10,700	11,800	13,400	13,200
Estonia	4,400	4,900	5,500	6,000	6,600	7,000	7,500	8,200	8,700	9,100	8,900
Latvia	4,100	4,500	5,300	5,200	5,500	6,800	6,300	5,800	6,000	7,300	6,800
Lithuania	4,100	5,900	7,200	6,700	6,400	8,600	10,100	10,100	11,500	12,600	11,900
Hungary	13,500	13,000	13,800	13,100	14,500	17,900	20,900	18,900	18,800	31,800	32,200
Poland	44,300	44,400	43,100	43,400	44,900	44,000	48,300	50,400	51,800	55,200	53,000
Slovenia	37,300	38,900	40,600	40,900	43,300	45,900	46,100	54,100	47,200	59,300	58,300
Slovakia	4,400	4,600	5,500	5,900	6,400	7,400	8,700	10,900	12,300	14,800	20,100

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
EU-15	100	100	100	100	100	100	100	100	100	100	100
Austria	–	–	–	–	–	–	–	–	–	–	217
France	–	–	–	–	152	153	154	161	140	155	–
Germany	71	73	76	71	76	77	83	77	76	82	87
Czech Republic	12	11	9	11	12	14	14	15	17	18	19
Estonia	7	7	8	9	10	10	11	12	13	12	13
Latvia	7	7	8	8	8	10	9	8	9	10	10
Lithuania	7	9	11	10	9	12	15	14	17	17	17
Hungary	21	20	21	20	21	26	31	27	28	43	46
Poland	71	67	65	66	65	63	71	72	76	74	75
Slovakia	7	7	8	9	9	11	13	16	18	20	29

Source: Eurostat.

Table AII.10 Euro/ECU exchange rates – Annual data

	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006
Czech koruna	–	–	–	34.2	34.2	34.7	34.5	35.9	36.0	36.9	35.6	34.1	30.8	31.8	31.9	29.8	28.3
Estonian kroon	–	–	–	15.5	15.4	15.0	15.3	15.7	15.7	15.6	15.6	15.6	15.6	15.6	15.6	15.6	15.6
Latvian lats	–	–	–	0.8	0.7	0.7	0.7	0.7	0.7	0.6	0.6	0.6	0.6	0.6	0.7	0.7	0.7
Lithuanian litas	–	–	–	5.1	4.7	5.2	5.1	4.5	4.5	4.3	3.7	3.6	3.5	3.5	3.5	3.5	3.5
Hungarian forint	130.5	142.2	172.8	107.6	125.0	164.5	193.8	211.7	240.6	252.8	260.0	256.6	243.0	253.6	251.7	248.1	264.3
New Polish zloty	2.0	2.0	3.0	2.1	2.7	3.2	3.4	3.7	3.9	4.2	4.0	3.7	3.9	4.4	4.5	4.0	3.9
Slovak koruna	–	–	–	36.0	38.1	38.9	38.9	38.1	39.5	44.1	42.6	43.3	42.7	41.5	40.0	38.6	37.2

Source: Eurostat.

Table AII.11 Price deflator GDP at market prices (national currencies; annual percentage change)

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Czech Republic	36.2	12.4	21	13.4	10.2	10.3	8.4	11.1	2.8	1.5	4.9	2.8	0.9	3.5	0.7	1.7	2.1
Estonia	–	–	–	39.7	31.4	24.3	10.4	8.9	4.5	5.4	5.3	3.8	2.3	2.1	6.8	6.1	8.7
Latvia	162.6	932.2	64.8	36.2	15.1	14.9	7	4.6	4.8	3.8	1.7	3.6	3.6	7	10.2	11.1	15.7
Lithuania	227.9	943	306.2	61.6	46.4	20	12.6	4	-0.9	0.5	-0.3	0.1	-0.9	2.7	5.8	7.1	7.8
Hungary	–	20.3	21.3	19.5	26.7	21.2	18.5	12.6	8.4	9.9	8.4	7.9	5.7	4.3	2	2.9	5.9
Poland	55.3	38.6	30.6	37.2	28	17.9	13.9	11.1	6.1	7.3	3.5	2.2	0.4	4.1	2.6	1.3	2.9
Slovakia	–	–	15.6	13.4	9.9	4.6	4.6	5.1	7.5	9.7	5	4.6	4.7	6	2.4	2.7	2.5

Source: Statistical Annex of the European Economy, autumn 2007, DG General Economic and Financial Affairs.

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