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## **LAND ENDOWMENTS AND LAND MARKET POLICIES IN CROATIA, FYR OF MACEDONIA AND TURKEY**

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### **Abstract**

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This paper provides an overview and a comparison of country-level land endowments and land market policies covering the three candidate countries for European Union membership: Croatia, the FYR of Macedonia and Turkey. The analyses and comparisons of agricultural land endowments and factors driving land markets are based on the available cross-section and time-series evidence on agricultural land endowments and land productivity (yields). The land productivity measured by production per hectare of agricultural land varies between the three countries. Agricultural land structures are the result of historical evolution in land markets and land-leasing developments with additional different institutional environments and agrarian and land reforms.

*Key words:* land endowments; land market policies; land productivity; candidate countries; European Union

*JEL Classifications:* Q15, P23, P42

### **Introduction**

European land markets have been determined by the historical evolution forming the initial conditions and additional reform processes during transition from a centrally planned to a market economy in the Central and Eastern European countries (CEECs) and with the process of European Union (EU) enlargement (Csaki and Lerman, 2000; Swinnen, 2002; Macours and Swinnen, 2002; Lerman et al., 2004). However, some of historical and institutional developments in land markets in the Ottoman Empire and later in Turkey are specific in comparison with CEECs (e.g. Lampe and Jackson, 1982; Khan, 1990; Kopeva et al., 1994b).

Our focus is on land endowments and land market policies in three candidate countries for EU membership: Croatia, the Former Yugoslav Republic (FYR) of Macedonia and Turkey. They are engaged in an ongoing strategy, policy and process for EU enlargement. However, from the methodological or conceptual relevance they are different:

Croatia and the FYR of Macedonia are post-socialist countries, but not Turkey. Some similarities between the territories of the FYR of Macedonia, but not for Croatia, with the territories of Turkey, were during the Ottoman Empire.

The aim of this paper is to provide a qualitative and quantitative analysis of the key issues and main factors driving developments of agricultural land markets in the candidate countries and the impact of national and EU programmes on the functioning of agricultural land markets. The evolution in land endowments, agricultural structures, the agricultural land market environment with institutional and legal aspects, land market activity and potential imperfections on land and other associated rural factor markets are important for agricultural sector and rural economy competitiveness in the more competitive enlarged EU markets. We focus on the analysis of key statistical data on land endowments and land market policies in the three candidate countries (Croatia, the FYR of Macedonia and Turkey) to provide some comparisons between them and policy implications.

This paper is structured as follows: First, we present a literature review. Then we analyse the main aggregates of land markets and land productivity, and explain factors shaping land market developments. The final section derives main conclusions and policy implications.

### *Literature review*

During the last two decades, among the most often investigated research issues in agricultural economics have been land reform and land policies, land market and land leasing arrangements, and evolving farm structures focusing on transition Central and Eastern European countries (Kopeva et al., 1994a; Csaki and Lerman, 2000; Lerman et al., 2002; Swinnen et al., 2007) and on emerging market economies. Focus of the analyses for the CEECs has been on agriculture in transition with land policies and evolving farm structures (Lerman et al., 2004) and patterns of agrarian transition (Macours and Swinnen, 2002). These patterns of agrarian transition vary between CEECs (Csaki and Lerman, 2000; Macours and Swinnen, 2002; Csaki and Fock, 2001) with differentials in causes of agricultural output decline during transition (Macours and Swinnen, 2000) and with differentials in successes and failures of reform in the transition of agriculture (Rozelle and Swinnen, 2004). Le Mouël (2005) provides an overview of the main issues in the literature on agricultural land markets with conditions for emerging and well-functioning agricultural land markets, including land reform and farm restructuring in transition countries, and agricultural land price formation. Latruffe and Le Mouël (2006a) provide comparative descriptive analysis of agricultural structures, agricultural land market environment with institutional and legal aspects, land market activity and potential imperfections on land and labour factor markets in selected EU countries. Swinnen et al. (2010) find that the effects of EU CAP subsidies are stronger on rental prices than on land prices, but differ across the EU member states.

The previous literature has highlighted structural changes in agriculture and in the farming sector in CEECs (Csaki and Lerman, 2000) and in emerging market economies. Agricultural reforms have also caused agricultural and food sector international competitiveness in the initial stage of transition during the pre-EU accession period (e.g., Bojnec and Swinnen, 1997b; Bojnec, 2001; Bojnec, 2002). The previous literature review also highlighted association between agricultural support, farmland markets and prices. Land price formation and farmland markets have traditionally been in economic attention in farmland areas (King and Sinden, 1994) and in urban gravitation

areas. With rapid urbanisation and expansion of big towns and cities, land markets play an important role in certain geographic areas in the transition of land from agricultural to urban use, from green spaces to the housing use and urban influences on periurban farmland and on farm real estate markets (Arnott and Lewis, 1979; Cavaillès and Wavresky, 2003). Latruffe and Le Mouël (2006b) present a literature review on theory and empirical findings on the association between agricultural support, farmland markets and prices. Yet, Latruffe and Le Mouël (2007) on the basis of an overview of existing literature argue that agricultural support policy instruments contribute to increase the rental price of farmland depending on the farmland supply price elasticity vis-à-vis other inputs and input substitution. Land prices are seen to be more responsive to government-based returns than to market-based returns.

Land markets in the CEECs and in emerging market, economies have been at the core of investigation of the transition process. Several determinants have determined and shaped land reforms and land structures (Kopeva et al., 1994b; Lerman et al., 2004; Swinnen et al., 2005; Swinnen and Vranken, 2009). Our aim is to focus and compare some empirical facts on land markets and land productivity in the three candidate countries: Turkey, Croatia and the FYR of Macedonia. So far, only a few studies have to some extent analysed different aspects of land markets and land productivity in these three candidate countries. Notable among such studies are, for example, a socio-economic assessment of farm households with policy recommendations during Croatia's EU accession (Möllers et al., 2009), the importance of family farm inheritance for rural factor markets in Croatia (Žutinic and Grgic, 2010), agricultural and rural capital markets (Bojnec, 2012) and rural labour markets in these three candidate countries (Bojnec, 2013). A few studies have been conducted for agribusiness in the Turkish economy (Demirba, 2007). Vural and Fidan (2009) conducted a case study on a hedonic price analysis to determine the marginal return to different parcel land characteristics in Turkey. They found that the agricultural land prices were determined by specific municipal real sale factors. The FYR of Macedonia so far has attracted fewer studies on land markets and land productivity (Swinnen and Van Herck, 2009; Petroska Angelovska et al., 2012). Noev et al. (2003) provide an overview and comparative analysis of land rental market developments in the FYR of Macedonia and Bulgaria. Swinnen and Van Herck (2009) investigated land market issues in the context of the Macedonian agricultural sector and agricultural policy with the pre-accession experience and the implications for the agricultural sector.

Similar to other former Yugoslav republics, the agricultural collectivisation in Croatia and in the FYR of Macedonia failed in the second half of the 1940s, while land in large estates above a set maximum land size was nationalised and converted into socially owned land (Bojniec and Swinnen, 1997a; Melmed-Sanjak et al., 1998). Due to failed collectivisation of peasants and other smaller household farms, the majority of agricultural land remained in the possession of small family household farms. Similar to other former Yugoslav republics and Poland, this has resulted in a bipolar ownership and operational farm structure with many small household farms and a few large former state (socially owned) enterprises. Like in Poland, there was the perception that economies of scale favour large over small-scale farms, which is in contrary to international evidence that larger farms are no more efficient than smaller farms and use less labour than small-scale family farms (Van Zyl et al., 2000). The bipolar farm structure remains. For example for the FYR of Macedonia, private household farms own about 80% of the total agricultural land and the remaining 20% are owned by the state and leased by agricultural enterprises, which are the successors of the agrokombinats and socially-owned agricultural enterprises (Swinnen and Van Herck, 2009). In addition to the bipolar farm structure, agricultural land used by private agricultural households is fragmented into several small plots, which has been determined by the inheritance system. To increase average farm size and improve conditions for land consolidation and structural changes in farm structures from less efficient to more efficient farmers, the lack of a well functioning land market and land leasing market and institutions are issues of particular importance (Noev et al., 2003). A significant

proportion of the state owned land in the FYR of Macedonia is not cultivated or is cultivated illegally (Acrotass-Consortium, 2006; Swinnen and Van Herck, 2009), while in Croatia some land is still under mines from the wartime in the first half of the 1990s.

## Comparisons of Land Endowments and Land Productivity

Our focus is on empirical evidence concerning land endowments and land productivity in the three candidate countries: Croatia, the FYR of Macedonia and Turkey.

### Land endowments

Agricultural land endowment is an important factor of agricultural production and a possible source of natural comparative advantage for agricultural production. Table 1 compares total area, arable land, permanent crops, cultivated area and per cent of total area cultivated in the three candidate countries. According to total area, arable land, permanent crops and cultivated area of these three countries, Turkey is a few times bigger than Croatia, and Croatia is about twice as large as the FYR of Macedonia. In addition to the land size, the structure of land is an important potential for the level and structure of agricultural production. The percentage of total area cultivated has declined in each of the candidate countries since the beginning of the 1990s: for example, 3.3 percentage points in Turkey, 6.9 percentage points in Croatia and 7.6 percentage points in the FYR of Macedonia. This huge reduction in the percentage of total area cultivated can be attributed to three reasons: 1) the transfer of cultivated land from agricultural

**Table 1**  
**Comparison of land areas (million of hectares)**

	Croatia		FYR of Macedonia		Turkey							
	1992	1997	2002	2007	1992	1997	2002	2007	1992	1997	2002	2007
Total area	5.65	5.66	5.65	5.66	2.57	2.57	2.57	2.57	78.36	78.36	78.36	78.36
Arable land	1.21	0.98	0.86	0.85	0.61	0.60	0.50	0.43	24.51	24.30	23.99	21.98
Permanent crops	0.11	0.13	0.07	0.08	0.06	0.05	0.04	0.04	3.01	2.57	2.59	2.91
Cultivated area	1.33	1.11	0.93	0.93	0.66	0.65	0.54	0.47	27.53	28.56	26.58	24.89
% of total area cultivated	23.4	19.6	16.4	16.5	25.8	25.2	21.1	18.2	35.1	34.3	33.9	31.8

Source: AQUASTAT Database (2011).

to non-agricultural uses; 2) fallow land due to economic reasons and 3) uncultivated land due to non-economic reasons. The latter is largely relevant only for Croatia, where some land is still under the landmines from the war in the first half of the 1990s. Finally, it is clearly visible from this evidence that Turkey not only has the greatest percentage of total area cultivated, but it seems to have also developed the best management practices with the existing cultivated land in use for agricultural production as it has the highest percentage of total area cultivated and the least important decline in this percentage.

According to (FAOSTAT 2011), between 2003 and 2008, the fallow land in Croatia declined from 25 000 to 13 000 hectares, which represents a bit more than 1% of agricultural area. While data on the fallow land for the FYR of Macedonia are not reported, for Turkey the fallow land declined during the same period from a bit less than 5 million hectares to 4.3 million hectares, which represents 1.1% of agricultural area.

In 2007, the percentage of agricultural area irrigated in the three candidate countries was as follows: 0.7% in Croatia, 2.7% in the FYR of Macedonia and 13.2% in Turkey. This might be also associated with structures of agricultural production with a greater share of cereals in Croatia and a greater importance of higher value-added fruit and vegetables on irrigated agricultural land in Turkey. In addition, several times problems are in the quality of irrigation water and in producers' willingness to pay for high quality irrigation water depending on type of agricultural produce (Basarir et al., 2009).

### **Sectoral structure of agricultural production**

Gross agricultural production in Turkey is more than 20 times bigger than in Croatia, while in Croatia it is almost twice as high as in the FYR of Macedonia (Table 2).

In each of the three candidate countries, the share of crop production is at least twice as high as that of livestock production. The share of livestock production is the highest in Croatia, while the share of crop production is the highest in the FYR of Macedonia, which experienced the lowest share of cereals in crop production. In crop production in the FYR of Macedonia as well as in Turkey, other crops, particularly vegetables and long-term plantings of fruit and vineyards, also represent an important share of production. Due to large country size with different climatic conditions, Turkey is also known for specific crops such as cotton, oranges and other citrus. Therefore, sectoral structures of agricultural production vary between the candidate countries and in the case of Turkey, there are also significant differences in the structures of agricultural production between regions and even inside some regions.

### **Agricultural factor endowments**

Due to data availability for western and EU-27 countries, farm size in these countries is often investigated by land farm structures and average size of agricultural land per farm (Bojnec and Swinnen, 1997; Latruffe and Le Mouël, 2006a). Therefore, farm size has been widely studied for western, EU countries (Bojnec and Swinnen, 1997a; Latruffe and Le Mouël, 2006a). Comparable statistics on farm structure have been developed and are available for the EU-27 countries (Eurostat, 2011), while so far, there is no comparable evidence for the candidate countries.

Agricultural factor endowment is compared between the three candidate countries by three variables: arable land in hectare (ha) per person, fertilizer consumption in kg per ha of arable land, and by tractors per 100 km<sup>2</sup> of arable land. As can be seen from Table 3, Turkey is the richest candidate country by arable land in ha per person.

**Table 2**  
**Structure of agricultural production**

	<i>Croatia</i>	<i>The FYR of Macedonia</i>	<i>Turkey</i>									
	Gross production, billion \$	% of crops	% of livestock	% of cereals in crops	Gross production, billion \$	% of crops	% of livestock	% of cereals in crops	Gross production, billion \$	% of crops	% of livestock	% of cereals in crops
1992	1.17	63.5	36.5	40.0	0.63	78.4	21.6	17.2	22.1	76.3	23.7	23.9
1996	1.21	71.6	28.4	40.2	0.55	76.7	23.3	17.5	23.8	77.0	23.0	21.8
2001	1.30	73.5	26.5	44.8	0.55	76.0	24.0	15.1	23.9	77.1	22.9	22.2
2005	1.17	64.9	35.1	49.0	0.63	78.3	21.7	17.7	27.3	76.9	23.1	23.5
2009	1.32	66.6	33.4	49.2	0.68	76.5	23.5	15.5	28.3	74.8	25.2	21.9

Source: FAOSTAT (2011).

Fertilizer consumption in kg per ha of arable land is the highest in Croatia, which experiences the lowest arable land in ha per person. Croatia experiences also the highest mechanisation factor endowment, which is measured by tractors per 100 km<sup>2</sup> of arable land, but this evidence at least might be less accurate (Bojnec, 2011).

### Land productivity (yields)

Land productivity is investigated and compared between the three candidate countries based on yields per hectare for wheat and maize, as the main crops in the candidate countries. There is a body of literature on determinants of crop yields such as the effects of soil salinity on crop production and yields and soil tillage systems, plant breeding and biotechnology and effects of climate change on water resources. Extreme drought weather conditions

can have major impacts on volatility in yields and in agricultural production on wheat and some other crops, fruits and vegetables growing regions with negative implications for agricultural and rural incomes (Engindeniz and Cosar, 2012).

Turkey is a substantial wheat producer (Table 4). Its production is more than 25 times larger than that of Croatia, whose production is more than twice that of the FYR of Macedonia. Wheat yields in Croatia are slightly lower than in the enlarged EU-27, but more than twice that of Turkey and slightly less than twice that of the FYR of Macedonia.

Maize production in Turkey is around twice as high as in Croatia, while maize production in the FYR of Macedonia is few times smaller than in Croatia (Table 5). Unlike the experience in the FYR of Macedonia, maize yields in

**Table 3**  
Agricultural factor endowments in 2007

	<i>Croatia</i>	<i>The FYR of Macedonia</i>	<i>Turkey</i>
Arable land in ha per person	0.19	0.21	0.30
Fertilizer consumption in kg per ha of arable land	154.0	66.1	100.0

Source: World Bank (2011).

**Table 4**  
Wheat production and yields

	<i>Croatia</i>	<i>The FYR of Macedonia</i>	<i>Turkey</i>	<i>EU</i>	Production, million tons	Yields, tons per ha	Production, million tons	Yields, tons per ha
	Production, million tons	Yields, tons per ha	Production, million tons	Yields, tons per ha				
1992	0.66	3.90	0.30	2.68	19.3	2.04	106.7	4.51
1996	0.74	3.69	0.27	2.29	18.5	1.98	124.3	4.94
2001	0.97	4.02	0.25	2.13	19.0	2.03	126.6	4.79
2005	0.60	4.11	0.33	3.08	21.5	2.32	135.4	5.12
2009	0.94	5.19	0.27	3.08	20.6	2.57	138.5	5.41

Source: FAOSTAT (2011).

**Table 5**  
Maize production and yields

	<i>Croatia</i>	<i>The FYR of Macedonia</i>	<i>Turkey</i>	<i>EU</i>	Production, million tons	Yields, tons per ha	Production, million tons	Yields, tons per ha
	Production, million tons	Yields, tons per ha	Production, million tons	Yields, tons per ha				
1992	1.54	4.15	0.13	2.98	2.23	4.24	44.5	4.80
1996	1.89	5.22	0.14	3.39	2.00	3.64	53.8	5.80
2001	2.21	5.45	0.12	3.45	2.20	4.00	61.6	6.41
2005	2.21	6.92	0.15	4.49	4.20	7.00	63.2	7.03
2009	2.18	7.35	0.15	4.75	4.25	7.19	57.8	6.92

Source: FAOSTAT (2011).

Turkey and particularly in Croatia have increased rapidly and are at the level or even above the levels for the enlarged EU-27.

### *Factors shaping land market developments*

When analysing these three countries and the factors that determine land market development, it is necessary to underline at the very beginning the differences in the process and concept of land reforms between the two post-socialist countries (Croatia and the FYR of Macedonia) and Turkey. Therefore, we aim to explain by using the previous literature and survey data main factors that have been shaping land market developments.

### *Historical evolution*

Historical factors have played a crucial role in the shaping of land market developments in each of the three analysed candidate countries. Historical evolution has also been different in the studied three candidate countries, which have influenced and affected their land markets and land tenure.

The Ottoman and Islamic rules were important factors shaping land markets for the territory of present Turkey (Sesli, 2010) and to a lesser extent for the territory of the FYR of Macedonia, but not for Croatia, which has been under the influence of the Austro-Hungarian, particularly Hungarian, empires (Lampe and Jackson, 1982). The territory of present the FYR of Macedonia particularly before the First World War shared some similarities with some other countries in this region, particularly with Bulgaria (Lampe and Jackson, 1982; Kopeva, 1994a, 1994b; Swinnen et al., 1997).

Later reforms conducted in modern Turkey have been important for land market developments there. On the other hand, since the First World War, land market developments on the territory of Croatia and the FYR of Macedonia shared some similar developments of land reforms, agricultural and farm restructuring as some other parts of the first Yugoslavia (Kingdom of Serbs, Croats and Slovenians) and the second, communist, Yugoslavia (Bojnec and Swinnen, 1997a). They have led to the small-scale fragmented farm ownership and operational structures (Bojnec and Latruffé, 2013).

Since the collapse of the former Yugoslavia in 1991, Croatia and the FYR of Macedonia have not conducted radical land reforms, such have been the case in some other case, for example in Bulgaria (Kopeva, 1994a; 1994b; Swinnen et al., 1997). Therefore, land reforms have not resulted in substantial changes in agricultural structures and

farm restructuring, as the majority of land has remained in private family farm ownership and operation (see also Möllers et al., 2009 for Croatia and Petroska Angelovska et al., 2012 for the FYR of Macedonia).

## **Land Reforms and Land Markets Policy Settings**

During the last two decades of institutional developments and land reforms in the three candidate countries, there have been modest structural changes in land markets. In Croatia and the FYR of Macedonia, land ownership and land use are bimodal, consisting from several small-scale farms and few large-scale enterprises (Swinnen and Van Herck, 2009; Petroska Angelovska et al., 2012). In Turkey, land reforms, land markets developments and farm restructuring are the results of long-term institutional development ranging from the Ottoman rules and more recent contemporary institutional developments. Yet, due to its large size and different historical-institutional developments, significant regional differences are recorded for land markets, agricultural structures and farm restructuring in Turkey. Unlikely for Croatia and the FYR of Macedonia, farm groups consisting of two or more households (SIS 2001) are also important in the legal status of agricultural holdings in Turkey.

In addition to individual family-farm-size fragmentation, the land of small-scale farms is often further fragmented into several small plots due to inheritance division of land of a family farm among several children. Fragmented farm structures and small plots are one of the major obstacles to the modernisation of agricultural production. For example, in the FYR of Macedonia, the average size of family farms is around 1.7 ha with mixed production structures (Swinnen and Van Herck, 2009), and around 80% of total cultivated land is owned or leased by around 180,000 small-scale private family farms most often of an average size between 2.5 and 2.8 ha (Petroska Angelovska et al., 2012). Family household subsistence farming in the FYR of Macedonia seems to be more important than in Turkey or in Croatia, which has important implications for small-scale agricultural farm structures and the need for farm restructuring with the creation of opportunities for off-farm employment and incomes (Janeska and Bojnec, 2012).

Regarding institutional and possible legal constraints on agricultural land ownership, there is no restriction on the ownership of agricultural land by a domestic natural person in the three candidate countries. Yet, approval of ownership by a responsible local government institution

is required. Certain restrictions on land ownership are imposed on foreign natural persons or legal entities.

In the FYR of Macedonia, restrictions on the ownership of agricultural land are imposed on foreign natural persons and legal entities. Foreign natural persons can own agricultural land if they inherited property with reciprocity, if they have already lived for several years in the FYR of Macedonia or if they can prove they are a farming company. In other cases, they can rent agricultural land with the approval of the previous central government. However, the limitations do not hold for foreign legal companies. They can own or rent agricultural land independent of ownership structure.

In Croatia, foreign natural or legal entities face more restrictions regarding the ownership of agricultural land than do domestic natural persons during the country's pre-accession period of adjustment to EU membership and possibly up to seven years after Croatia's accession to the EU.

In Turkey, domestic legal entities and foreign natural persons or legal entities face different restrictions than domestic natural persons regarding the ownership of agricultural land. Domestic legal entities, foreign natural persons and foreign legal entities can own only apartments or firms, but they are not allowed to own an agricultural land.

Taxation policies on agricultural land have been introduced in the analysed three candidate countries, but so far they are less important among the budgetary revenues. In the FYR of Macedonia, agricultural land that is owned or rented, but cultivated, is excluded from an annual taxation, whereas in Croatia and Turkey, the owner of agricultural land is obliged to pay land taxes on a yearly basis according to the quality of land. Land taxes on agricultural land are applied in a form of cadastre income and have not accelerated substantially agricultural land markets.

### ***Land sales transactions and land sale prices***

Land sales transactions are a traditional way in which agricultural land markets function. Vranken et al. (2011) provides an overview of sales market regulations of agricultural land for EU countries and two candidate countries, i.e. the FYR of Macedonia and Turkey. In land sales transactions in the three candidate countries, there is no a minimum or a maximum sales price. In the FYR of Macedonia, state-owned land cannot be sold – it can only be rented.

Agricultural land sale prices vary between the candidate countries and within the countries. In 2011, the price of agricultural land in Croatia was between €5 000 and €7 000 per ha.

In the FYR of Macedonia, the sales price of agricultural land was around €2 500 per ha, while arable land

sales price was higher between €10 000 and €15 000 per ha. The price of agricultural land varies by region and by location within regions and by the quality of land. The price interval can be from €2 000 up to €40 000 per ha. In locations where agricultural land can be transformed into urban land or land for construction, the price can be up to €100 000 per ha. The average sales price in the FYR of Macedonia varies by land quality category: between €2 000 to €15 000 per ha in mountain areas, €15 000 to €25 000 per ha for land category classes between 5-8, and €25 000 to €40 000 per ha for land category class of 4.

In Turkey, the sales price of agricultural land varies between €22 000 and €35 000 per ha. There are considerable regional differences in the sales price, depending on several internal factors and particularly between regions. One important factor of them is the fertility of land or the land quality. The most fertile land can cost up to €65 000 per ha.

With land sales transactions are associated costs for the transfer of land, such as notary and cadastral costs and a registration fee regulated by law. In the FYR of Macedonia, the buyer needs to pay a registration tax amounting to 2-4% of the land sales price.

In general, there is no restriction related to the acquisition of agricultural land by a domestic natural person in the three candidate countries. In Croatia the sale of agricultural land needs to be approved by the government agency and the tenant has pre-emption rights. In the FYR of Macedonia, co-owners have a priority right and neighbours have priority purchase right. In Turkey, there are restrictions regarding the subdivision and sale of a plot below a certain minimum size and the sale of agricultural land need to be approved by the government. The tenant in Turkey has pre-emption rights and co-owners have priority rights. There are also restrictions for land sale transactions in border areas and in specific protected areas.

Some additional restrictions regarding the acquisition of agricultural land apply to foreign legal entities in Croatia, according to its Agreement for accession to the EU. In the FYR of Macedonia, foreign natural persons can own agricultural land if it is inherited with reciprocity, if they have already lived for a certain period in the FYR of Macedonia or if they can prove they are a farming company. Foreign legal entities can own agricultural land independent of ownership structure (e.g. majority of shareholders from the FYR of Macedonia). In Turkey, domestic legal entities, foreign natural persons and foreign legal entities can only legally own apartment or firms, but they are not allowed to own agricultural land.

Imposed bans and restrictions to foreigners (physical and juridical entities) affects land market demands. Indirectly, these bans and restrictions can be avoided via domestic physical or juridical entities, but in practice, it is more likely that they are of a smaller scale particularly for non agricultural purposes such as in tourism resorts areas, which are also more attractive for tourism, recreational and other non agricultural land uses.

Land fragmentation is an output of land reforms during longer periods and affects both land market and land tenure transactions. Land fragmentation increases transaction costs. The capitalization rate is inversely related to the land value. This means that the higher capitalization rates are associated with the lower agricultural land prices as well as lower rental prices. The higher capitalization rates for example in Turkey are generally applied to small-scale farms with fragmented agricultural land. As a result, agricultural land prices as well as rental prices are lower.

#### ***Land rental transactions***

Land rental transactions are important conditions for emerging and well-functioning agricultural land markets to increase operational farm size (Swinnen et al., 2006). Except for state-owned land in the FYR of Macedonia, land rental transactions in the three candidate countries are not limited by the government setting of minimum or maximum rental prices.

In Croatia as well as in other two candidate countries, there are regional differences in rental price. In Croatia, the minimum tenancy duration is 5 years and the maximum duration is 20 years. The tenancy contract is inheritable and almost all the tenancy contracts are in written form. All rental agreements are required to be registered in the cadastre and in the land register. Legal contract enforcement depends widely according to the contract.

In the FYR of Macedonia, the law regulates a minimum rental price for state-owned agricultural land and a maximum length of time tenancy duration. The minimum rental price for state-owned agricultural land varies by land quality: €25 per ha for cadastre classes from 1 to 4, €15 per ha for cadastre classes from 5 to 8, €15 for the mountain areas for cadastre classes from 1 to 4, and €5 per ha for the mountain areas for cadastre classes from 5 to 8. The average rental price is around €15 per ha of agricultural land and €25 per ha of arable land. Regional differences in rental price depend on demands, which is higher in more attractive regions (e.g. Strumica and Tikveš), but lower in less attractive regions with uncultivated land, where the land is almost without rental value. The average

rental price depends on the land quality: €5-15 per ha in the mountain areas, €15 per ha for land category from 5 to 8 class, and €25 per ha for land category of the class 4. Oral rental agreements were traditional, but recently there has been a switch to written contracts. Rental agreements are registerable optionally in the land register. The tenancy contract is inheritable. All tenancy contracts for renting state-owned agricultural land take a written form. During the years 2006-10, the responsible ministry signed around 3,000 contracts for renting around 123 000 ha of land. However, legal contract enforcement is not clearly defined and managed if one of the parties breaches the terms.

In Turkey, rental prices are not regulated and land renting is often orally agreed between owner and tenants without defining monetary rental prices. The owner and tenant usually agree on how to share the products: often the owner provides the land and tenant covers other costs and then around the owner takes 1/3 of the product and 2/3 of the product is taken by the tenant. There are regional differences depending on how tenant and owner reach agreement on the type of the rent to be paid. The tenancy duration is not restricted. The tenant does not have preemptive rights when the owner sells the land and the tenancy contract is not inheritable. An oral rental agreement is possible due to a high level of trust between owner and tenant, which is often between relatives, neighbours or similarly trusted persons. Rental agreements are not registered in the cadastre nor in the land register. The owner and tenant may make an agreement at notary offices. If one of the parties breaches the agreement terms, even if the agreement is oral, the parties can apply to the court to solve the problem.

To sum up, the land rental prices in the three candidate countries have been determined in an association with output prices that are produced on the rented land. However, there are some differences in the level of transaction costs for rental contracts. The oral sharecropping agreements in Turkey are based on trust with relatively low level of transaction costs. The governmental or normative land rental prices for state land exist in the FYR of Macedonia, while rental prices in Croatia are determined by local supply and demand factors.

#### ***Agricultural support, farmland markets and land prices***

Agricultural support measures to agriculture and the rural economy from domestic and international (particularly EU) sources vary between the three candidate countries. The domestic government supports to agriculture

and the rural economy are also correlated with the level of economic development, as measured by GDP per capita: it is higher for Croatia than for the FYR of Macedonia or Turkey. In each of the three candidate countries is also important informal sector, which increases incomes through shadow economy and excess food consumption (Davutyan, 2008).

So far, there is no any study on the capitalisation of agricultural and rural development support measures on farmland markets and land prices in the three candidate countries. Due to relatively lower domestic government support, for example in the FYR of Macedonia, while international donations and support were less often given for land markets, it is also less likely to significantly influence farmland markets transaction and land prices. As each of these three countries has experienced significant outflow of labour to Western Europe since the mid-1960s, particularly from rural areas, remittances and other financial flows from abroad to some rural areas might be even more important for rural well-being and survival than domestic and international government supports.

## **Conclusions and Policy Implications**

During the last 20 years of transition from a centrally planned to a market economy in the CEECs, accompanied by the simultaneous East-West European integration process, European land markets have been changed substantially. Structural changes in the farming sectors, land reform and EU accession have had socio-economic implications for farm households and for rural factor markets.

The paper has presented a comparative analysis of land endowments and land market policies focusing on the three EU candidate countries: Croatia, FYR of Macedonia and Turkey. We analyse by each country and by comparative analysis: land distributions and developments and factors driving land market developments. Agricultural land structures are the results of historical evolution in land market, land sale and land leasing developments within different institutional environments, agrarian and land reforms.

The land markets are quite different in the three candidate countries for EU membership. Turkey is larger than Croatia and particularly larger than the FYR of Macedonia, in terms of the size of the agricultural sector (land area). In addition, there are also differentials in land market institutional settings and their evolutions, historical agrarian and land reforms, agricultural and farm structures. Turkey and to a lesser extent the FYR of Macedonia belonged to the

Ottoman rules, while Croatia to the Austro-Hungarian, particularly Hungarian rules (Lampe and Jackson, 1982; Kopeva et al., 1984b; Swinnen et al., 1997). After the First World War, Croatia and the FYR of Macedonia share more similarities in comparison to Turkey. Similar to Slovenia, Croatia and the FYR of Macedonia have largely experienced privately-owned and operated agriculture also during the former Yugoslav system (Bojnec and Swinnen, 1997; Bojnec and Latruffe, 2013). In both Croatia and the FYR of Macedonia, agricultural land within agricultural service cooperatives has been limited. The former state land has been transformed in state management and largely continued to be operated by the privatised agricultural enterprises. For example, similar to the case of Slovenia, the FYR of Macedonia has established a state fund for the management of former state land, and this fund has become an important player in land-leasing arrangements. The most recent land reforms in Croatia and in the FYR of Macedonia have been less radical than in some other countries in the Balkan region such as in Albania (Cungu and Swinnen, 1999) or in Bulgaria (Kopeva et al., 1994a).

In addition to own-operated land and land market transactions, land leasing has become an important land operation. As in western European countries, land-leasing arrangements are expected to increase further, thus increasing the considerable differentials between land ownership and land operation farm structures. This process is likely to be the main driving force in agricultural and farm restructuring towards an increasing average operational land size of farms.

On the other hand, Turkey has experienced an evolution in land market and land-leasing arrangements, which are linked both to historical (Islamic) traditions and land-market transactions, which are typical for developed market economies. Land-leasing arrangements in Turkey are largely based on trust and still-prevailing oral sharecropping arrangements between land owners and tenants rather than on a contract arrangement and land-lease price, which is more typical for Croatia and, except for state land, to a lesser extent for the FYR of Macedonia. In Turkey due to the country's large size and different historical-cultural traditions, there are also significant differentials in land market and land-leasing developments within the country by regions (Sesli 2010).

Furthermore, land markets in the three candidate countries have experienced the convergence of laws toward EU norms. In this regard, Croatia is adjusting its rules and implementation to be soon ready for the EU membership, which is expected on 1 July 2013.

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