



## Comparative Analysis of Factor Markets for Agriculture across the Member States

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# Agricultural and Rural Labour Markets in the EU Candidate Countries of Croatia, Former Yugoslav Republic of Macedonia and Turkey

## ABSTRACT

This paper provides an overview and comparison of labour markets in agricultural and rural areas in the three candidate countries for the EU membership: Croatia, the Former Yugoslav Republic of Macedonia and Turkey. We analyse and compare the labour market structures and the factors driving them. The analyses are based on the available cross-section and time-series data on agricultural labour structures and living conditions in rural areas. Considerable differences are found among the candidate countries in the importance of the agricultural labour force, between rural and urban labour, and in poverty and living conditions in rural areas. Agricultural and rural labour market structures are the result of demographic and education processes, in addition to labour flows between agricultural and non-agricultural activities, from rural areas to urban ones and migration flows abroad. Declines in the agricultural labour force and rural population are foreseen for each of the candidate countries, but with significant variations between them. Showing different patterns over time, labour market developments in the sector and rural areas have been shaped by the overall labour market institutions, conditions and other factors in each country, such as the legal basis, educational attainment and migration flows, as well as the presence of non-agricultural activities in rural areas.

**Keywords:** Labour market, agricultural and rural labour structures, education, gender, unemployment and living conditions in rural areas, candidate countries, European Union.

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# **Agricultural and Rural Labour Markets in the EU Candidate Countries of Croatia, Former Yugoslav Republic of Macedonia and Turkey**

**Štefan Bojnec\***

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## **1. Introduction**

Agricultural and rural labour markets have been determined by the historical evolutions that have given rise to the initial conditions, institutional and educational changes (Sapsford and Tzannatos, 1993). In transition countries these have been accompanied by other reform processes entailed in the transition from centrally planned to market economies in Central and Eastern European countries (CEECs) and the process of EU enlargement (Macours and Swinnen, 2002).

The present paper focuses on agricultural and rural labour markets in three countries with candidate status in an ongoing strategy, policy and process for EU membership: Croatia, the former Yugoslav Republic (FYR) of Macedonia and Turkey. Similar to other transition CEECs and emerging economies, in the candidate countries the agricultural, rural and overall labour markets have also developed through different phases (Micevska, 2008), in which knowledge-based economic growth is considered crucial for raising the level of international competitiveness. Thus, the education system needs to be geared towards producing a workforce that can be used efficiently in the labour market (Sapsford and Tzannatos, 1993).

The analysis of key statistical data on agricultural and rural labour markets in the three candidate countries reveals some patterns in their development and enables comparisons. The assessment includes the adoption and implementation of EU legislation and standards in agricultural and rural labour markets, and specific living conditions. The determinants of agricultural and rural labour market characteristics and development are presented, based on literature and a survey conducted of the institutional framework for the agricultural labour market by the Teagasc Team (2011) in these three countries.

The rest of this paper is structured in the following way. First, in section 2, we present the literature review. Section 3 analyses the main aggregates of agricultural output and labour productivity, agricultural and rural labour market settings, the rural and urban population, educational attainments, unemployment, rural poverty and living conditions. Section 4 describes the determinants of developments in agricultural and rural labour markets. Finally, section 5 derives the main conclusions and policy implications.

## **2. Literature review**

Previous literature has highlighted different aspects of the transformation and structural changes in agricultural and rural labour markets in the CEECs and patterns of agrarian transition, which vary among the CEECs (Macours and Swinnen, 2002). Agricultural and

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rural labour markets in the CEECs have been analysed by a few studies focusing on human capital, market imperfections and labour reallocation (Rizov and Swinnen, 2004), transition and agricultural labour markets (Swinnen et al., 2005) and the determinants of labour flows in and out of agriculture (Bojnec and Dries, 2005).

In each of the three candidate countries, a significant share of the rural population has left agriculture and the villages, and chosen to migrate abroad. During the 1960s and 1970s, labour migrations from the former Yugoslavia, particularly from Croatia as well as the FYR of Macedonia, to Western Europe were very significant. These processes have continued. For example, in the FYR of Macedonia, migrations from rural to urban areas and those from rural areas to abroad have continued owing to high levels of unemployment, a lack of employment opportunities and the absence of income-generating activities (Dimitrieva et al., 2000; Janeska and Bojnec, 2011). Therefore, each of the three candidate countries has engendered a diaspora, which is sending remittances to their family members in rural areas. For example, an important aspect for Turkey–EU relations is the labour migration from Turkey to Western Europe, and the Turkish diaspora in some of the EU member countries (Akgündüz, 2008), along with more recent labour market issues involving migration (Krieger and Maître, 2006).

Macours and Swinnen (2008) investigated the problems of rural poverty in transition countries, which is also an issue for rural development in some parts of the three candidate countries. In the FRY of Macedonia, in spite of high unemployment rates and job shedding, agriculture and the rural economy have still been very important for maintaining jobs, small businesses and entrepreneurship, economic development and poverty alleviation during transition (Janeska and Bojnec, 2011).

Möllers et al. (2009) assessed different socio-economic aspects of Croatian farm households and their strategies and expectations, and offered policy recommendations for Croatia's EU accession. Grgić et al. (2010) investigated the (dis)satisfaction of the rural population with their quality of life and intentions to migrate from rural areas in Croatia. They argued that the major hardships of rural life are of an economic nature – a lack of employment opportunities, inadequate choice of profession and lower incomes compared with a city. These rural–urban gaps are even wider for the FYR of Macedonia and Turkey. Therefore, our aim is to study and compare some empirical evidence on agricultural and rural labour markets, along with living conditions in rural areas in the three candidate countries.

### **3. Comparisons of labour markets and living conditions in rural areas**

Agricultural and rural labour markets as well as the living conditions in rural areas are analysed within the macroeconomic, sectoral and urban–rural settings of the three candidate countries.

#### ***3.1 Macroeconomic, rural and agricultural labour market settings***

By size of population, Turkey is several times larger than Croatia, which by the same indicator is more than twice the size of the FYR of Macedonia (Table 1). During the last two decades, the size of the population has declined in Croatia, but has increased in the FYR of Macedonia and particularly in Turkey. Consequently, the population density, defined as the number of inhabitants per km<sup>2</sup>, has also been declining in Croatia, while it has increased in the FYR of Macedonia and especially in Turkey. At the same time, Turkey has the lowest share of rural population.

Moreover, the total, economically active population has fallen in Croatia, but risen in the FYR of Macedonia and Turkey. In 2007, the shares of the total, economically active population in agriculture were the following: 5.6% in Croatia, 9.0% in the FYR of Macedonia and 34.8% in Turkey. This evidence clearly confirms the substantial role agriculture plays in these three candidate countries, notably in Turkey where around 25 million of the economically active population are engaged in agriculture.

**Table 1. Comparison of population (million inhabitants)**

	<b>Croatia</b>				<b>FYR of Macedonia</b>				<b>Turkey</b>			
	<b>1992</b>	<b>1997</b>	<b>2002</b>	<b>2007</b>	<b>1992</b>	<b>1997</b>	<b>2002</b>	<b>2007</b>	<b>1992</b>	<b>1997</b>	<b>2002</b>	<b>2007</b>
Population	4.59	4.63	4.47	4.43	1.93	1.98	2.02	2.04	58.09	63.33	68.40	73.00
Rural population	2.09	2.07	1.97	1.91	0.80	0.77	0.73	0.69	22.94	23.32	23.39	23.18
Population density*	81.2	81.7	79.0	78.3	75.2	77.2	78.7	79.4	74.1	80.8	87.3	93.2
Total economically active population	2.09	2.07	1.98	1.96	0.81	0.82	0.85	0.89	21.56	22.95	24.05	25.14
Total economically active population in agriculture	0.30	0.21	0.15	0.11	0.16	0.12	0.10	0.08	10.61	10.08	9.61	8.75

\* Number of inhabitants per km<sup>2</sup>

Source: AQUASTAT Database (FAO, 2011).

### **3.2 The role of agricultural output in the economy**

The importance of agricultural value added to GDP has declined in each of the three candidate countries. This development is consistent with the diminishing economic prominence of agriculture in the economy – a pattern experienced in most developed countries in the course of economic development. In spite of the decreasing relative role of agriculture in the economy, the agricultural sector is still important in each of the three candidate countries. In 2007, agricultural value added to GDP represented 6.1% in Croatia, 8.7% in Turkey and 11.0% in the FYR of Macedonia (Table 2).

**Table 2. Agricultural value added to GDP (%)**

	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>
1990	10.9	8.5	18.1
1993	13.9	11.8	16.1
1996	9.3	13.2	17.4
2001	8.4	11.8	9.9
2005	6.5	12.8	10.8
2007	6.1	12.0	10.8
2009	6.7	11.3	9.3

Source: World Bank (2011).

When analysing data, it is worth mentioning that slight variations may be found in the data reported by different sources. For example, in 2007, the share of agricultural value added to GDP for the FYR of Macedonia was 11.0% according to the World Bank (Table 2), while the FAO's AQUASTAT Database (FAO, 2011) reported 12.0%. For the same year, however, there are no such differences in the reported shares of agricultural value added to GDP for Croatia or Turkey.

During the more recent years of European economic recession, the role of agriculture in the economy of the three candidate countries has stabilised or even increased slightly. For instance, in 2009, the share of the agricultural sector in total gross value added (in %) amounted to 6.7% for Croatia, 11.3% for the FYR of Macedonia and 9.3% for Turkey. The increase or stabilisation of the share of agriculture in the economy implies that agriculture

has played a certain social-buffer role during the economic recession, against rising unemployment and worsening living conditions among the population in rural areas.

### 3.3 Employment in agriculture

Employment in agriculture is analysed as a percentage of total employment in the economy, as well as by gender and the employment of children. Table 3 shows the overall declining share of agriculture in total employment, which varies among the three candidate countries by gender.

*Table 3. Employment in agriculture (% of total employment) by gender\**

	Croatia			FYR of Macedonia			Turkey		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
1990	–	–	–	–	–	–	75.8	33.6	46.9
1996	21.2	18.8	19.9	–	–	–	71.5	31.5	42.8
1999	17.2	16.1	16.6	–	–	–	67.6	30.9	41.4
2002	15.0	15.4	15.2	24.7	23.4	23.9	60.0	24.8	34.9
2005	18.9	16.0	17.3	19.2	19.8	19.5	51.6	21.7	29.5
2007	14.2	12.0	12.8	17.3	18.9	18.2	47.3	19.1	26.4
2008	–	–	–	–	–	–	46.0	19.0	26.2

\* Female employees in agriculture (% of female employment); male employees in agriculture (% of male employment); employment in agriculture (% of total employment)

Source: World Bank (2011).

In Croatia, which has the lowest share of employment in agriculture, the proportion of female employment in agriculture is slightly higher than the share of male employment. Turkey is most notable with respect to its substantial share of female employment in agriculture, but the share of women engaged in agriculture has declined markedly during the last two decades. This trend is indicative of both considerable changes in the participation of women in the agricultural labour market as well as a major restructuring of overall female employment and the labour market in Turkey. Meanwhile, a switch from a larger share of female to a larger share of male employees in agriculture has taken place in the FYR of Macedonia (see also Janeska and Bojniec, 2011).

There is no data on child employment in agriculture for Croatia or the FYR of Macedonia. For this reason, Table 4 solely presents data on child employment in agriculture for Turkey. The proportion has been rather high, particularly for the female population.

*Table 4. Child employment in agriculture in Turkey (% of economically active children aged 7-14)*

	Female	Male	Total
1999	83.4	–	28.3
2006	11.2	21.4	27.0

Source: World Bank (2011).

### 3.4 Labour productivity in agriculture

Agricultural labour productivity, which is analysed by value added per worker in agriculture, has increased in each of the candidate countries. In 2008, agricultural value added per worker in constant 2000 US\$ was \$17,835.56 for Croatia, \$5,165.40 for the FYR of Macedonia and \$3,326.01 for Turkey (Table 5). These figures indicate substantial differences in agricultural labour productivity among the three countries. Value added per worker in

Croatian agriculture was more than three times that in the FYR of Macedonia and around five times that in Turkey.

*Table 5. Agricultural value added per worker (in constant 2000 US\$)*

	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>
1992	5,543.3	2,413.4	2,274.4
1996	6,105.4	2,558.1	2,426.3
2001	9,738.0	3,093.7	2,588.1
2005	16,123.4	5,643.9	3,145.9
2008	17,835.6	5,165.4	3,326.0

Source: World Bank (2011).

### **3.5 Rural and urban population**

Between 1975 and 1986, a switch took place in the three candidate countries from a predominately rural to a mainly urban population. This transformation in the rural–urban population structure largely took place in parallel with extensive labour migration flows from the three candidate countries to Western Europe. An example in this regard is labour migration from Turkey to Western Europe, which was particularly pronounced during the years 1960–74 (Akgündüz, 2008). There were rather similar labour migration flows abroad between the mid-1960s and mid-1970s from Croatia and the FYR of Macedonia to Western Europe.

The switch from a mostly rural to a mostly urban population happened in the mid-1970s in the FRY of Macedonia, at the start of the 1980s in Croatia and in the mid-1980s in Turkey (Table 6). Later, the process of de-ruralisation of the population was fastest in Turkey, where the decline in the share of the rural population was from around 48% in the mid-1980s to 30.9% in 2009. Also in 2009, the share of the rural population was 32.6% in the FYR of Macedonia and 42.5% in Croatia. Therefore, more than two-thirds of the total population in the FYR of Macedonia and Turkey was urban.

*Table 6. Rural and urban population (% of total)*

	<b>% of rural</b>			<b>% of urban</b>		
	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>
1960	69.8	66.0	68.5	30.2	34.0	31.5
1965	65.0	59.6	65.8	35.0	40.4	34.2
1970	59.8	52.9	61.8	40.2	47.1	38.2
1975	54.9	49.4	58.4	45.1	50.6	41.6
1980	49.9	46.5	56.2	50.1	53.5	43.8
1985	47.7	44.3	47.6	52.3	55.7	52.4
1990	46.0	42.2	40.8	54.0	57.8	59.2
1995	45.1	39.7	37.9	54.9	60.3	62.1
2000	44.4	37.1	35.3	55.6	62.9	64.7
2005	43.5	34.6	32.7	56.5	65.4	67.3
2009	42.5	32.6	30.9	57.5	67.4	69.1

Source: World Bank (2011).

In addition to labour flows from rural areas to other countries, the rapid transformation from a rural to an urban population (particularly in Turkey and the FYR of Macedonia) has been driven by a low level of labour productivity and a surplus of labour in agriculture, along

with a lack of non-agricultural employment opportunities in rural areas. Meanwhile, there has been fast growth in some of the major cities in Turkey, such as Istanbul, Ankara and Izmir, while the relatively fastest growth in the FYR of Macedonia has been achieved by rapid urbanisation and expansion of the capital, Skopje.

During the last two decades, the share of the rural population in Croatia has declined slightly. Croatia, in comparison with Turkey and the FYR of Macedonia, has experienced a more balanced, polycentric development between rural and urban areas. This implies that the creation of non-agricultural employment opportunities in rural areas has been important to making the rural labour market attractive to the younger and educated population, and motivating them stay or return to rural areas after completing higher education.

According to interviews of experts conducted in the three candidate countries, the rural labour market continues to be less attractive to the younger and educated population in both Turkey and the FYR of Macedonia. For the FYR of Macedonia, a particularly significant factor is the low level or inexistence of proper employment opportunities, even for agricultural experts, unless they are private entrepreneurs or start agricultural or other businesses in rural areas (see also Janeska and Bojniec, 2011).

### 3.6 Literacy and educational attainments

Each of the candidate countries has made efforts to improve both literacy and the educational attainments of the population. Table 7 presents the literacy rates for youth (literacy rate of youth as a % of persons aged 15-24) and adults (literacy rate of adults as a % of persons aged 15 and older). The literacy rate for youth is close to 100% in Croatia and slightly less in the FYR of Macedonia. Turkey has made significant progress in the literacy of youth, and the same for adults with time lags.

Table 7. Literacy rates, total\*

	Croatia		FYR of Macedonia		Turkey	
	Youth	Adult	Youth	Adult	Youth	Adult
1975	–	–	–	–	80.1	61.6
1985	–	–	–	–	90.9	76.0
1990	–	–	–	–	–	79.2
1991	–	96.7	–	–	–	–
1994	–	–	–	94.1	–	–
2001	99.6	98.1	98.7	96.1	–	–
2004	–	–	–	–	95.6	87.4
2007	–	–	–	–	96.4	88.7
2008	99.6	98.7	98.7	97.0	–	–

\* Literacy rate, youth total (% of persons aged 15-24); literacy rate, adult total (% of persons aged 15 and older).

Source: World Bank (2011).

During the last decade, school enrolment in tertiary education has almost doubled in each of the candidate countries (Table 8). While the school enrolment in tertiary education has varied among the candidate countries – being highest in Croatia, followed by the FYR of Macedonia and then Turkey – owing to the different initial levels, the dynamic patterns over the last two decades have tended to be alike in terms of increasing enrolment in tertiary education. While this evidence is not presented separately for the urban and rural populations or for agriculture, it is likely that agriculture and rural areas have experienced similar development patterns. This is particularly the case where there has been an available supply of such education with opportunities for enrolment in rural environments or in areas closer to urban ones, which is important for the demand for higher or tertiary education. It



has also been underlined by experts from these candidate countries that education improves not only the knowledge, but also the flexibility and mobility of agricultural and rural populations. More specifically, higher levels of education can provide opportunities for migration from rural to urban areas or abroad in cases of limited employment opportunities in rural areas or in general in a country.

*Table 8. School enrolment, tertiary (% of gross)*

	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>
1975	–	–	6.7
1985	–	24.7	8.4
1990	22.7	18.6	12.0
1995	26.5	18.6	18.4
2000	30.8	22.6	23.2
2005	43.9	29.8	31.5
2008	47.0*	40.4	38.4

\* 2007 data.

Source: World Bank (2011).

### **3.7 Unemployment**

Since the mid-1980s, the rates of unemployment in Turkey have been less than or in the region of 10% (Table 9). In the mid-1990s, they were close to or slightly higher than 10%. No major differences have been reported in the rates of unemployment between the male and female labour forces. Meanwhile, the FYR of Macedonia has experienced relatively higher rates of unemployment, which have been a somewhat higher for the female than the male labour force. The rates of unemployment have been particularly high in more rural regions, where there is a lack of employment opportunities (Janeska and Bojnec, 2011). During the last decade, Croatia has considerably reduced its rates of unemployment, which have been slightly higher for the female than the male labour force.

*Table 9. Unemployment rates (%)\**

	<b>Croatia</b>			<b>FYR of Macedonia</b>			<b>Turkey</b>		
	<b>Female</b>	<b>Male</b>	<b>Total</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>	<b>Female</b>	<b>Male</b>	<b>Total</b>
1997	10.4	9.5	9.9	40.8	33.0	36.0	7.8	6.5	6.8
2001	21.3	19.7	20.5	32.0	29.5	30.5	7.5	8.7	8.4
2005	13.8	11.6	12.6	38.4	36.5	37.3	10.3	10.3	10.3
2008	10.0	7.0	8.4	34.2	33.5	33.8	9.4	9.4	9.4

\* % female labour force, % of male labour force and % of total labour force, respectively.

Source: World Bank (2011).

### **3.8 Rural poverty and living conditions in rural areas**

More than a quarter of the population in these three candidate countries lives below the poverty line. For example, in 2008, the at-risk-of-poverty rate before social transfers was 25.5% of the population in Croatia and 26.1% of the population in Turkey (Eurostat, 2011).

The poverty headcount ratio at the national poverty line (% of the population) was much lower in Croatia than in the FYR of Macedonia or in Turkey (Table 10). At the same time, as can be seen from Table 11, the poverty headcount ratio at the rural poverty line (% of the rural population) for both the FYR of Macedonia and for Turkey was higher than the poverty headcount ratio at the urban poverty line (% of the urban population). This implies that in rural areas, along with agricultural development there is a need to foster non-agricultural activities that will help create employment opportunities in other sectors, and thus provide

additional household income and the financial means for survival, as well as more sustainable economic development.

*Table 10. Poverty headcount ratio at the national poverty line (% of the population)*

	<b>Croatia</b>	<b>FYR of Macedonia</b>	<b>Turkey</b>
1994	–	–	28.3
2002	11.2	21.4	27.0
2004	11.1	–	–

Source: World Bank (2011).

*Table 11. Poverty measures for the FYR of Macedonia and Turkey*

	<b>FYR of Macedonia</b>		<b>Turkey</b>
	<b>2002</b>	<b>2003</b>	<b>2002</b>
Poverty gap at the national poverty line (%)	–	6.7	0.3
Poverty headcount ratio at the national poverty line (% of population)	21.4	21.7	27.0
Poverty gap at the rural poverty line (%)	–	6.5	–
Poverty headcount ratio at the rural poverty line (% of rural population)	25.3	22.3	34.5
Poverty headcount ratio at the urban poverty line (% of urban population)	–	–	22.0

Source: World Bank (2011).

Different living conditions between rural and urban areas in terms of push or pull factors for labour migration are further revealed by data on access to improved water sources and upgraded sanitation facilities in rural areas. As can be seen from Table 12, almost all of the rural population in Croatia has access to upgraded sanitation facilities. This is less so for the FYR of Macedonia and even less for Turkey. For the latter, however, living conditions with upgraded water sources and sanitation facilities in rural areas have improved over time. Although rural areas in Croatia have attractive living conditions in comparison with the situation in the FYR of Macedonia and Turkey, Grgić et al. (2010) still found (dis)satisfaction among the rural population with their quality of life and intentions to migrate from rural areas in Croatia. They argue that the major hardships of rural life in Croatia are of an economic nature – a lack of employment opportunities, inadequate choice of professional employment opportunities and lower incomes compared with cities and urban areas.

*Table 12. Improved water sources and sanitation facilities in rural areas (% of rural population with access)*

	<b>Croatia</b>		<b>FYR of Macedonia</b>		<b>Turkey</b>	
	<b>Water</b>	<b>Sanitation</b>	<b>Water</b>	<b>Sanitation</b>	<b>Water</b>	<b>Sanitation</b>
1990	–	–	–	–	73	66
1995	97	99	–	–	79	68
2000	97	99	99	82	85	71
2005	97	99	99	82	92	73
2008	97	99	99	82	96	75

Source: World Bank (2011).

## **4. Determinants of rural labour market developments**

### ***4.1 Macroeconomic, rural and agricultural features of the labour market***

Macroeconomic settings, particularly output growth and employment opportunities in non-agricultural activities, are important for rural and agricultural labour markets. Higher unemployment rates in rural areas and in the economy as a whole, such as in the FYR of Macedonia, result in limited employment opportunities in non-agricultural sectors for a surplus of agricultural and rural labour in rural areas. High unemployment rates and difficulties in finding employment can be influential push factors in job search and labour flows outside the country, particularly among the younger and more educated segments of the population.

The dominant farm structure in the three candidate countries is small, family-owned and -operated farms. In terms of their output, they vary from small-scale and subsistence holdings for home food consumption to slightly larger farms, which can be more specialised, commercial entities. In the FYR of Macedonia and Turkey, more labour-intensive horticultural production is an important feature of agricultural output. Such production also exists in Croatia, but a smaller number of large-scale agricultural enterprises specialising in crop (notably fruit) production have a significant presence in the sector, which were formerly state farms (referred to as ‘socially-owned enterprises’) and which rent land from the state’s agricultural land fund. To a lesser extent, a modest number of similar, large-scale agricultural enterprises also operate in the FYR of Macedonia, but in addition to crops they are particularly engaged in producing fruit, grapes, wine and other horticultural outputs.

In each of the three candidate countries, individual family farms are inherited from the owner without the beneficiary being required to pay the sales value. In Turkey, there are also farms belonging to multiple households, but these are on an inherited basis, while the growth of individual family farms takes place either through selling, renting or different kinds of sharecropping arrangements. In the FYR of Macedonia and Croatia, sharecropping arrangements are less common or even inexistent forms of farm operations.

Part-time farming is a phenomenon that is closely associated with local, non-agricultural employment opportunities. For example, in Croatia, 80% of farms are operated part-time. Part-time farming can be seen in two ways: first, as an additional source of income for agricultural households, which may be used for agricultural investment. Second and more likely, is that it is a gradual step away from agricultural production, with labour flowing outside agricultural household employment and reductions in agricultural investment when the off-farm incomes of farm households increase. In the latter case, at a certain income level farm households may decide to stop farming either by renting or selling specific farm assets for agricultural production. In each of the three candidate countries part-time farming is a feature of the agricultural sector. The farm operator may also have an off-farm job position outside the agricultural household and sector. There is limited exact evidence about the share of part-time farms, but it seems to be significant in each of the three candidate countries. In Croatia, distances between local towns are relatively small and non-agricultural activities have developed in rural areas. Part-time farming is likewise a distinct aspect of the sector in the FYR of Macedonia and Turkey, but is most probably associated with rural or regional towns or urban centres, because non-agricultural employment opportunities in rural areas across these countries as a whole are less developed. This can also be related to the specialisation of output or the output mix.

### ***4.2 Labour legislation***

The process through which an employer hires or fires an employee throughout the economy and specifically in the agricultural sector is easy or relatively easy in the FYR of Macedonia. The labour market in general is similarly flexible in Croatia and Turkey, but in Croatia it seems closer to neither easy nor difficult. In the agricultural sector, however, in each of the

countries the prevailing type of employment is that on individual family farms, through the labour of family members or self-employment by the head of the household.

The candidate countries have been adjusting their labour legislation to that of the EU. This particularly holds for Croatia, which is expected to be the first to become an EU member state. In Croatia and in the FYR of Macedonia, there is legislation governing the maximum number of hours that can be worked by an employee, which is 42 hours per week (or 184 hours per month or 2,100 hours per year) in Croatia and around 40 hours per week in the FYR of Macedonia. The legislation governing the maximum number of hours worked per week applies to employees across the economy, including the agricultural sector, which in Croatia extends to 52 hours per week for seasonal work. Yet like many other countries, on individual family farms (particularly livestock farms) there are no strictly set working hours per day, week or month. Individuals tend to work more hours per week on crop and horticultural farms when there are peak demands for labour, especially during the high season and harvesting periods, while during other periods of the year, for instance winter, they are more likely to work fewer hours per week. Except in Croatia, existing employment legislation does not specifically cover the health and safety of farm employees on individual family farms.

### ***4.3 Wage setting and employment contracts***

In the FYR of Macedonia, there is no minimum wage for employees, particularly not on individual family farms, which are generally small and some of which are subsistence in nature. Agricultural employees' wages are determined by decentralised, individual bargaining. In 2008, Croatia introduced a minimum wage for employees, but there is not a specific, agricultural minimum wage for agricultural employees. The legislation does not allow for different levels of minimum wages according to the age or experience of employees. Agricultural employees' wages are determined by a mixture of decentralised, individual bargaining and centralised bargaining.

Except for a formal contract in agricultural enterprises in Croatia, the typical contract of work among employees in the agricultural sector (even in agricultural enterprises in the FYR of Macedonia) is an informal verbal contract, in other words, a gentleman's agreement. The informal verbal contract is widespread in Turkey, and is found mostly among family members working on individual farms in Croatia and the FYR of Macedonia. At some of the larger and specialised family farms in Croatia, formal contracts might be used – they are especially used for labour hired outside the family members of the individual farm. Seasonal agricultural work is often engaged through an informal verbal contract. Owing to the absence of a formal contract, as noted for the FYR of Macedonia, for agricultural employees the nature of employment is very insecure, while in Croatia, it is neither secure nor insecure.

While in Turkey farm employees can have a share of the output/profits of the farm business, the sharecropping system is not practised in the FYR of Macedonia. Nor is it a common practice on individual family farms or other agricultural enterprises in Croatia, except where farm employees in the latter can have shares in the annual profits, which is rather rare.

### ***4.4 Unions***

Only a small percentage of farm owners or operators in the agricultural sector are represented by a union. Except for Croatia, employees in the agricultural sector, however, are typically not represented by a labour union.

In the FYR of Macedonia, there is no specific legislation that covers the employment rights of agricultural workers. The situation is similar in Croatia and Turkey. In Croatia, in practice rights relate to employment in agricultural enterprises along with formal contractual work on individual family and other farm operations.

#### **4.5 Taxation and social benefits**

Farm employees are eligible for unemployment benefits if they leave the agricultural sector and become unemployed and they are registered as such. Yet in the FRY of Macedonia as well as in Turkey, a great majority are not registered and thus they do not receive unemployment benefits for what is in essence hidden unemployment. The duration of unemployment benefits varies among the candidate countries. In Croatia, it is from 90 to 450 days for those who worked more than 25 years. Farm operators are not eligible for these types of unemployment payments if they leave the agricultural sector and become unemployed, but they are eligible for income support (other than CAP payments) while working in the agricultural sector. Farm employees are not eligible for unemployment payments if they leave the agricultural sector and become unemployed. On the other hand, concerning farm operators, in the case of the FYR of Macedonia it is more common that benefits are paid for a year or less to those operators who are eligible for this type of benefit if they leave the agricultural sector and become unemployed. Farm operators in the FYR of Macedonia are not eligible for income support payments (other than agricultural support payments) while working in the agricultural sector.

In the FYR of Macedonia, taxes on employment income in the economy represent less than 10% of tax revenue, while in Croatia they represent less than 3%. The great majority of tax revenue comes from taxes on consumption.

Unlike Croatia, where there are special pension provisions for farm operators, there are no special pension provisions for farm operators in the Republic of Macedonia or in Turkey that differ from those of self-employed persons working in the rest of the economy, nor are there subsidies to help fund farm operators' pensions. Still, in the candidate countries there is at least some legislation for the mandatory provision of pensions for farm employees. For example, in the FYR of Macedonia, pension provisions for farm employees are the same, irrespective of whether individuals are engaged in agricultural activities or in diversified, on-farm activities that are not purely agricultural, such as farm tourism. This is different in Croatia, however. At the same time, unlike Croatia, in the FYR of Macedonia as well as in Turkey there is no legislation for the mandatory provision of pensions for members of the farm operator's household who work on the farm without a formal employment contract.

#### **4.6 Education and training**

In each of the three candidate countries there is a system of specific agricultural qualifications for farmers or farm employees. Agricultural education and research programmes are available from secondary education up to the PhD level, although these qualifications are not compulsory for farmers or farm employees. For instance, for the FYR of Macedonia, typically the highest level of educational attainment for farm operators is slightly more than 14 years of school, meaning primary and secondary education plus a certain amount of higher education. Nevertheless, there are often managers or operators in agricultural enterprises who have university education. Most recently, the younger and more educated can also be found on larger, individual farm operations (see also Janeska and Bojnec, 2011, for the FYR of Macedonia).

By comparison, in Turkey the level of educational attainment is slightly lower and in Croatia it is somewhat higher. So far, in practice there are few incentives in place to encourage farmers to obtain specific agricultural qualifications. For example in Croatia, the agricultural advisory services provide incentives for attaining new knowledge on technical improvements in farming and give technical assistance to farmers to improve the efficiency of agricultural and supplementary activities in agricultural households and in the economy. The skills and educational levels of agricultural employees are ranked by country experts as lower than those of non-agricultural workers.

#### **4.7 Labour mobility**

Some active labour market measures to provide farm operators with skills in non-agricultural occupations and thus enable labour reallocation from agriculture to non-agricultural activities exist in the candidate countries. For instance, in the FYR of Macedonia, the employment agency provides active labour market measures ranging from programmes for self-employment, vocational training and retraining, knowledge and skills (such as foreign languages and computer skills) to subsidised employment. Active labour market measures additionally provide employees with skills to work in agriculture. Similar measures can be found in Croatia and Turkey (for Turkey, see Ercan, 2011).

Since the 1960s, the three candidate countries have been known by their labour outflows abroad, particularly to Western Europe. Although the employment of workers from other EU member states in the agricultural sector in the three countries has been very uncommon or relatively uncommon, in Croatia in particular it has been taking place in some parts of the agricultural labour market, especially during peak seasonal and harvesting periods.

Thus, while the employment of workers from outside the EU in the agricultural sector of the three countries has been very uncommon or not been very widespread, it has indeed been known to occur. In the FYR of Macedonia, the share of foreign workers employed in the agricultural sector has been decreasing against a background of increasing local unemployment and a lack of employment opportunities in the local rural labour markets. At the same time, during the last decade the fall in the share of foreign employees in the agricultural sector of the FYR of Macedonia has been associated with improvements in the economic situation and employment opportunities in the home countries of immigrants, mainly in neighbouring Albania and Kosovo. On the other hand, in Croatia the share of foreign workers employed in the agricultural sector has been increasing, because of the relatively small interest among the domestic population in working as shepherds or undertaking similar activities in agriculture and rural areas.

#### **4.8 Living conditions**

Living conditions in villages and rural areas (except in tourist resorts) are seen as less favourable vis-à-vis urban areas. This finding even holds for Croatia (Grgić et al., 2010), which looks best in comparison with the FYR of Macedonia and Turkey. This is an additional push factor for young and educated people not only from agriculture, but also from rural areas.

### **5. Conclusions and policy implications**

Structural changes in the labour market have had socio-economic implications for farm households and for agricultural and rural labour markets in the candidate countries. Labour in agriculture has been substituted by a greater use of capital equipment and more capital-intensive technologies. Along with different structures of population and labour, in terms of overall population size Turkey is larger than Croatia and especially larger than the FYR of Macedonia. Because of its large size, its historical and institutional settings and its cultural rules, Turkey has also experienced variations in agricultural and rural labour market developments within the country by region that are even more significant than those within the FYR of Macedonia or Croatia. Thus, the similarities and differences in history, tradition and cultural factors among the three candidate countries are likely to affect their agricultural and rural labour markets. Employment in agriculture is lowest in Croatia and higher in the FYR of Macedonia and notably in Turkey. The demographic and socio-economic characteristics of rural labour markets likewise differ by education and gender. Nevertheless, the development patterns in the agricultural and rural labour markets of these countries tend to converge more than diverge.

In addition, each of the three countries has experienced a considerable outflow of labour from agriculture and rural areas to urban areas as well as to Western countries. Migration

abroad is one of the common features of the three candidate countries. These migrations to Western Europe, particularly to Germany, were substantial in the mid-1960s and 1970s, and to a lesser extent during the 1980s. This means that they took place before the transition began in the CEECs and Western borders gradually opened for labour from other transition CEECs. The inflows of remittances and pensions in the three candidate countries from abroad to rural areas may still be important for rural welfare and wellbeing in each of the countries.

Therefore, in spite of substantial differences in economic size and certain cultural aspects, the three countries share some similar developments in agricultural and rural labour markets. Some of these are found in the typical patterns of agricultural and rural economic development that have also been observed in most other transition CEECs. Others are rooted in common characteristics of the former Yugoslav countries as well as Greece and Turkey, especially with regard to international labour migration from rural areas to Western Europe and overseas.

In the agricultural and rural labour markets in the three candidate countries, labour laws have been enforced as part of these countries' alignment with the EU. Agricultural and rural development is needed to address and reduce various forms of rural poverty, which have been mitigated by social transfers and inflows of remittances from abroad. Yet it is necessary to ensure that local development takes place and that different assets in agricultural and rural areas are utilised to incorporate large segments of the rural population in sustainable rural development.

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## Comparative Analysis of Factor Markets for Agriculture across the Member States

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### The Factor Markets project in a nutshell

<b>Title</b>	Comparative Analysis of Factor Markets for Agriculture across the Member States
<b>Funding scheme</b>	Collaborative Project (CP) / Small or medium scale focused research project
<b>Coordinator</b>	CEPS, Prof. Johan F.M. Swinnen
<b>Duration</b>	01/09/2010 – 31/08/2013 (36 months)
<b>Short description</b>	<p>Well functioning factor markets are a crucial condition for the competitiveness and growth of agriculture and for rural development. At the same time, the functioning of the factor markets themselves are influenced by changes in agriculture and the rural economy, and in EU policies. Member state regulations and institutions affecting land, labour, and capital markets may cause important heterogeneity in the factor markets, which may have important effects on the functioning of the factor markets and on the interactions between factor markets and EU policies.</p> <p>The general objective of the FACTOR MARKETS project is to analyse the functioning of factor markets for agriculture in the EU-27, including the Candidate Countries. The FACTOR MARKETS project will compare the different markets, their institutional framework and their impact on agricultural development and structural change, as well as their impact on rural economies, for the Member States, Candidate Countries and the EU as a whole. The FACTOR MARKETS project will focus on capital, labour and land markets. The results of this study will contribute to a better understanding of the fundamental economic factors affecting EU agriculture, thus allowing better targeting of policies to improve the competitiveness of the sector.</p>
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<b>Partners</b>	17 (13 countries)
<b>EU funding</b>	1,979,023 €
<b>EC Scientific officer</b>	Dr. Hans-Jörg Lutzeyer

