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CHANGES IN LABOUR FORCE RESOURCES IN AGRICULTURE IN THE CENTRAL AND EASTERN EUROPEAN COUNTRIES AS A RESULT OF ACCESSION TO THE EUROPEAN UNION

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ABSTRACT. One of the main problems of agriculture in the CEEC, namely the level of employment in agricultural sector at the moment of their accession to the EU was presented in the report. The paper characterizes also the changes that have already happened and will have to happen in future. The level of employment in agriculture, share of agriculture in employment and the number of employed on 100 ha of UAA in CEEC and EU-15 were compared.

Key words: Central and Eastern European Countries, structural changes, accession to the EU, changes in employment in agricultural sector

Introduction

Accession of CEEC to EU was an important step in the development the agricultural sector of these countries, but it also posed many challenges. Development of agriculture is governed by some universal rules. These rules imply increasing concentration of production and farms, reduction of the percent of people employed in agriculture, reduction of the contribution of agriculture in GDP, increasing efficiency of agricultural production and increasing competitiveness of agricultural-food products on the market (**Kolarska-Bobińska et al.** 2001). The character of the EU CAP implies a wide range of changes required in the agricultural sector and rural areas. The outcome of the changes will affect the whole society (**Szczepaniak** 2001). It is expected that the standard of living of the people and income situation of farmers will gradually improve, although it is not going to be an easy and fast transformation. A significant improvement in the standard of living of farmers requires a long-term policy of financial support (**Walkowski** 2004). The main condition of modernization of the rural life is maintenance of stable and long-term economic growth (**Poczta** 2001) as in each country and at each stage of historical development the economy determines changes in the agriculture

and in the rural areas (Tomczak 2001). Strong economy is fundamental for structural transformation in agriculture, including those in the agrarian structure being a consequence of the changes in the structure of employment of people living in rural areas (Poczta 2001). Well-known consequences of economical development are the outflow of people from the country to cities, increased significance of industrial means in agricultural production, modernization in the structure and organization of farming, professionalization of work in agricultural production and socio-economical changes in the rural areas (Tomczak 2001). These changes can be incited only by growth in the economical areas outside agriculture. Agriculture by itself has no chance of effective use of the agricultural production potential or human resources presently working in this branch of economy. The rural areas are not able to make up for the delay of their development without the assistance of the financial means from the redistribution of the national product obtained in the other areas (Leopold 2001). The only solution is to increase the rate of transformation and restructuring the agriculture as it is the way to reduce the number of people employed in the agriculture, increase the efficiency of work and the gross production (Tomczak 2001).

Materials and methods

The aim of the report is to present the level of employment in agriculture of the Central and Eastern European Countries at the moment of their accession to EU and to characterize the changes that have already happened and will have to happen in future. The level of employment in agriculture, share of agriculture in employment and the number of employed on 100 ha of UAA in CEEC and EU-15 were compared. The report has been prepared on the basis of literature and detailed statistical data of EU for all analysed countries for the years 2003-2005.

Results

Structural changes

Structural transformations in the sphere of agriculture and in the rural areas are crucial to ensure profitability and competitiveness of agriculture. Their realization implies the need for the following parallel processes: restructuring and modernization of agriculture aimed at improvement of agrarian structure and enhanced competition of agriculture in a global sense, multifunctional development of the country permitting the outflow of rural population to other professions, creation of work and life conditions of rural population corresponding to civilization standards, support of alternative income resources next to simultaneous development of technical and social rural infrastructure. In the perspective of the next few years the agricultural development will be substantially affected by its structural revamping, development of technical and institutional infrastructure, increase in ecological awareness of agricultural production together with environment protection problems (Siekierski 2002). Global experience has shown the

importance of the temporal aspect of structural and production changes in the agriculture, even in the conditions most favourable for the transitions (**Tomczak** 2001). The structural changes comprise the transformations in ownership, technology of production and organization and institutions. The state policy should be oriented towards acceleration of the beneficial tendencies strengthening the structural changes in agriculture and rural areas such as rationalization of investment increase of production efficiency, development of infrastructure and increased dynamics of international trade (**Siekierski** 2002). The structure of the production potential of agriculture changes mainly as a result of transformations in the whole national economy (**Woś** 2004); such changes must be treated as a natural process of adaptation to the overall development of the country (**Leopold** 2002). The expected outcome is a continuous reduction in the number of small farms and concentration of resources being both the reason for changes in the structure of employment and its consequence (**Tomczak** 2001). Agriculture in itself has low potential for structural changes and the majority of changes it undergoes has been stimulated by development of the other sectors of economy. By absorption of land and human resources these sectors induce structural changes in agriculture and indirectly in whole national economy (**Woś** 2004). These processes are permanent and to a high degree autonomous. Changes in the agricultural structure derive from those in the structure of activity of people employed in agriculture (**Leopold** 2002). On the background of the dynamic changes in the other sectors, agriculture seems rather resistant to structural changes. The transitional progress in the country is determined by introduction and diversification of alternative types of economic activities. The hindrances slowing down the transformations include: low efficiency of private capital investment in economic activity in the rural areas, high price of foreign capital, very low level of demand on products and services and low level of initiative of rural population (Przemiany... 2000). Low demand on labour work related to agriculture is a serious factor drawing back the structural changes and limiting the income of those working in agriculture. Relative abundance of labour in the country at increasing pressure on growing work efficiency will force greater use of work force coming from the country, which may favour development of small firms dealing with services and all kinds of crafts. The incentives stimulating development of activities not directly related to farming significantly influence the transformations in the agrarian structure and improvement in the lifestyle and standard of living in the rural areas. The most important problem is to reduce the number of people employed in agriculture and the number of farms. The evolution from poor to developed countries observed on many examples implies a continuous decrease in the number of individual farms, reaching new relations in the production potential and increased level of production leading to increased income. The process depends on the pace of development of the other sectors of national economy and because of the inert resistance of agriculture it is often related to social problems (**Tomczak** 2001).

Changes in labour resources

Surplus of labour force engaged in agricultural production is one of the basic development limitations of agricultural sector. Excessive employment slows down the pace of improvement in agrarian structure, increase in farming efficiency or technological progress, which induces low income and incomplete use of the potential (**Wróblewska** 2004).

According to European Commission (EC) data, the number of people employed in Polish agriculture in 2004 was 2.4 millions, which was much more than in any other country from Central and East European Countries (CEEC), as it made 70.4% of the overall employment in agricultural sector of CEEC and 38.8% employed in agriculture in EU-15 (Table 1). From among the European countries accepted to EU in 2004 the lowest number of those employed in agriculture was in Estonia, reaching only 32 thousand. In general, the number of people employed in agriculture in Eastern and Central Europe is high in these countries in which agriculture is a buffer zone on the work market. High level of employment in agriculture was the reason of concern in EU as to the possibilities of quick structural changes in these countries (Burnat and Pietera 2001).

Table 1

Employment in agriculture, share of employed in agriculture and number of employed on 100 ha of UAA in CEEC and in EU in 2004
Zatrudnienie w rolnictwie, udział zatrudnionych w rolnictwie oraz ich liczba na 100 ha UR w krajach EŚiW i w UE w 2004 r.

	Employment in agriculture (thousands of AWU) Zatrudnieni w rolnictwie ^a (w tys. AWU)	Share of agriculture in employment (%) Udział rolnictwa w zatrudnieniu ogółem (%)	Employed in agriculture on 100 ha of UAA Zatrudnieni w rolnictwie na 100 ha UR
Czech Republic Czechy	208	4.4	5.73
Estonia	32	5.5	4.16
Lithuania Litwa	234	16.3	8.99
Latria – Łotwa	136	13.3	8.28
Poland – Polska	2 409	17.6	14.78
Slovakia Słowacja	109	5.1	5.63
Slovenia Słowenia	91	9.7	18.53
Hungary Węgry	205	5.3	3.50
CEEC – EŚiW	3 424	9.7	10.30
EU-15	6 208	3.8	4.81
EU-25	9 653	5.0	5.94

^aIn agriculture, forestry, fishery and hunting.

Source: own elaboration based on: Agricultural situation... (2005).

^aW rolnictwie, leśnictwie, łowiectwie i rybołówstwie.

Źródło: opracowanie na podstawie: Agricultural situation... (2005).

A comparison of the contribution of those employed in agriculture in CEEC to that in EU-15 reveals great differences. In EU-15 countries the average contribution of agriculture on the employment market in 2004 was 3.8%, while in CEEC the lowest contribution of those working in agriculture (about 4-5%) was in Czech Republic, Slovak Republic, Hungary and Estonia and the highest in Poland, Lithuania and Latvia (15.7% on average). In the latter countries the level of those employed in agriculture exceeded the limit of 10-15% and in some of them reached almost 20% – so 4 times greater than the level in EU-25 and 5 times greater than in EU-15. This situation is a consequence of agrarian overpopulation and high number of small farms (**Poczta** 2003, *Spójna polityka...* 1998). Thus with the accession of new countries in 2004 the number of persons working in agriculture has almost doubled with respect to those working in this sector in EU-15.

The agriculture of some Central and Eastern European countries is still as buffer of labour force. A convenient index to illustrate the over-employment in agriculture is the number of persons working in agriculture per 100 ha of UAA. This parameter is rather objective and permits comparisons on global scale (**Grochowski** and **Woś** 1979). In the CEEC in 2004 the average number of people employed in agriculture per 100 ha of UAA was 10.3, which was over twice higher than in EU-15. The highest values of this index of 19 and 15 persons were in Slovenia and Poland, respectively. In Lithuania and Latvia this index was of 9 persons per 100 ha of UAA, while in Czech Republic and Slovakia it was 6, so close to the mean of EU-25. The lowest value of this index was in Hungary (3.5) and it was very close to the mean value for EU-15. High values of this index follow from a high number of small farms, low technological level of work on farms, unfavourable demographic structure and historical conditions.

Of key importance in the process of economical restructuring are the changes in the structure of employment. In most of the Central and Eastern European countries the situation on the job market has become an important economical and political problem. Development of the whole economy, agriculture included, requires first of all a significant reduction of the employment in agriculture stimulated by the access to modern technology, radical change in the agrarian structure and shift of labor from farming to other sectors especially to services and in particular – services of agriculture.

After the accession to EU in all CEEC a tendency to reduce the employment in agriculture was observed (Table 2). With reference to the situation in 2003, in 2005 the greatest reduction of employment in agriculture, forestry, fishery and hunting occurred in Poland – by about 30 thousands and in Lithuania – by about 20 thousands AWU (annual work unit). A comparable decrease in employed occurred in these years in Czech Republic, in Latvia and in Hungary – on average by 11.7 thousands AWU. In the same period the smallest decrease in the employment in the agricultural sector was noted in Estonia and in Slovakia by 3 and 4.5 thousands AWU, respectively. Analysis of the above phenomena in relative numbers shows that the greatest reduction in the employment in agriculture occurred in the Baltic countries and reached on average 8.9%. A comparable reduction in the employment in this sector was noted in Slovenia and Czech Republic – on average by 6.4%, and the lowest in Poland – only of 1.2%.

Over the two years analysed (2003-2005) the proportion of those employed in agriculture to the total employed also changed. Again the greatest changes were observed in Lithuania and Latvia – on average of 1.6% points, while in Slovenia, Estonia and Poland this proportion changed on average by 0.6% points and in Czech Republic, Slovakia and Hungary – only by 0.3% points. The main reasons for such a low reduction

Table 2

Changes in employment in agriculture in CEEC in 2005 in relation to 2003
Zmiany w zatrudnieniu w rolnictwie krajów EŚiW w 2005 w stosunku do 2003 roku

Kraj Country	Employment in agriculture (thousands of AWU*) Zatrudnieni w rolnictwie (w tys. AWU*)		Share of agriculture in employment Udział rolnictwa w zatrudnieniu ogółem (%)		Change in 2005 in relation to 2003 Zmiana w 2005 w stosunku do 2003 roku		
					employment zatrudnienie		share udział
	2003	2005	2003	2005	thousands of AWU tys. AWU	%	pkt. % % points
Czech Republic Czechy	202.0	189.5	4.3	4.0	-12.5	-6.2	-0.3
Estonia	35.0	32.0	5.9	5.3	-3.0	-8.6	-0.6
Lithuania Litwa	227.0	207.0	15.8	14.0	-20.0	-8.8	-1.8
Latvia – Łotwa	134.8	122.3	13.2	11.8	-12.5	-9.3	-1.4
Poland – Polska	2482.3	2452.3	18.0	17.4	-30.0	-1.2	-0.6
Slovakia Słowacja	109.8	105.3	5.1	4.8	-4.5	-4.1	-0.3
Slovenia Słowenia	92.0	86.0	9.8	9.1	-6.0	-6.5	-0.7
Hungary Węgry	199.8	189.8	5.1	4.9	-10.0	-5.0	-0.3

*AWU – annual work unit.

Source: own elaboration based the data from the Eurostat data base (2006).

*AWU – roczna jednostka pracy.

Źródło: opracowanie własne na podstawie danych z bazy Eurostat (2006).

in employment in agriculture are imbalance between the labour supply and demand on job market, low level of farmers' adaptation to the market demands because of low mobility and inadequate education and unfavourable demographic structure. Changes in the employment in agriculture are prompted by a decreasing demand for workers and increasing efficiency of work (Ohvril 2003). Introduction of new technology and mechanization of agriculture have significantly contributed to a rationalization of work in farming. However, it must be remarked that the specialized types of production and development of non-agricultural economical activity are very slow, which brings regional disparities and lack of balance in the supply and demand of work, leading to increasing unemployment in rural areas, in particular among young people (Simo 2003). According to a general rule of economical development, the technological means needed by the work force employed in agriculture increase, which is accompanied by increased capital and material intensity of agricultural production (Grochowski and

Woś 1979). The slow character of changes in the structure of employment in the agricultural sector follows from the specific features of work in farming such as running family farms, limited job offer, mobility problems and mentality of farmers. Insufficient level of agricultural development and infrastructure in rural areas is a serious obstacle in localization of modern industrial plants in the rural areas. The delay in use of modern technology in farm production does not bring demands for specialist services. The firms that are localized in rural areas are based on outdated and labour-consuming technologies, creating the lowest pay jobs offered to mostly women, young people, low-educated workers and elderly workers. One of the methods proposed to reduce the employment in agriculture is a gradual industrialization of rural areas (**Tendera-Właszczuk** 2001). New principles of shaping the basic economical relations on the food products market and in particular – the price relations – have revealed that the agriculture in itself is not able to induce transformations in the low-efficient agrarian structure, closely related to the possibility of shifting the surplus work force to other sectors of economy. Moreover, with a prolonged delay of changes the situation in agriculture becomes more difficult and diverts off balance in the economical and social areas (**Łuczka-Bakula** 2000). It has been predicted that the rate of reduction in the employment in agriculture will be in future lower than it is at present because the job market is perceived as limiting the changes in the agrarian structure and the increase in efficiency in farming (**Woś** 1999). At present the best solution recommended for the Central and Eastern European Countries is to generate an increase in economy and to increase the job market flexibility so that it would be easier to find a new job for those losing jobs in agriculture (**Rosatti** 2002). The possibilities of employment outside agriculture depend on the current situation on the local job markets and on demographical processes (**Rosner** 2001). Farming will for long remain the fundamental element of rural economy, but its relative weight must weaken in view of increasing significance of other economical and social functions of the country (**Kolarska-Bobińska et al.** 2001). It is beyond doubt that development of extra agricultural activity in rural areas stimulates general progress. Promotion of economical activity not related to agriculture in rural areas is also of importance for modernization of farming, restructuring of agriculture, rational use of work force, increased income and development of rural areas (**Kołodziejczak** 2003). It is known however that the problems of employment in the country cannot be solved by small firms of food product processing, craft or other services or agritourism. Therefore, the crucial issue is creation of work places, which can be provided by industrial plants owned by concerns or large firms, most often with foreign capital (**Poczta** 2001). The main driving force for development of agriculture lies outside it, i.e. in development of industry. Industrialization of the country determines the directions of agriculture development, the possibilities and rate of its modernization and the outflow of labour from agriculture. In the perspective of the nearest few years the employment in agriculture is expected to change radically. It will be a consequence of the necessity of modernization of agriculture and increasing demand for labour in the other than agriculture sectors of national economy. The reduction of employment in agriculture must be accompanied by changes in organization of production first of all in individual farms. Other factors favouring development of jobs outside farming include: improved infrastructure of rural areas and high quality education provided to the rural youth (**Poczta** 2001).

Conclusions

1. The requirement for structural changes in the rural areas is maintenance of a high pace of developmental growth. Advanced general development induces changes in the structure of employment in rural areas as they are related to the conditions of work in agriculture created by overall social and economic status and the situation on markets of agricultural products.

2. Creation of jobs outside agriculture is one of the conditions for reduction of surplus work force in agriculture, concentration of production, availability of land to commercial sector of agriculture and increased productivity in agriculture.

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ZMIANY W ZASOBACH SIŁY ROBOCZEJ W ROLNICTWIE
KRAJÓW EUROPY ŚRODKOWEJ I WSCHODNIEJ
NA SKUTEK AKCESJI DO UNII EUROPEJSKIEJ

S t r e s z c z e n i e

W pracy przedstawiono poziom zatrudnienia w rolnictwie państw EŚiW w momencie akcesji do UE oraz przemiany, które nastąpiły po integracji z UE i które powinny mieć miejsce w przyszłości. Porównano wielkość zatrudnienia w sektorze rolnym, udział rolnictwa w zatrudnieniu ogółem oraz liczbę zatrudnionych na 100 ha UR w krajach EŚiW i UE-15. Wśród analizowanych krajów, które wstąpiły do UE w 2004 roku, rolnictwo polskie charakteryzuje się największym zatrudnieniem, wynoszącym 2,4 mln osób, co stanowi 70,4% ogółu zatrudnionych w sektorze rolnym krajów EŚiW i 38,8% zatrudnionych w rolnictwie UE-15. W państwach Wspólnoty, przeciętny udział rolnictwa w rynku zatrudnienia kształtował się na poziomie 3,8%. W krajach EŚiW najmniejszy udział aktywnych zawodowo w rolnictwie (4,4%) zaobserwowano w Czechach, a największy w Polsce (17,6%). Największymi zasobami siły roboczej w odniesieniu do posiadanej powierzchni UR charakteryzują się rolnictwa słoweńskie i polskie, które ze względu na rozdrobnioną strukturę agrarną zatrudniały w 2004 roku na 100 ha UR odpowiednio 19 oraz 15 osób. Po wejściu do UE we wszystkich analizowanych krajach EŚiW występuje tendencja do zmniejszania zatrudnienia w rolnictwie.