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THE COMPARISON OF SOME SELECTED ASPECTS OF FOREST ECONOMY IN FRONTIER REGIONS OF POLAND, THE CZECH REPUBLIC AND GERMANY

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ABSTRACT

Poland and the Czech Republic are about to join the European Union shortly. This, on the one hand, makes it necessary to undertake appropriate harmonisation measures by these countries and, on the other, creates both justified and unjustified concerns. This study makes a comprehensive attempt at assessing risks of disrupting and upsetting labour markets in forestry in such areas as levels of remuneration and expenditures associated with carrying out individual tasks in forestries of Poland, Germany and the Czech Republic. The performed detailed studies were carried out in frontier areas of the above-mentioned countries.

The obtained results confirmed the existence of considerable disproportions, imbalancies and inconsistencies both in the level of incurred expenditures, levels of employment and remuneration in forestry. This indicates the need to undertake further efforts aiming at levelling off the existing disproportions.

Key words: European Union, forest economy, employment in forestry, harvest costs

INTRODUCTION

Poland's accession to the European Union makes it necessary to undertake many different adjustments, not only in the area of harmonisation of various types of legislation but, first and foremost, improvements in competition conditions existing in this huge market place [2, 3]. Many different researchers point to dangers associated with unequal development of forestry in Poland in comparison with EU member states [1, 4]. However, Poles' main concern appears to be connected with unbalanced conditions of competition (especially in agriculture) and risks of uncontrolled buying out of Polish farmland by foreigners. On the other hand, EU countries are afraid of being flooded by cheap labour from countries, which are about to join the Community.

It is worth emphasising that potential hazards resulting from unbalanced economic and technological development of candidate countries, in comparison with the level of economy in EU member states, will be felt primarily in countries which are about to join the European Union. Their size, in comparison with the area and population of the EU member states, is small and they simply cannot cause any significant disturbances in their economies. However, it is to be expected that in frontier areas, where differences in land prices, levels of remuneration, employment potentials etc. are considerable, mutual impacts can be sizeable and may easily affect decisions of respective communities.

The presented study deals with issues associated with threats of disturbing labour markets in forestry resulting from variations in levels of remuneration and financial expenditures sustained to conduct specific jobs. Detailed studies were carried out in frontier areas in Poland, the Czech Republic and Germany (Saxony) because it is here that the biggest possibilities of enterprise and workforce flows can be expected.

METHODOLOGY AND SCOPE OF INVESTIGATIONS

The source material used to prepare this study comprised the results of investigations carried out jointly by the A. Cieszkowski Agricultural University in Poznań, the Prague Agricultural University and the Polytechnic in Dresden. The applied materials were obtained, primarily, by means of excerption of the required data from available sources. The investigations were carried out in two stages.

The first stage consisted of collecting statistical materials concerning the compared countries and neighbouring regions with the aim to portray trends and tendencies existing in their respective economies and forestries. Data were obtained from archives, statistical yearbooks as well as report materials from forest divisions.

The second stage consisted of the selection of frontier forest divisions and their comprehensive analyses from the point of view of their economy, environment and natural conditions. The performed investigations comprised the total of seven forest divisions: two in Poland, two in the Czech Republic and three forest divisions in Germany. The researchers investigated the number of workers and employment structure dividing the staff into blue-collar workers and technical-administrative personnel as well as employment levels in enterprises providing services in the forestry sector. In addition, remunerations in forestry and enterprises providing services in forestry were analysed as well as costs by type and calculated per 1 hectare of forest area and 1 m^3 of harvested timber. In order to allow the comparison of individual constituents, the price is given in EUROS.

RESULTS

Population and employment in individual regions

Lower Silesia is a region situated in the southwestern part of Poland with the area of 19 948 km^2 and which borders with the Czech Republic in the south and with Germany in the west. The population of Lower Silesia has been steadily decreasing and, at the moment, amounts to 2.9 million inhabitants. There is a clear aging tendency among the population (Tab. 1). Over 1/3 of the inhabitants of the region reached 46 years of age and nearly 12% are retired.

Table 1. Population of the Lower Silesia region

Age	Population	Male	Female
0-2	85204	43864	41340
3-6	131771	67583	64233
7-14	343943	175544	168399
15	53500	27403	26029
16	51446	26310	25136
17	50811	25814	24997
18	51889	26364	25525
19	51243	25966	25277
20-24	245818	125257	120561
25-29	200597	102341	98256
30-44	668190	334540	333650
45-64	692575	327237	365338
Over 65	355141	132282	222859
	2982128	1440460	1541668

This region experienced a severe decline in the dynamics of economic development in recent years. Alongside the establishment of new enterprises, this region also went through numerous bankruptcies and liquidations of many other industrial plants. Most frequently, enterprises characterised by low levels of production technology and high levels of employment went into liquidation or bankruptcy, whereas new companies were characterised by advanced technologies and low employment levels. Obviously, this led to a decline in employment and increased numbers of people looking for work (Fig. 2 and 3).

Fig. 1. Men and women in different age divisions

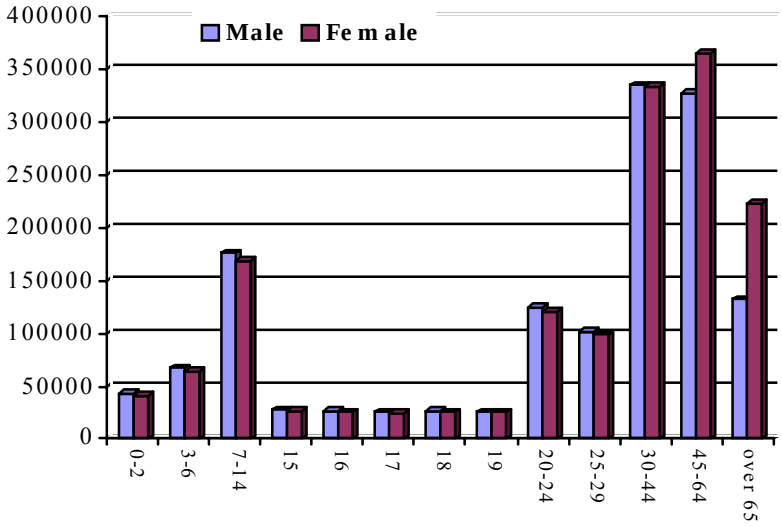
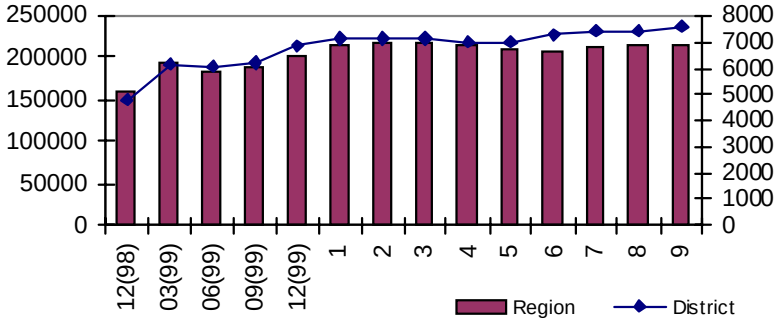


Fig. 2. Number of unemployed citizens of the Lower Silesia region and the Zgorzelec district

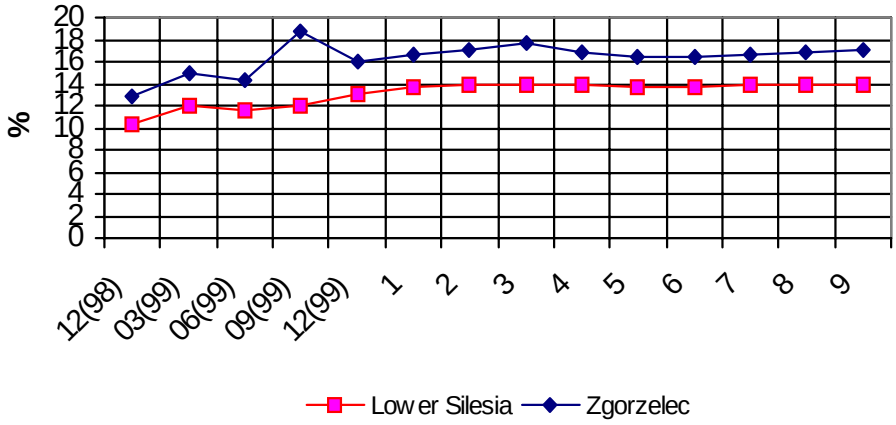


Employment in forestry

As a rule, Polish forest divisions, with their over 20 thousand hectare average area, are larger than their German counterparts which range from 9 to 15 thousand hectares. The largest forest divisions are found in the Czech Republic where their areas reach even 50 thousand hectares. They are enterprises organised as joint stock companies but the land belongs to the state.

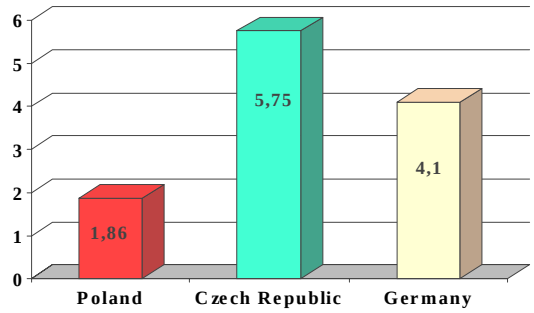
Because of considerable variations in the area of individual forest divisions, the numbers of employees were calculated per 1000 ha of forest. The lowest number (1.86/1000 ha) of persons employed as manual labourers was recorded in Poland (Fig.4). This small number of employed manual workers is the result of early privatisation of forest work and transfer of the majority of tasks performed in forestry to the service sector. This allowed a significant reduction of permanent costs in forest divisions. The highest level of employment of manual labourers (7.45/1000 ha) was found in Czech forest divisions.

Fig. 3. Percentage amount of unemployed citizens in the area of Lower Silesia and the Zgorzelec district



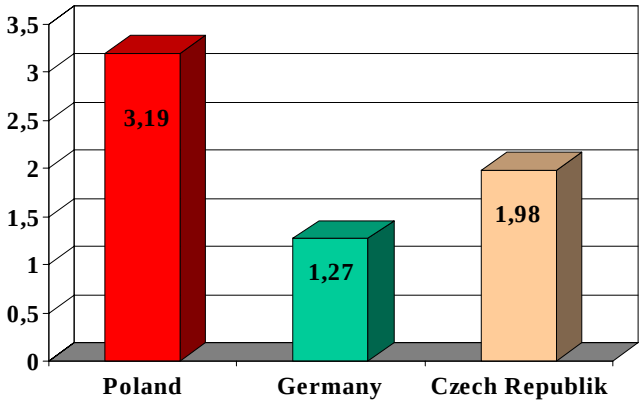
A totally different picture emerged when levels of technical and administrative employees, including management staff, were compared (Fig.5). In Germany, in this group of workforce, only 1.27 employees are employed per each 1000 ha, whereas in Poland – 3.19 workers/1000 ha, i.e. approximately 2.5 times more. In addition, this level of employment is also by nearly 60% higher than in the Czech Republic.

Fig. 4. Number of employed workers calculated per 1000 ha forest area



The presented data indicate a considerable over employment in forestry administration sector observed in State Forests. Reductions in employment, which had been recorded in recent years in Polish forestry, were associated exclusively with forest manual workers. Statistical data clearly show that employment in the forestry administrative sector increased in recent years. High levels of employment observed among the management personnel and administrative and technical staff can be attributed to a considerable expansion of management both at Regional and General Direction of State Forests.

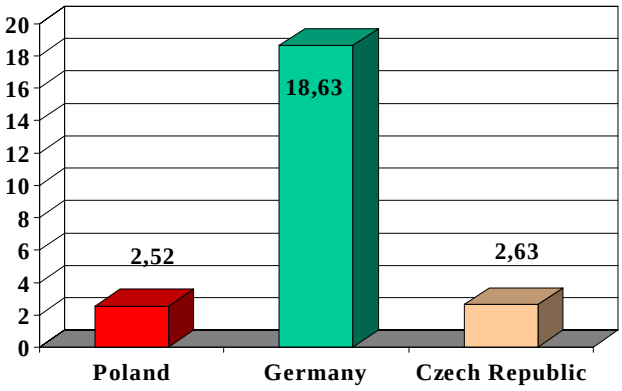
Fig. 5. Number of employed in forestry administration calculated for 1000 ha forest area



Labour and remuneration costs

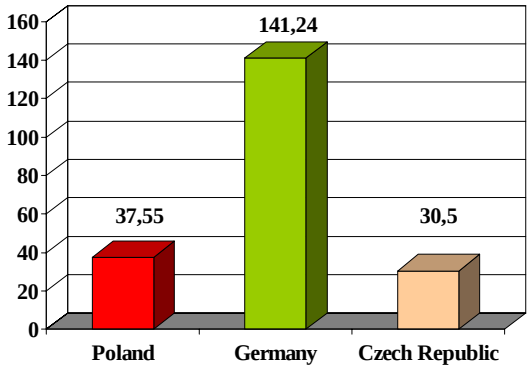
Gross labour and remuneration costs both in Poland and in the Czech Republic are similar (Fig.6) and amount to 2.52 € and 2.63 €, respectively. The hourly rate in Germany is almost nine times higher and totals 18.63 €. The presented results indicate a realistic probability that Polish and Czech forestry workers will seek labour opportunities in area situated near their respective frontiers with Germany.

Fig. 6. The cost of work-hour



In order to allow the analysis of employment costs of forestry workers, the authors carried out an assessment of remuneration costs calculated per 1000 ha (Fig.7). In this case, the lowest remuneration costs were calculated for Czech forests, whereas the highest – for German forests but this time differences between individual countries were considerably smaller. The obtained results were similar for Poland and the Czech Republic, whereas remuneration costs calculated per 1000 ha in Germany were approximately four times higher than in Poland and 4.5 times higher than in the Czech Republic. Presumably, this may have been caused by variations in the scope of performed operations as well as variations in labour efficiency observed in the examined countries.

Fig. 7. The payment costs calculated for 1000 ha forest area



It also seemed interesting to compare different types of expenditures incurred on forests, i.e. for the performance of various jobs in individual sectors of forest economy (Fig.8). Also in this case, in order to get comparable results, the authors determined expenditures sustained by forests calculated per 1000 ha. The performed comparison of expenditures did not take into consideration costs of forest administration in the Czech Republic because of the different system of organisation functioning in this country.

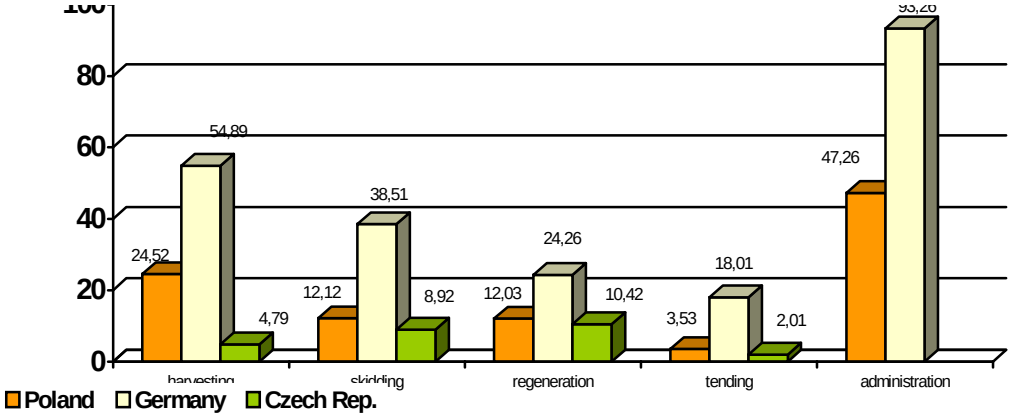
Results in keeping with those expected were obtained in the case of expenditures associated with stand regeneration and tending. Expenditures sustained to perform these operations were the lowest in the Czech Republic, where also remuneration costs calculated per 1000 ha were the lowest. The performed cost analyses of harvesting and skidding operations calculated per 1000 ha revealed that these treatments were the most expensive in German forests (Fig. 8).

Harvesting expenditures in Germany are twice as high as in Poland and up to 12 times higher in comparison with the Czech Republic. The exceptionally low timber harvesting expenditures observed in the Czech Republic (2.83 €/1000 ha) seem very surprising. Such low timber harvesting expenditures observed in the Czech Republic can be attributed to limited harvesting operations performed in this country in the youngest stands in which such operations are characterised by the highest expenditures. Such hypothesis appears to be confirmed by the lowest – from among the examined countries – timber-harvesting costs of 1 m^3 (Fig.9).

Skidding expenditures in German forests were found to be 3 times higher than in Poland and over 4 times higher than in the Czech Republic. Presumably, the lower timber skidding expenditures per 1000 ha recorded in the Czech Republic can be attributed to the smaller volume of harvesting, as mentioned earlier when analysing harvesting expenditures. On the other hand, skidding costs calculated per 1 m^3 are clearly higher and this may be attributed to longer skidding distances imposed by mountainous management conditions.

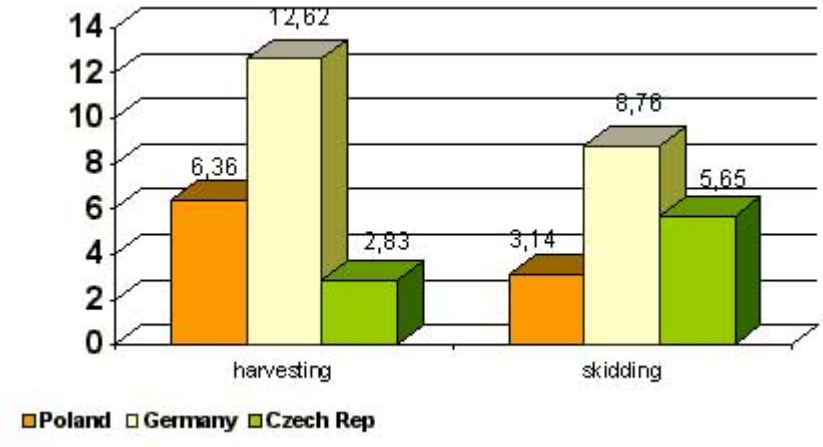
The highest expenditures to carry out forest economic activities calculated per 1000 ha observed in Saxony are not at all surprising, bearing in mind the highest labour costs occurring in this country.

Fig. 8. Chosen expenses of forest inspectorate calculated for 1000ha forest arera



When analysing the presented results, it should be emphasised that if the discussed results are averaged, expenditures sustained to carry out economic activities on the area of 1000 ha in Poland and Germany differ only slightly. However, similar expenditures in the Czech Republic are considerably lower. These results are confirmed by observations from forest management practice where first cases of Czech forest service enterprises have already submitted their offers for tenders connected with forest operations.

Fig. 9. Chosen expanses of forest inspectorate calculated for 1 m^3



DISCUSSION

The presented results of investigations reveal the existence of considerable differences between Poland, Germany and the Czech Republic both with regard to respective levels of employment as well as remunerations and expenditures necessary to conduct individual forest operations and tasks.

A significant element indicating considerable variations in the examined neighbouring countries is the level of employment in forestry on administrative posts, including forest services and office workers [5]. In Poland, the number of employed is twice as high as in Germany and by 1/3 higher than in the Czech Republic (Fig.5). There is no doubt that this exerts a strong impact on management costs in forests. It is worth noticing that unit (per hour of work) labour costs in Germany are nine times higher than in Poland. It is not difficult to predict that once Poland joins the European Union, a pressure will be applied to increase remuneration in Polish forestry. Since forestry in Poland is financed from the income it can generate, it will only be possible to increase remunerations if incomes grow or costs decline. One of the ways to reduce costs is to cut the number of workers employed in management, technical-engineering and administration sectors. It is further to be expected that scopes of certain jobs performed within the framework of some tending operations associated with harvesting scarce timber whose costs of harvesting are higher than its value will have to be confined to minimum. This, no doubt, is one of the elements allowing reductions of harvesting and skidding expenditures to levels found in Germany and the Czech Republic.

It is quite possible that foreign enterprises operating in the forestry sector will expand their activities to the Polish forestry marketplace. Already today, despite considerable formal and legislative barriers, Czech enterprises participate in tenders for certain jobs. This situation makes it necessary to invest additional sums of money to increase the capital of enterprises providing services in the forestry sector. In addition, it stresses the need to elaborate accurate logistic plans and strategies of tasks facing forestry as their lack contributes to low economic effectiveness of activities conducted in the forestry sector.

The observed variations in levels of remunerations indicate a significant probability of expansion of Polish workers into foreign labour marketplaces. However, bearing in mind forestry expenditures, it is equally likely that technologically more advanced service enterprises from Germany or the Czech Republic will try to enter Polish labour marketplace. There is no doubt that new economical conditions will enforce more effective actions and operations of both the administration of the State Forests and forest services enterprises resulting in increased labour efficiency and higher levels of remunerations and profits.

CONCLUSIONS

1. There is a considerable difference in the number of persons employed in forestry on administrative posts calculated per 1000 ha of forest area. Poland turned out to be the country with the highest number of people working in this sector.
2. Workers' remunerations, both at the administrative and manual labours levels in the forestry sector, show considerable variations between Germany and candidate countries (Poland and the Czech Republic). Gross hourly costs are almost six times higher in Germany.
3. Bearing in mind very high disproportions in levels of remuneration, it is quite probable that workers from candidate countries will want to find employment in the current EU member states.
4. It is essential to undertake appropriate measures to level off the existing disproportions in levels of employment and remuneration in neighbouring countries – which are about to become EU members.

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