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## **IMPACT OF EU-ACCESSION ON THE FINANCIAL SITUATION OF FARMS IN VISEGRAD COUNTRIES**

### *WPLYW PRZYSTĄPIENIA DO UE NA SYTUACJĘ EKONOMICZNĄ GOSPODARSTW ROLNYCH W PAŃSTWACH GRUPY WYSZEHRADZKIEJ*

**Key words: financial analysis, agricultural enterprise, FADN, EU-accession, Visegrad countries**

*Słowa kluczowe: analiza finansowa, przedsiębiorstwo rolnicze, FADN, przystąpienie do UE, państwa Grupy Wyszehradzkiej*

**Abstract.** Eight years after the EU-accession, the experience and results of the accession may be analyzed. This article examines the effects of accession on the farm economic situation of the four Visegrad countries, the Czech Republic, Hungary, Poland and Slovakia; their economic and financial status was compared with the EU-15 average. The study applies data from the international publicly available FADN database for the period 2004-2008. The farm financial situation analysis involves 20 indicators classified into five groups: capital structure, profitability, efficiency, liquidity indicators, and special indicators for EU support. Results of the international comparison show that the V4 countries were unable to catch up with the former (EU-15) member states until 2008, contrary to previous – probably too optimistic – expectations.

### **Introduction**

There are several similarities in the agricultural structure of the V4 countries, as a result of their long past and modern history. The number of farms is the largest in Poland, where nearly 1,2 million farms (more than 1 EUME size) are operated, the number of farms is the smallest in the Czech Republic, with 25 000 farms, both data is for in 2007. Farms below 2 EUME are not registered in the international FADN database. The most important and common problems of the V4 countries are connected to farm structure and land ownership and the inadequate operation of the institutional system [Koester 2008]. According to [Latruffe et al. 2008] the change of land tenure system is needed, and the changes in the land market may be key aspects for the V4 countries in the future. After the accession the agriculture shall meet the requirements at three levels, that is, global, EU and local standard shall be taken into consideration, and the agriculture should be adjusted to the European multifunctional model [Doucha, Foltýn 2008]. Wilkin [2007] evaluated the Polish and the Hungarian agriculture. According to his results the most significant problems are the decline or stagnation of agricultural production, the low rate of investments, continuous changes in property rights structure, growing pressure of foreign competition and unstable and inconsistent agricultural policy, while the main effect of accession was the significant increase in the support for agriculture from public finances (national and EU). The Visegrad countries started their catching up process towards the EU-15 member states in profitability and efficiency aspects, but this process seems to be slower than it was expected. Before the accession, the Hungarian agriculture was at the leading position in the region, but until present, Hungary lost its former advantages in comparison with the other V4 countries [Törőné Dunay, 2012]. In this paper, we wish to analyze the impacts of accession according to the financial results of agricultural enterprises.

### **Materials and methods**

The research may be divided into five main stages:

- for the analysis of the financial situation of agricultural enterprises of V4 countries, 20 indicators were determined and calculated for each years of the examined period. They may be classified into five groups: capital structure, profitability, efficiency, liquidity indicators, and special indicators for EU supports;
- the same indicators were calculated for the average of the EU-15 member states, for each years of the period between 2004 and 2008.
- the main tendencies of the changes of financial situation were determined by the data of the V4 and EU-15 countries;

- a detailed analysis was completed, of the examined indicators in order to determine the dynamics of the convergence to the EU-15 countries; the examination of the support level of the different countries and the farm-level impacts of the payment system in the V4 countries;
- different statistical analyses were made in order to support the evidence of the results.

The financial and economic status of the examined agricultural enterprises was performed through the secondary sources of the public international FADN database. The following 3 farm size categories were formed in accordance with the FADN typology (small size categories were concentrated: below 40 ESU, 40-100 ESU and above 100 ESU).

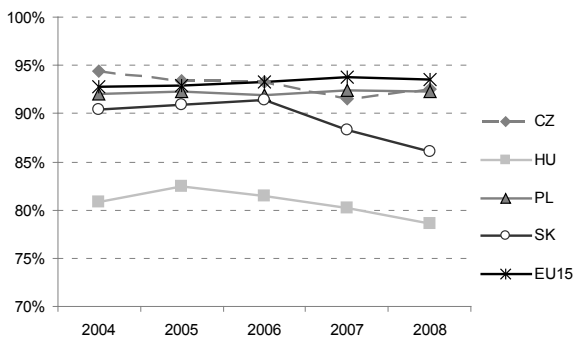
In the selection of the examined farm types, in addition to the FADN typology, the most determinant factors were the domestic significance of the given farm type and the possibility of comparability. Only field crops producer, dairy and mixed farm types could be inserted into the comparative analysis, because of missing data of some member states.

The statistical analyses were taken by the SPSS 18 (PASW Statistics 18) for Windows programme; the differences were verified by one-way ANOVA (carried out by Games-Howell and or LSD post-hoc tests).

## Results

According to the assessment of the database, it may be observed, that capital intensity is higher in case of smaller farm sizes, i.e. the share of own capital is more determinant in their capital structure. The capital intensity of Hungarian farms is the worst among the examined countries; it is lower than the EU-15 average and the Visegrad countries in all farm size categories. Although a certain increase may be observed in self-financing capability in the average of all farms of the V4 countries, but the convergence to the EU-15 average has not been occurred yet. Fig. 1. and 2. illustrate the capital intensity (i.e. the share of own capital) of small and large farms.

The small and large farms may be well separated according to the capital intensity (i.e. the share of own capital). Small farms mostly depend on own capital, as the foreign capital is more expensive and the creditworthiness of small farms is low. The larger the farm size, the more the share of foreign capital. Foreign capital consist of long term and short term loans; in the EU-15 countries long term loans are more widely used than in the V4 countries. Most of the long term loans are connected to investments and modernization, which are more common in large farms.

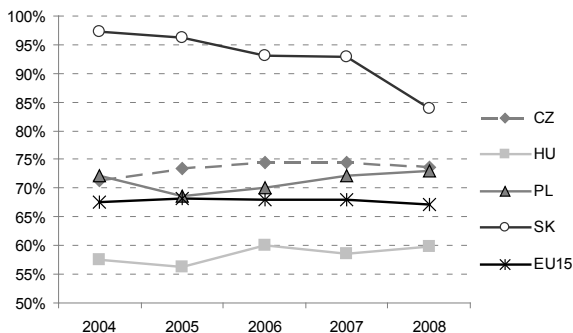


**Figure 1. The capital intensity in small farms (<40 ESU) between 2004 and 2008**

*Rysunek 1. Intensywność kapitału w małych gospodarstwach (<40 ESU), w latach 2004-2008*

Source: own study based on the FADN data

*Źródło: obliczenia własne na podstawie danych FADN*



**Figure 2. The capital intensity in large farms (>100 ESU) between 2004 and 2008**

*Rysunek 2. Intensywność kapitału w dużych gospodarstwach (>100 ESU), w latach 2004-2007*

Source: jak na rys. 1

*Źródło: see fig. 1*

Most of the small farms use other sources, for example family support instead of bank loans. The level of current assets is also very low in V4 countries.

According to the results of our examinations, the farm level profitability indicators of the V4 countries has not been improved substantially since the date of accession. In case of Hungary, a slight improvement may be observed in large farms, but in case of the other Visegrad countries stagnation or a small decrease of this indicator is general. The profitability ratio is better in large farm sizes. In case of Slovakia and the Czech Republic, the values of the profitability ratio are rather variable. As a result of the low profitability

level, the self-financing capability of the agricultural enterprises could not improved substantially after the EU accession.

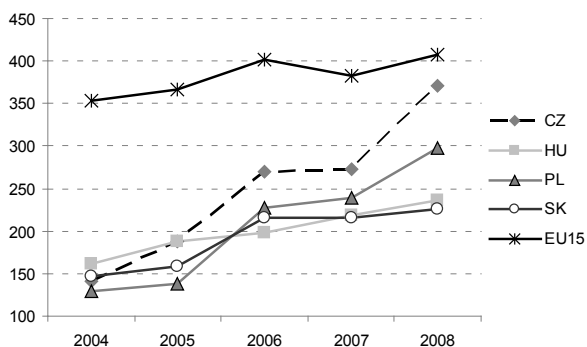
The values of liquidity indicator were generally high in every farm size categories, both in EU-15 and in Visegrad countries. The liquidity in EU-15 average was higher than in the V4 countries except Slovakia, where extremely high values could be observed in every farm size categories and all farm types. This may be a so-called semblance of liquidity, which is caused by the high level of accounts receivable or stocks.

The values of net working capital were positive and showed an increasing tendency in all countries; this indicates the spreading of conservative financing strategy. Conservative financing strategy is stable; it uses long-term funds to finance all of a firm's projected needs and it uses short-term funds only in emergencies, which will not make the capital structure more expensive. Nevertheless, in case of the V4 countries, most of the agricultural enterprises are not creditworthy and the foreign capital more expensive than own sources. Thus, the spreading of conservative financing strategy is not absolutely resulted by awareness, but rather by compelling reasons.

The examination of the total supports (payments and other – mainly Second Pillar – supports) per hectare resulted that the values of EU supports per hectare are lower in the V4 countries than in the EU-15 average, but they showed a convergence in accordance with the Copenhagen agreement.

The tendencies of total support level are illustrated by figure and 4. In figure 3 the support level of the small farm size categories are shown, while on figure 4 the data of large farms are summarized.

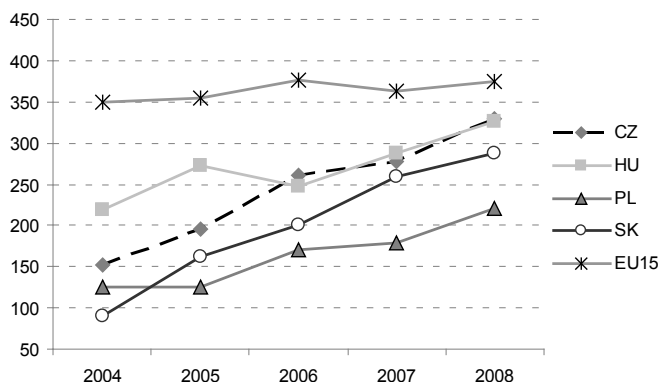
The total sum of support per hectare take nearly the same values in all farm sizes in EU-15 member states, while in the V4 countries different farm size categories had different support level. In Visegrad countries, and particularly in Hungary, large farms had significantly higher values of support, which suggest that large agricultural enterprises could apply more successfully for different types of Second Pillar support. It obviously may have many different reasons, but mostly it is caused by the better information level of large farms or better professional knowledge of their employees, their better relations, or even by their more favourable financial situation, i.e. they can pay for the services of consultant companies.



**Figure 3. Total small farm (<40 ESU) support per hectare in EUR in the examined countries between 2004 and 2008**  
*Rysunek 3. Całkowite wsparcie małych gospodarstw (<40 ESU) w badanych krajach w latach 2004-2008 (EUR/ha)*

Source: jak na rys. 1

Źródło: see fig. 1



**Figure 4. Total large farm (>100 ESU) support per hectare in EUR in the examined countries between 2004 and 2008**

*Rysunek 4. Całkowite wsparcie dużych gospodarstw (>100 ESU) w badanych krajach w latach 2004-2008 (EUR/ha)*

Source: jak na rys. 1

Źródło: see fig. 1

All the results of our evaluations were verified by statistical analyses. In case of the examination of supports, the one-way ANOVA indicated significant differences between the small (<40 ESU) and large (>100 ESU) farm size categories.

The analysis of supports and the values of the calculated indicators of financial situation revealed that the increased support and payments level could not make a solution for the farms, as neither the profitability nor the efficiency indicators improved, despite the income increased significantly because of the EU supports. The share of support in total income could not decrease.

In practice, the sum of the EU payments means an optional tool for the agricultural enterprises in the V4 countries, by which credits may be substituted. The sum of payments and other types of support determines the volume of income, particularly in smaller farm categories. This situation worsened after the accession due to the increased support level.

The present form of EU supports and payments may conserve the unfavourable farm structure; their volume is not enough for modernization and developments, but it is enough for survival, which may preclude the improvement of competitiveness. In Hungary, this situation is even worse, as the Hungarian farm data presented the poorest results, thus Hungary is handicapped in comparison with the Visegrad countries.

## Conclusions

The positive impacts of the EU-accession on the farms of V4 countries are not clear after this five-year period; the expectations before the accession seemed to be too excessive. The support policy of the CAP could slightly improve the financial situation of the agricultural enterprises, but it was not enough to increase competitiveness and efficiency of the farms. In case of small farms, this help was enough to maintain their operation and production, but it was not enough to improve their production. This situation will probably conserve the present, disadvantageous farm structure.

The advantages of the accession – the expanded market, the co-financed investments and modernization programmes, the higher income level increased by the payments etc. – could not be utilized by most of the farms.

The results- of this international comparison are more devastating; the closing up process of the Hungarian farms towards the former EU member states could not start in profit production aspects, moreover, Hungary lost its former advantages in comparison with the other Visegrad countries.

## Streszczenie

Po 8 latach od przystąpienia do UE można ocenić efekty akcesji. W artykule podjęto próbę oceny wpływu akcesji do UE na sytuację ekonomiczną gospodarstw rolnych w Polsce, na Węgrzech, Słowacji i w Republice Czeskiej, państwach tworzących tzw. grupę wyszehradzką. Wykorzystując dane FADN porównano sytuację ekonomiczną gospodarstw tych krajów z sytuacją gospodarstw z tzw. starych krajów członkowskich (EU-15). Stwierdzono, że gospodarstwa rolne z nowych krajów członkowskich do 2008 r. nie miały szans w wyrównaniu sytuacji ekonomicznej w porównaniu z gospodarstwami ze starych państw członkowskich.

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