

## **GROWTH AND PRODUCTIVITY ADVANTAGES OF SPECIALIZED FARMS IN CENTRAL AND EASTERN EUROPEAN COUNTRIES IN 2005–2013**

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### **ABSTRACT**

The paper makes a comparison between specialized small (below 5 ha UAA) and non-small farms (5 ha and over) and non-specialized farms with particular respect to the EU-10 (Central and Eastern European – CEECs) countries. It analyses the structure and growth of farms in terms of 10 types of their specializations, performance, labour and land use between 2005 and 2013. The aim of the paper is to point out which type of specialized farms demonstrate advantages in terms of production growth and productivity when compared with non-specialized farms. It has been concluded that in area, labour and total productivity both small and non-small specialized farms of EU-10 have achieved higher growth in compare with related farm categories of EU-27. Within EU-10 number of specialized farms has declined less than the number of non-specialized ones. Average farm output of specialized farms (both small and non-small) have exceeded that of non-specialized farms both in 2005 and 2013. The growth and productivity of specialized farms varied according to countries and according to farm types. Comparing specialized farms to non-specialized ones within EU-10 non-specialized small farms have advantage in growth of area and labour productivity while non-small non-specialized farms have achieved higher growth in labour productivity.

**Key words:** small farms, specialization, CEECs

### **INTRODUCTION**

The issue of survival for farms and especially small farms has always been on the table for discussion for the EU and Member States' national policy-makers. This paper discusses the specialization of farms in the EU-10 from 2005 to 2013 distinguishing small farm and non-small farm categories. The very definition of the term small farm became a topic of discussion among researchers aiming to achieve a clearer understanding of this farm category. Hubbard gives a good background to this debate [Hubbard 2009]. However, the performance and role of small and family farms is not always clearly interpreted. Small farms are family farms but family farms are not always small farms [Matthews 2011].

Two criteria are used for defining the size of farms in the EU. One is the size of land, although, different countries use different thresholds for small farms. Farms having less than 5 ha of utilized agricultural area (UAA) are regarded as small farms in this paper while all those farms having 5 ha UAA or over are regarded as non-small farms. Farms can also be categorized according to the economic size by the standard output (SO).

In the literature, the role, importance, development and policy aspects of small farms has been discussed [Motion for a European Parliament... 2014, Davidova 2014, Davidova and Bailey 2014, Dwyer 2014]. It has been

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emphasized that small farms have to make changes in farming methods in order to have a successful adjustment concerning their possible integration into modern food chains [Forgacs 2006, Csaki and Forgacs 2008, Gordon et al. 2014, Rabinowitz 2014]. Social capital aspects of small farms have also been investigated [Wolz et al. 2010]. Structural change of semi-subsistence farms (SSFs) in 2004 NMSs was discussed from agricultural policy point of view [Erjavec et al. 2014]. The roles and dynamics of small farms in rural development were analysed in a study focused on Romania [Popescu 2014]. However, the specialization aspect of farms in the EU-10 in general has not received much attention from researchers so far. Forgacs [2016] has carried out an analysis of specialization of small farms covering nine types of specializations. The paper analyzed the number of small farms, their land and labor use as well as farm output in CEECs between 2005 and 2013. It revealed that although both area and labour productivity were higher in non-specialized small farms as opposed to specialized ones, the growth in total productivity achieved by small specialized farms has exceeded that achieved by non-specialized ones since the EU Eastward Enlargement concluding specialization offers advantages not only for large farms but small ones, too, showing that this is a path offering better chances for survival for them.

This paper gives a comparison between the performance advantages of small (below 5 ha UAA) and non-small specialized farms (5 ha UAA and over) on the one hand, and between specialized and non-specialized farms on the other hand.

Why does analysis of the performance of small specialized farms make sense when specialization brings economic advantages mostly for large farms? There is a good deal of theoretical research both at macro and micro level about the advantages of specialization. The paper does not deal with theoretical aspects of specialization, instead, it gives an overview of specialized farms development in the EU-10 over a nine-year period. The size of farm (production) is a key factor to a specialized farm taking advantages of narrowing product structure by finding a better combination of inputs and making its market bargaining power stronger, resulting in higher profitability. However, the proportion of small farms amounts to some 80% of total farms in the EU-10 in 2005 and the proportion of specialized small farms (above 30%) did not decrease at all from 2005 to 2013. Both the high number of small specialized farms and the fact of their increasing share and higher growth in per farm output (SO/farms) as compared to non-specialized farms provide solid arguments for paying attention to the advantages of specialization for small farms, too. It is a fact that over the period 2005–2013 small specialized farms in the EU-10 declined to a lesser extent than non-specialized farms, providing evidence that the specialization of small farms also offers advantages in finding a better path for survival. In addition, a comparison of input, output and productivity indicators between small and non-small (5 ha UAA and above) specialized farms shows how farms have been trying to adjust to a changing economic environment when their size is taken into account.

The question is: to what extent could specialization help farms to achieve a better performance than non-specialized farms and what differences exist between non-small specialized farms and small specialized ones in CEEs over 2005–2013 period.

The following hypotheses will be investigated:

- Hypothesis 1: Share of number of specialized small and non-small farms do not decline in related farm category.
- Hypothesis 2: Specialization of farms has regional characteristics.
- Hypothesis 3: Growth of economic indicators of specialized farms show advantages compared to non-specialized farms.

## **MATERIAL AND METHODS**

To obtain a deep insight into farms' performance from a specialization perspective, Eurostat data set of 2005–2013 was used for analysis (<http://ec.europa.eu/eurostat/data/database>). Besides the structural development of specialized farms their labour use (agricultural work unit – AWU), land use (UAA) and production (SO) were

analyzed. The performance of specialized and non-specialized farms has been compared while analysis of their growth provides insight into the pattern of farms' development among 10 specialized farm types<sup>1</sup>, as compared with non-specialized farms.

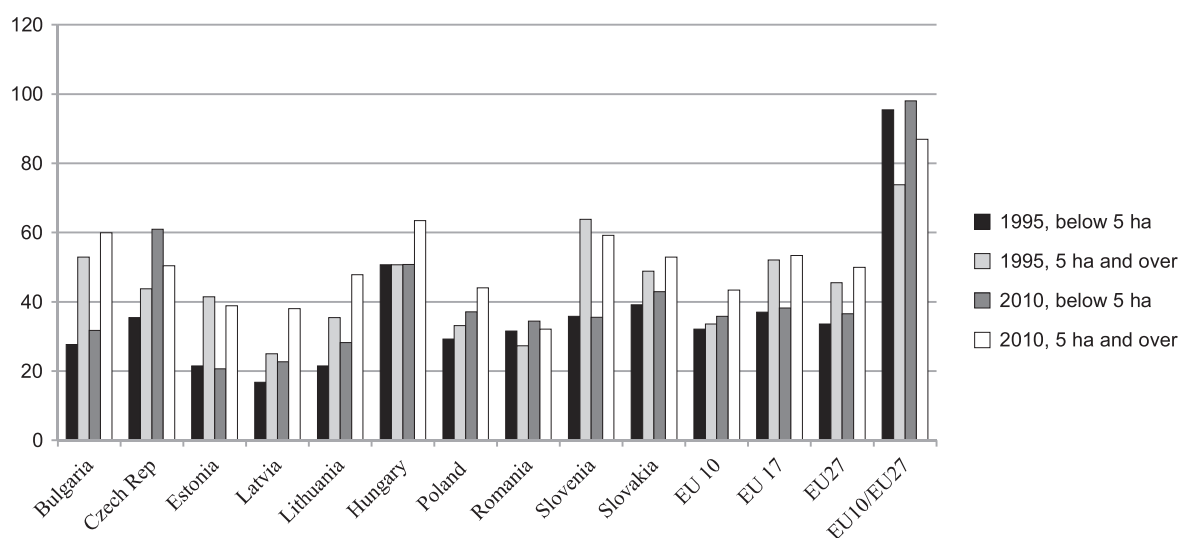
This is the first time specialization of farms in the EU-10 has been analyzed in-depth and compared to both the EU-27 average and non-specialized farms of the EU-10 after EU Eastward Enlargement.

## ANALYSIS OF SPECIALIZATION OF FARMS

### Number of specialized farms

In 2005 there were 8.6 million farms in the EU-10 of which 80.3% belonged to the small farm category. Both in the small and the non-small farm categories around one third of farms are specialized; a bit more specialization can be observed in the case of non-small farms than with small ones. The number of farms declined in all EU-10 countries significantly between 2005 and 2013; this was especially true in the case of small non-specialized farms, exceeding the decrease of number of specialized small farms. However, the number of non-small specialized farms has actually increased by 9.2%. The relative share of specialized farms within the related category has increased significantly in the non-small farm category (29.3%), having a relative share of 43.4% in related category in 2013 while it was 35.8% in small specialized farms (Fig. 1). Generally, it can be seen that the specialization level of non-small farms has exceeded that of small ones, the exceptions being Romania and to an extent, Hungary and the Czech Republic.

It is therefore clear that during structural restructuring farms did their best to speed up further specialization to become more competitive in the marketplace and survive. Such developments can be observed in all EU-10



**Fig. 1.** Relative share of number of specialized farms within related category (2005, 2013)

Source: Author's calculations based on the Eurostat data.

<sup>1</sup> The following specialized farm types give the basis for analysis: 1 – specialized in cereals, oilseed and protein crops; 2 – specialized in horticulture indoor; 3 – specialized in horticulture outdoor; 4 – specialized in vineyards; 5 – specialized in fruit and citrus fruit; 6 – specialized in dairy farming; 7 – specialized in cattle-rearing and fattening; 8 – specialized in cattle rearing and fattening – dairy combined; 9 – Specialized in pig production; 10 – specialized in poultry production.

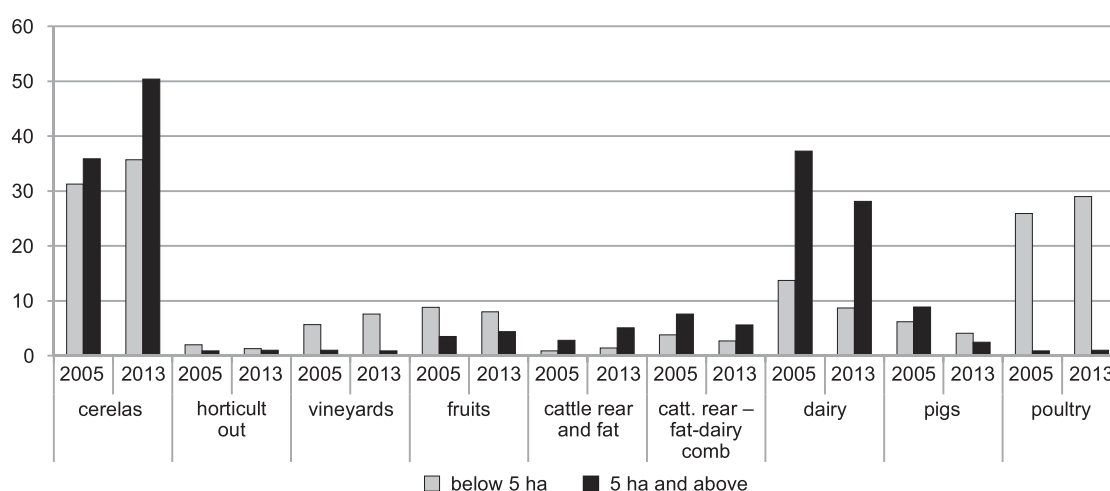
countries. The growth of share of number of specialized farms of EU-10 was above EU-27 average in both categories, reflecting the fact that the catching up of farms in CEECs has a strong specialization character but still varies by countries.

Specialization in cereals, cattle rearing and fattening and poultry were most preferred by small farms while the number of non-small specialized farms has grown in cattle rearing and fattening across all EU-10; the number of non-small farms specializing in fruits and cereals also went up in nine countries of EU-10. The number of small specialized pig farms did not decrease in three CEE Member States (Romania, Lithuania and Latvia) whereas it decreased in all CEECs in case of non-small specialized farms, thereby indicating the low competitiveness of large specialized farms.

Only in vineyards and cattle rearing and fattening did the number of small specialized farms increased over the analyzed period. Among non-small specialized farms five countries out of EU-10 can be found where number of specialized farms was higher in 2013 compared to 2005. The highest degree of growth went to cattle rearing and fattening (96.9%) followed by cereals (53.1%) and fruits (38.1%).

The highest growth of small specialized farms goes to Latvia (cattle rearing and fattening, 1,600% with low basis), to Lithuania (cereals 355% and poultry 230%). The number of small specialized farms dropped only less than 5% in Romania and less than 8% in Lithuania and Slovakia while the decline was above 50% in four CEECs (Slovenia, the Czech Republic, Estonia and Bulgaria). In 2013 there are more non-small specialized farms in six CEECs backed by highest growth in Bulgaria (61.7%) and Slovenia (53.3%). In Hungary almost two out of three are specialized farms within the related category.

The growth of share of specialized farms in CEECs exceeded that of EU-27 average, approaching EU average more among non-small farms in 2013. In 2005 the share of specialized farms of TOP 5 amounts to more than 93.2% in case of non-small farms (dairying: 37.3; cereals: 35.9; pigs: 8.9; cattle-rearing and fattening – dairy combined: 7.6% and fruit: 3.5%) while this figure accounts for 85.4% in small farms (cereals: 31.3; poultry: 25.9; dairy: 13.7; fruits: 8.8; and vineyards: 5.7%). A high concentration of farm specialization can be seen in both small and non-small farms but apart from cereals small farms specialized mostly in labor intensive farming, especially in poultry, fruits and vineyards as compared to non-small farms (Fig. 2). Only specialized farms in indoor horticulture cannot be found in TOP 5. In 2013 the same specializations can be found in TOP 5 in both farm categories, except in non-small farms where pig was OUT and cattle-rearing and fattening was IN. However,



**Fig. 2.** Share of specialized farms in related category by farm type in EU-10 (2005, 2013)

Source: Author's calculations based on the Eurostat data.

significant structural changes have taken place. In non-small farms the share of farms in four specializations has decreased and every second one already went to cereals category. In case of small farms, the share of TOP 5 increased from 85.4% in 2005 to 89% in 2013. More farms specialized in cereals and poultry while the level of specialization was left practically unchanged among non-small farms.

### Land use in specialized farms

In 2005 small farms used 9.1 million ha of UAA in the EU-10 having a share of 61.5% of the total EU-27 and this share was maintained in 2013 when 5.6 million UAA was cultivated by small farms in two countries (Romania and Poland). Land use of specialized small farms in the EU-10 amounted to 1.9 million ha in 2013, 17% more than in the EU-17, from 2.3 million ha in 2005.

The total land area used by specialized small farms went back by 16.3% in the EU-10 (21.8% in the EU-17). Non-small specialized farms cultivated 17.1 million UAA in 2005, which went up by 39.4% to 23.8 million ha in 2013. UAA of small specialized farms has declined in all EU-10 Member States within a scale of 1.9% in Poland up to 53.6% in the Czech Republic. Conversely, non-small specialized farms have increased UAA in all EU-10 countries.

In 2005 25.4% of UAA used by small farms went to specialized farms – below the average – in Baltic states and Romania, while it was at 40.3% the highest in Hungary. Average figure of EU-10 went up to 29.8% in 2013 when in three countries (the Czech Republic, Hungary and Slovakia) this figure was already above 40%. Share in UAA of non-small specialized farms accounted for 45.2% in 2005 and 56.9% in 2013 exceeding already EU average figure of the same category. It is a general picture that all specialized farms (small and non-small) took the advantage of specialization on an extended land area of 53.2% on average in 2013. Growth of UAA of specialized farms varied by countries. The highest growth has been achieved in Latvia and Lithuania while it was practically unchanged in Slovenia and decreased a bit in Bulgaria resulting in an average growth of EU-10 at 28.8% over the nine-year period (Table 1).

**Table 1.** Share of specialized farms with land in UAA within related category

Specification	Share of (%)						Dynamics total 2013/2005
	2005			2013			
	below 5 ha	5 ha and over	total	below 5 ha	5 ha and over	total	
Bulgaria	29.5	78.4	72.0	34.2	69.3	67.9	94.4
Czech Republic	26.5	34.8	34.7	49.3	47.1	47.2	135.8
Estonia	21.9	68.4	66.6	20.6	69.5	68.7	103.0
Latvia	16.9	41.3	39.5	25.0	62.0	60.6	153.6
Lithuania	21.2	47.0	43.6	28.8	67.3	63.9	146.7
Hungary	40.3	56.9	55.5	47.8	66.1	65.1	117.3
Poland	27.9	40.5	38.3	37.8	51.5	49.7	129.7
Romania	23.0	39.4	33.4	24.3	52.1	44.2	132.2
Slovenia	38.4	63.2	57.4	36.9	64.1	58.4	101.7
Slovakia	33.3	43.1	42.9	41.1	56.5	56.3	131.2
EU-10	25.4	45.2	41.3	29.8	56.9	53.2	128.8
EU-17	36.9	52.7	52.0	39.6	55.0	54.5	104.9
EU-27	29.8	50.9	49.1	33.6	55.5	54.2	110.4
EU-10/EU-27	85.2	88.8	84.3	88.7	102.5	98.3	116.7

Source: Author's calculations based on the Eurostat data.

In seven specialized farm types land use of both small and non-small farms developed in the same directions. There have been two specializations (cereals and cattle rearing and fattening) where all specialized farms increased land area from 2005 to 2013. The growth was significant in cattle rearing and fattening in both farm categories (63.3 and 53.5% respectively). At the same time, both small and non-small farms found five specializations (cattle rearing and fattening- dairy combined, dairy, pigs, horticulture indoor and horticulture outdoor) unattractive and land use in those types declined. The decrease was the highest in pig specialized farms in both farm types (66.6 and 68.4% respectively). In vineyards and fruits specialized small farms increased UAA while it went back in non-small farms in both cases.

### Labour use in specialized farms

In 2005 AWU used in EU-27 amounted to 12.7 million of which 52.7% went to EU-10. 29.5% of AWU used in EU-10 went to specialized farms reaching three quarters of the related category of EU-27 average. Due to technological development farms on average decreased labour use by 26.6% in EU-27 and by 29.6% in EU-10. However, in EU-10 the decline of AWU in small specialized farms was only 24.1% while it has even increased by 10.7% in non-small farms indicating specialized farms have significantly increased their share in labor use between in 2005–2013 period (Table 2). It can be concluded that in a dynamic approach (in relative share) specialized farms in general offer more jobs for labor both in EU-27 and EU-10 and non-small specialized farms of EU-10 have absorbed more labour in 2013 in compare to that of 2005. Poland is the only country where small specialized farms used more labour in 2013 compared to 2005. Decline of labour use exceeded 50% in four countries with the highest figure in case of Slovakia (77.6%). Non-small specialized farms have performed a more labour intensive production in EU-10. In six countries labour use has been increased at most in Hungary (45.6%) followed by Bulgaria and Poland (17.9%). Meanwhile progress in specialization creates a basis for increasing efficiency, specialized farms use more labour than non-specialized farms across EU-27 but at the same time more in EU-10.

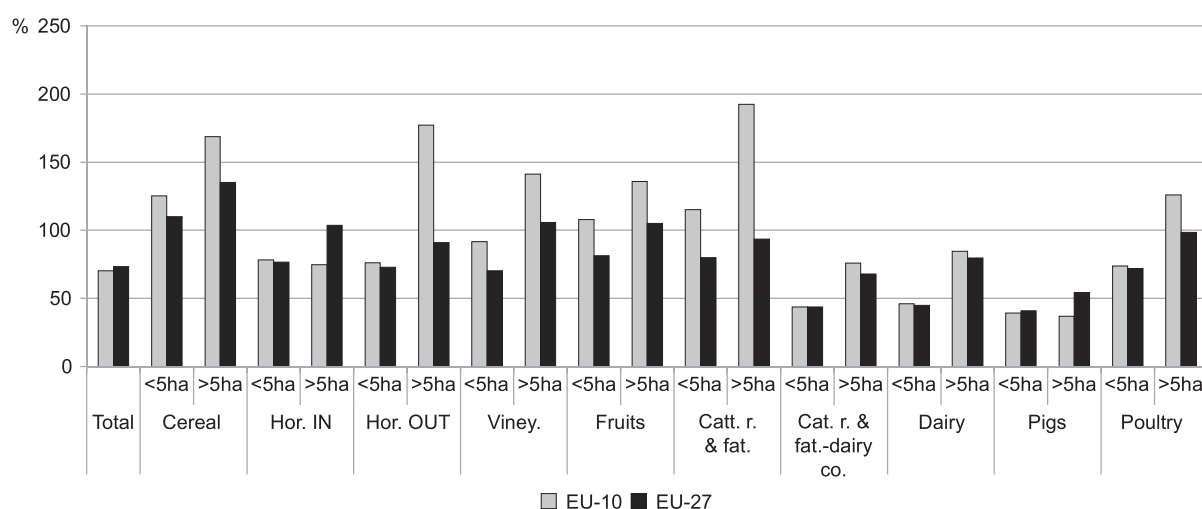
Looking at AWU used by farm types the picture is varied very much showing specialization of farms is still in transition and it is so even more in EU-10. Specialized farms in cereals the only one farm specialization type in EU-27 which needed more labour both in small and non-small farms in 2013 than in 2005 at a higher level in EU-10. There are four more non-small specialized farm types (horticulture outdoor, vineyards, fruits and cattle-rearing and fattening) where labour use went up in 2013 compared to base year; meanwhile, in small farms cattle-rearing and fattening is the only specialized farm type, besides cereals, where more labour was used in 2013 than in 2005. Decline in labour use affected more small specialized farms than non-small ones. In 2013 small specialized farms lost more than 50% of their labour of 2005 in cattle-rearing and fattening and dairy combined, dairy and pig production in EU-10, these figures are in line with those of EU-27 (Fig. 3).

**Table 2.** Dynamics of labour use (AWU) of specialized farms by countries in EU-10 in 2013/2005

Specification	Farms, total	Spec. farms	Spec. farms
		below 5 ha	5 ha and over
		%	
Bulgaria	51.3	46.9	117.9
Czech Republic	69.2	49.2	107.7
Estonia	59.8	35.2	71.4
Latvia	59.8	79.9	100.7
Lithuania	65.3	82.5	90.7
Hungary	93.7	84.9	145.6
Poland	84.4	104.0	117.9
Romania	59.8	67.4	92.2
Slovenia	86.8	87.6	83.3
Slovakia	51.2	22.4	100.6
EU-10	70.4	75.9	110.7
EU-27	73.4	72.0	94.5
EU-10/EU-27	95.8	105.4	117.2

Source: Author's calculations based on the Eurostat data.





**Fig. 3.** Dynamics of labor use (AWU) by specialized farms in EU-10, EU-27 in 2013/2005

Source: Author's calculations based on the Eurostat data.

### Production potential of specialized farms

Farms in the EU-10 produced EURO 286.2 billion of SO in 2005 of which EUR 42.3 billion (14.8%) went to EU-10. Specialized farms in EU-10 had SO of 17 billion EUR of which 25.3% goes to small farms. SO of EU-27 increased by 14.9% to 2013. The growth of SO in EU-10 amounted to 26.7%. Specialized farms in EU-10 as part of their catching up increased SO by 64.3%, exclusively backed by non-small specialized farms' performance. In 2013 more than half (52.2%) of SO comes from specialized farms but still below of that of EU-27. In five out of ten countries share of specialized farms in SO was above 60%. More than two third of SO in EU-10 came from specialized farms in three countries as Bulgaria, Latvia and Estonia (67.6–69.9%). However, this ratio remains below 40% in the Czech Republic and Romania. It can be underlined that in E-10 specialized farms were the backbone of this increase in production between 2005 and 2013 (Table 3).

**Table 3.** Standard output of specialized farms of EU-10 in 2005 and 2013

Specification	Farms		SO of specialized farms with land		Farms		SO of specialized farms with land			
							2005		2013	
	grand total	below 5 ha	5 ha and over	grand total	below 5 ha	5 ha and over	grand total	below 5 ha	5 ha and over	
million EUR										
Bulgaria	2 321	366	752	3336	249	2084				
Czech Republic	3 653	74	873	4 447	38	1 564				
Estonia	483	10	291	676	5	452				
Latvia	585	18	227	990	20	655				
Lithuania	1 550	88	538	1 919	87	1 099				
Hungary	4 922	536	1 685	5 578	436	2 787				
Poland	16 084	1 791	5 838	21 797	1 968	10 304				
Romania	10 518	1 285	1 737	11 990	1 279	3 443				
Slovenia	834	79	421	1 009	96	543				

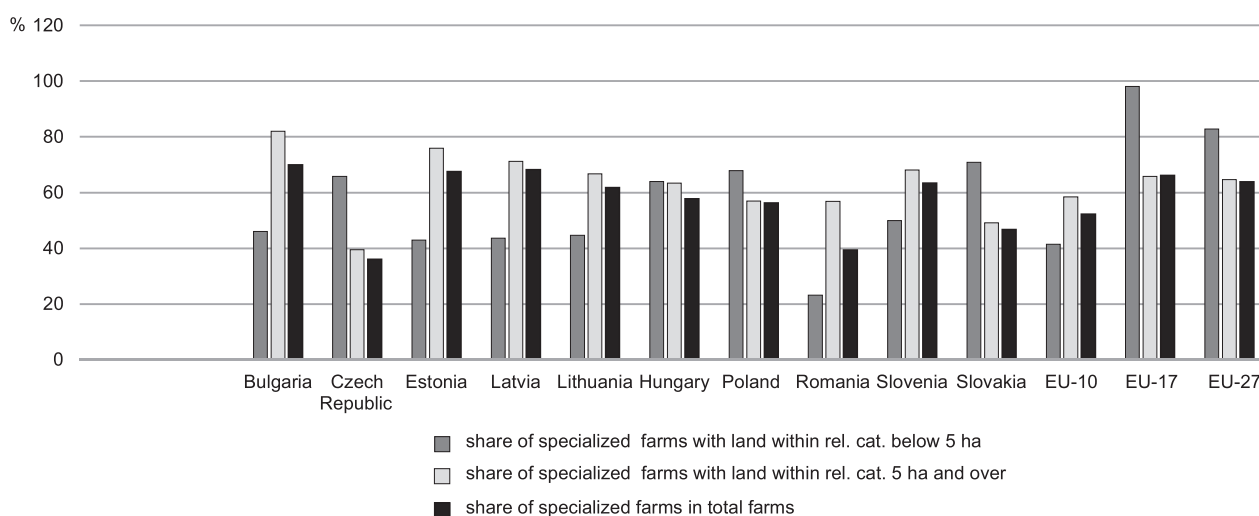
**Table 3 cont.**

1	2	3	4	5	6	7
Slovakia	1 321	52	356	1 812	47	799
EU-10	42 271	4 299	12 718	53 554	4 224	23 731
EU-17	243 960	31 557	127 742	275 461	26 999	155 153
EU-27	286 232	35 857	140 460	329 015	31 223	178 884
EU-10/EU-27	14.8	12.0	9.1	16.3	13.5	13.3

Source: Author’s calculations based on the Eurostat data.

In 2013 more than half of SO of EU-10 comes from specialized farms, however, it varies by countries. More than 60% of SO produced by specialized farms in Bulgaria, Estonia, Latvia, Lithuania and Slovenia. Contribution of specialized farms to SO within related farm category also differs from country to country. In six countries (Bulgaria, Estonia, Latvia, Lithuania, Romania and Slovenia) share of non-small specialized farms in SO of related category exceeds that of small farms. Small farms have a higher contribution rate to SO in Czech Republic, Hungary, Poland and Slovakia (Fig. 4). In EU-27 the dairy, cereal, pig and vineyard specialized farms produced most of SO while in EU-10 cereal and dairy specialized farms have significant share in SO.

Growth of SO by farm types and by country is not homogenous at all. Standard outout grew by 86.6% in case of non-small farms, while small specialized farms produced SO less by 1.8% in 2013 than in 2005.



**Fig. 4.** Share of specilaized farms of EU-10 in SO by countries in 2013

Source: Author’s calculations based on the Eurostat data.

### Productivity and efficiency of specialized farms

Although, growth of average size of non-small farms of EU-10 was high reaching 44.08 ha in 2013, however, the average size of specialized small and non-small farms of EU-10 are below those of the EU-27 both in 2005 and 2010. In 2005 the highest farm size by UAA of non-small specialized farms in EU-10 went to cereals (56.8 ha), cattle-rearing and fattening (37.9 ha), poultry (30.3 ha) and vineyards (24.5 ha) keeping this ranking in 2013 with average size of 60.8, 41.2, 29.5 and 27 ha respectively. The highest growth in land use took place in fruit



and citrus fruit (45.6%), pigs (44.6%) and horticulture outdoor (43.7%) farm types. Small specialized farms used less per/farm labour in 2013 compared to 2005 while non-small specialized farms used a bit more, but labour use varied by farm types quite a bit.

Non-small specialized farms extended their UAA from 2005 to in 2013 by 27.7%, whereas this increase was only 6.9% among small farms. However, extended land area did not increase the labour in small farms while AWU increased in non-small farms only by 1.4%. Behind average figures there were four farm types in which significantly more labour was used by small farms in 2013: for instance, in cereal production (40.3%), horticulture outdoor (47.7%), and fruits (50.9%). In the case of non-small specialized farms the tendency to use more labour is partly similar in cereal production, but the increase of labour was much higher in horticulture outdoor (45.8%), vineyards (37.7%), pigs (21.5%) and poultry (10.3%). In 2013 compared to 2005 less labour worked in both small and non-small farms in cattle-rearing and fattening as well as cattle rearing and fattening-dairy combined farms. In non-small farms among the most labour intensive farm types are horticulture indoor and horticulture outdoor, fruits, dairy and pigs both in EU-10 and EU-27; however, the vineyards and poultry farms of EU-27 used much less labour compared to EU-10.

Concerning economic indicators as UAA/farm, AWU/farm and SO/farm in farms total and in specialized farms as well have been higher in EU-27 compared to EU-10 for the entire period with the exception of AWU/farm in non-small specialized farms (Table 4).

The key question is: to what extent could farms and especially specialized farms in EU-10 catch up over 2005–2013 period? Generally, it can be concluded that in total as well as in case of small and non-small farms (specialized and non-specialized) the dynamics of economic indicators of EU-10 were higher than those of EU-27. The only exception goes to labour productivity (SO/AWU) in non-small specialized farms which also grew in EU-10 but 1.2% below that of EU-27 average.

In EU-10 economic indicators have grown in total productivity (75.3%), labour productivity (63.4%) and area productivity (22.9%). Looking at dynamics of key economic indicators by farm groups (small and non-small) the picture is mixed. Within the related category, the growth in area and labour productivity of small specialized farms was below the average of total small farms. However small specialized farms have achieved higher growth rate in total productivity (SO/farm) due to using relatively more land and labour. In non-small specialized farms growth of both area and total productivity were higher compared to total non-small farms' average while labour productivity was well below that (16.8 and 45% respectively).

**Table 4.** Dynamics of selected economic indicators in EU-10, EU-27 in 2013/2005

Specification		Farms, total	Farms less than 5 ha, total	Farms 5 ha and over, total	Specialized farms below 5 ha	Specialized farms 5 ha and over
		%				
SO/UAA	EU-10	122.9	120.6	128.6	117.4	133.8
	EU-27	114.3	115.2	116.0	107.5	113.0
	EU-10/EU-27	107.6	104.6	110.9	109.3	118.4
SO/AWU	EU-10	163.4	161.9	145.0	140.0	116.8
	EU-27	146.5	149.1	132.4	137.4	118.3
	EU-10/EU-27	111.5	108.6	109.4	101.9	98.8
SO/Farms	EU-10	175.3	122.7	168.6	125.5	171.0
	EU-27	155.8	120.7	137.4	116.6	133.0
	EU-10/EU-27	112.5	101.7	122.8	107.6	128.5

Source: Author's calculations based on the Eurostat data.

Justification of hypothesis:

- Hypothesis 1: Share of number of small and non-small specialized farms did not decline in related farm category. *Justified*. Relative share of small and non-small specialized farms within total farms have increased.
- Hypothesis 2: Specialization of farms has regional characteristics. *Partially justified*. In some areas e.g. in pig production or dynamics of specialization level regional characteristics can be observed; however, in other cases it cannot.
- Hypothesis 3: Growth of economic indicators of specialized farms show advantages compared to non-specialized farms. *Partly justified*. Growth in labor productivity was significantly higher both in small and non-small non-specialized farms. Concerning area productivity non-small specialized farms have achieved higher growth but small specialized farms' growth was below the average, while total productivity of both small and non-small specialized farms exceeded that of non-specialized farms in related category.

## CONCLUSIONS

Concerning area, labour and total productivity both small and non-small specialized farms of EU-10 have achieved higher growth in compare with related farm categories of EU-27 with one exception of labour productivity of non-small specialized farms. Within EU-10 number of specialized farms has declined less than the number of non-specialized farms. Average farm output of specialized farms (both small and non-small) have exceeded that of non-specialized farms both in 2005 and 2013. Non-small specialized farms have increased their production significantly. The dynamics of growth of per farm output was also higher in specialized farms. The growth and productivity of specialized farms varied according to countries and according to farm types. Comparing specialized farms to non-specialized farms within EU-10 non-specialized small farms have advantage in growth of area and labour productivity while non-small non-specialized farms has achieved higher growth in labour productivity.

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## **PRZEWAGA SPECJALISTYCZNYCH GOSPODARSTW ROLNYCH W ZAKRESIE ROZWOJU I PRODUKTYWNOŚCI W KRAJACH EUROPY CENTRALNEJ I WSCHODNIEJ W LATACH 2005–2013**

### **STRESZCZENIE**

W artykule porównano małe (do 5 ha UR) i większe (5 ha i więcej) specjalistyczne gospodarstwa rolne z gospodarstwami niespecjalistycznymi w 10 krajach Europy Centralnej i Wschodniej należących do UE. Analiza dla lat 2005–2013 dotyczyła struktury i wzrostu w gospodarstwach, w grupach według kierunku specjalizacji, wyników, pracy i wykorzystania ziemi. Celem opracowania jest określenie, który typ gospodarstw specjalistycznych wykazuje przewagę nad pozostałymi w zakresie wzrostu i produktywności. Z analizy wynika, że przeciętna powierzchnia i produktywność gospodarstw specjalistycznych małych i większych z 10 rozpatrywanych krajów wzrosła bardziej niż analogicznych kategoriach gospodarstw w całej UE (27 krajów). W 10 rozpatrywanych krajach liczba gospodarstw specjalistycznych spadła, ale w mniejszym stopniu niż gospodarstw pozostałych. Przeciętna produkcja gospodarstwa specjalistycznego przewyższała analogiczną w gospodarstwach niespecjalistycznych zarówno w 2005 roku, jak i 2013. Dynamika wzrostu i produktywność gospodarstw wyspecjalizowanych różniła się zarówno między krajami, jak i między typami gospodarstw.

**Słowa kluczowe:** małe gospodarstwa rolne, specjalizacja, kraje Europy Środkowo-Wschodniej