

# THE INFLUENCE OF AGRICULTURAL EXPLOITATIONS SIZE ON THE AGRICULTURAL SECTOR PERFORMANCE FROM ROMANIA

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## Abstract

*This paper aims to examine the influence of farm size on performance in the agricultural sector in order to reduce competitiveness gaps compared to other EU countries. Although it has a high agricultural potential, the average production from Romania are much lower than those obtained in the European Union. One of the key reasons for this is the average size of farms, Romania owns the largest number of farms in the European Union and an average size of about 4 times lower than the EU average.*

## Keywords

*performance, yields, economic dimension.*

## Introduction

Romania has a high agricultural potential, ranking seven in the European Union by the agricultural area. However, agricultural potential is not sufficiently utilized, with large area of unused land, which is one of the factors that generate low competitiveness of agricultural sector compared to other EU countries. Besides this factor, we can mention low productivity, high share of agricultural land used for subsistence farms (about 45%) and semi-subsistence (16%), low level of alignment with EU rules, poor technical equipment, training of farmers, transfer of technology and knowledge underrepresented etc. Among the main factors influencing the results in farming is the size of agricultural holdings (both physical and especially the economic one). Classification of agricultural holdings by type of farming and economic size is based on the concept of standard products (standard production of an agricultural activity (in the vegetable or animal) is the average value expressed in monetary units (lei or Euro) of gross production, determined based on prices of agricultural products sold directly to consumers<sup>11</sup>. European Commission Regulation no. 1242/2008 establishing a Community typology of agricultural holdings provides the following classes:

Classes of economic size	Limits in Euro
I	Less than 2000 Euro
II	2000 – 4000
III	4000 – 8000
IV	8000 – 15.000
V	15.000 – 25.000
VI	25.000 – 50.000
VII	50.000 – 100.000

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<sup>11</sup> Tipologia și dimensiunea economică a exploatațiilor agricole, National Institute of Statistics, 2013.

<b>Classes of economic size</b>	<b>Limits in Euro</b>
VIII	100.000 – 250.000
IX	250.000 – 500.000
X	500.000 – 750.000
XI	750.000 – 1.000.000
XII	1.000.000 – 1.500.000
XIII	1.500.000 – 3.000.000
XIV	Equal or more than 3.000.000 Euro

Source: Tipologia și dimensiunea economică a exploatațiilor agricole, National Institute of Statistics, 2013.

#### *Romanian agricultural exploitations*

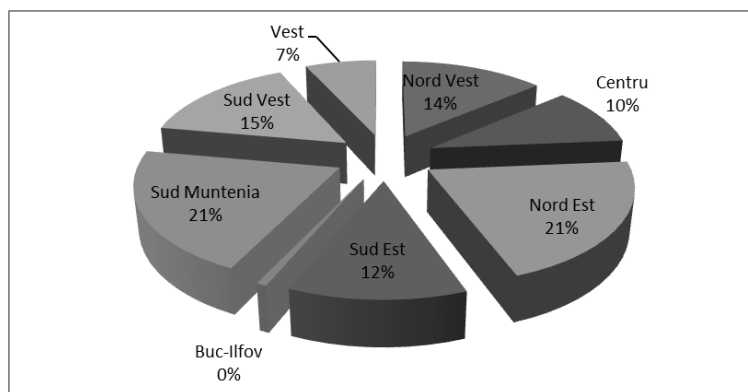
Romania has 3.6 million farms, representing about 30% of the European Union. Out of 3.6 million holdings, 73% of them have used agricultural land and livestock, they hold only 25% of farmland, and only 2% had livestock, which demonstrates a higher interest of Romanian farmers for crops.

**Table 1 Agricultural holdings of agricultural land use and / or who owned livestock**

<b>Region</b>	<b>Total</b>	<b>Agricultural holdings With used agricultural area and livestock</b>	<b>Agricultural holdings With only utilized surface agricultural</b>	<b>Agricultural holdings with only livestock</b>
Nord-West	499857	329082	168632	2137
Center	358471	239776	111081	7606
Nord-East	754533	583066	159061	12401
South-East	433043	322945	101533	8563
Buc-Ilfov	25316	15310	8447	1558
South Muntenia	753585	568052	164838	20662
South West	557850	424191	124029	9630
West	247001	179718	64004	3279
<b>TOTAL</b>	<b>3629656</b>	<b>2662140</b>	<b>901625</b>	<b>65836</b>

Source: Tipologia și dimensiunea economică a exploatațiilor agricole, National Institute of Statistics, 2013.

The region represents in the regional development policy of the European Union, the fundamental element for proper grounding of theoretical and practical approaches and strategies of economic and social policies in territorial plan and the lack of involvement of regions in developing programs of leading hinders their implementation (Istudor, 2006). South-East and South-Muntenia represent regions with the highest agricultural land (about 32% of the total agricultural area of Romania), also having the highest number of farms (about 41% of the total), which shows a smaller average in these regions.



Source: data processing Tipologia și dimensiunea economică a exploatațiilor agricole, National Institute of Statistics, 2013.

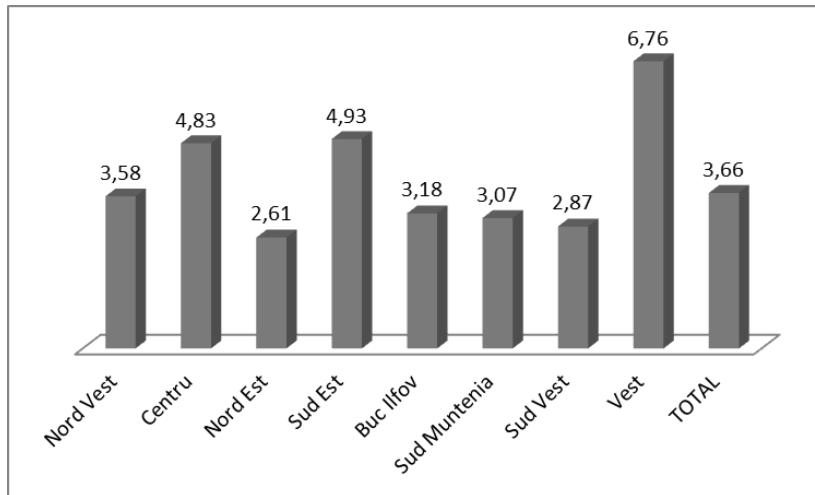
**Fig. 1 Distribution of agricultural holdings by region, 2013**

**Table 2 Utilized agricultural area by regions, 2013**

Regions	Total holdings	Holdings that have used agricultural area	Used agricultural area (UAA)	Average UAA	
				By holding	By holding that has used agricultural area
North-West	499857	497714	1783184,18	3,57	3,58
Center	358471	350857	1693990,28	4,73	4,83
North-East	754533	742127	1937081,19	2,57	2,61
South-East	433043	424478	2092495,50	4,83	4,93
Buc Ilfov	25316	23757	75572,66	2,99	3,18
South Muntenia	753585	732890	2250948,62	2,99	3,07
South West	557850	548220	1574195,01	2,82	2,87
West	247001	243722	1648382,36	6,67	6,76
<b>TOTAL</b>	<b>3629656</b>	<b>3563765</b>	<b>13055849,80</b>	<b>3,60</b>	<b>3,66</b>

Source: Tipologia și dimensiunea economică a exploatațiilor agricole, National Institute of Statistics, 2013.

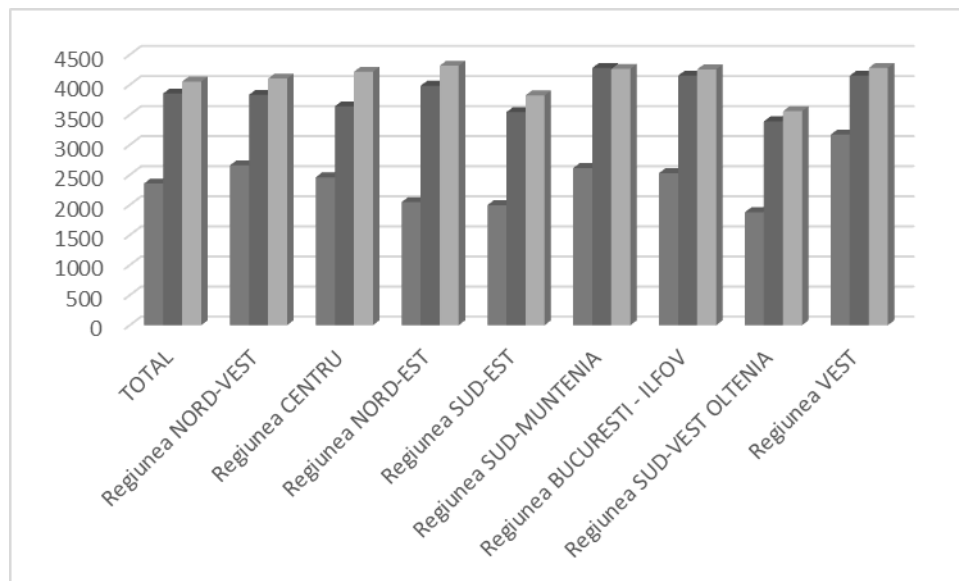
In Romania there are 3,629,656 farms, of which 98.1% had used agricultural areas. Total utilized agricultural area in Romania in 2013 was 13,055,849 hectares, representing an average of 3.66 hectares agricultural land/farm. Analyzing this area by region reveals that there are differences from one region to another. The highest number of farms is found in the North East region, followed by South-Muntenia and South West. The biggest agricultural area used is found in South-Muntenia, South-East and North-East.



Source: prelucrări date ”Tipologia și dimensiunea economică a exploatațiilor agricole, Institutul Național de Statistică, 2013”.

**Fig. 2 Average size of agricultural holdings by regions, 2013 (ha/holding)**

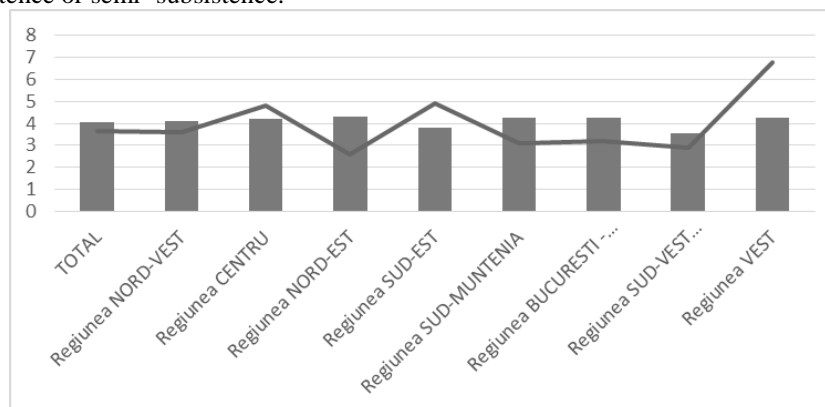
Analyzing the chart, it is found that the average size of farms in Romania differs from one region to another. The Western region is the region with the largest size, namely 6.76 ha/holding (being 84% higher than that recorded national average), followed by the South-East with 4.93 ha / holding. North East is the region with the smallest size of farms, only 2.61 ha/holding (about 30% lower than the national average and 150% lower than Western region).



Source: data processing, TEMPO ONLINE, National Institute of Statistics

**Fig. 3 Evolution of yields of cereals in the period 2012-2014 by region**

In the period 2012-2014, average cereal production in Romania was 3421 kg/ha. The highest yields are recorded in 2014, considered a good agricultural year, which proves that Romania's agriculture still depends to a very large extent, the climatic factor. The highest yields are recorded in the Northeast region (from 4316 kg/ha) region in this period doubled yields. This is followed by the West, which, although holding agricultural areas are much lower than other regions recorded average yields that exceed the national average. Meanwhile, the Western region has the largest farm size, demonstrating that in these areas, intensive agriculture is practiced with modern production means, instilling in her commercial character, less subsistence or semi- subsistence.



Source: data processing, TEMPO ONLINE, National Institute of Statistics

**Fig. 4 Average production of cereals and average size of agricultural holdings by region in 2014**

### Conclusions

In order to efficient use on Romania's agricultural potential through the effective use of means of mechanization, crop rotation and even specific consumption reduction it is necessary to increase the physical and economic size of agricultural holdings. In Romania there is an increase in the size of farms, from 3.37 hectares in 2005 to 3.66 hectares in 2013, accompanied by an increase in yields for the main crops. As Tofan A. (2005) in the paper entitled "The economic size of agricultural holdings", increasing the physical size of farms is accompanied by faster growth of economic size, which means that the surface is more important than increasing intensification of production per unit surface. North-East and South-Muntenia are the regions with the highest agricultural area with the highest number of farms. As regards cereal production, these regions have higher yields and because arable land and favorable conditions for these crops. The process of consolidation of farms (materialized by increasing their size) was more intense in the West region, which although does not have agricultural area as large as in other regions recorded the largest size of farms, of 6.76 hectares (84% higher than the national average). This phenomenon is due to the higher level of investments in these regions and production systems development, technology transfer etc.

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