

Petre, Ionuț Laurențiu

**Conference Paper**

## Comparative study of the agricultural sector in Romania and the main member states of the U.E.

**Provided in Cooperation with:**

The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest

*Suggested Citation:* Petre, Ionuț Laurențiu (2021) : Comparative study of the agricultural sector in Romania and the main member states of the U.E., In: Agrarian Economy and Rural Development - Realities and Perspectives for Romania. International Symposium. 12th Edition, The Research Institute for Agriculture Economy and Rural Development (ICEADR), Bucharest, pp. 313-320

This Version is available at:

<https://hdl.handle.net/10419/263058>

**Standard-Nutzungsbedingungen:**

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

**Terms of use:**

*Documents in EconStor may be saved and copied for your personal and scholarly purposes.*

*You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.*

*If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.*

# COMPARATIVE STUDY OF THE AGRICULTURAL SECTOR IN ROMANIA AND THE MAIN MEMBER STATES OF THE U.E.

IONUȚ LAURENȚIU PETRE <sup>1</sup>

## Abstract

*To identify the problems faced by the Romanian agricultural sector and to identify viable development solutions, a comparative analysis of the competitiveness of the Romanian sector with the other member states of the European Union is necessary. In this regard, in the present research, a quantitative analysis of the statistical data taken from the Eurostat databases was performed, to determine the competitiveness of the sector compared to other Member States. The main technical-economic indicators from the last statistical publication (structural survey) from 2016 were analyzed. Following the determination of the positioning of Romanian agriculture, recommendations and solutions can be identified to develop it and increase competitiveness.*

**Keywords:** Romanian agriculture, competitiveness, vegetable sector, comparative study

**JEL classification:** Q01, Q10.

## INTRODUCTION

Given that in each country can be identified several types of relief, climate difference from natural resources, the greater the gap between the Member States of the European Union, so the agricultural structure in these countries varies depending on all these factors (geology, topography, climate, natural resources, as well as the diversity of regional activities (Buzioanu et al., 2017).

The same paper mentions that "*the study on the structure of agricultural holdings, known as the Farm Structure Survey (FSS), helps to assess the situation of agriculture across the EU, to monitor trends and transitions in the structure of agricultural holdings*".

In Gavrilescu's paper, 2005, it is considered that Romania has an advantage compared to the European Union, before Romania's accession, given the fact that in Romania the agricultural area had a share of 62%, compared to the agricultural area throughout the Union, since then, which owned only 41%, so the author said that "*Romania has an advantage of a much larger agricultural area, namely 62% of the total. Under these conditions, Romania has an essential advantage over EU countries, namely a much higher share of agricultural land in the country*". However, it remains to be seen whether Romania has reaped this advantage or, unfortunately, has remained at a lower level of development of the agricultural sector than the rest of the EU Member States.

Cotelnic and Cimpoieș, considers that "*agriculture cannot compete on equal terms with other branches of the national economy given the privileged position of agriculture that is linked to both natural factors, transparency of production of important vital products, raw materials and food*", but on the other hand, no other sector is subject to a higher risk, such as the one to which the agricultural sector is subject, being conditioned by pedo-climatic factors, if we do not intervene with certain measures of stability on agricultural production, production value, market measures. Thus, we can ask ourselves whether agriculture is a privileged branch of a state's economy or not? I believe that this question can also be based on the following analysis and on the level of competitiveness of each state from an agricultural point of view.

## MATERIAL AND METHOD

In this paper we want to make a comparative analysis of the agricultural sector in each member state of the European Union, highlighting Romania's position and the degree of

---

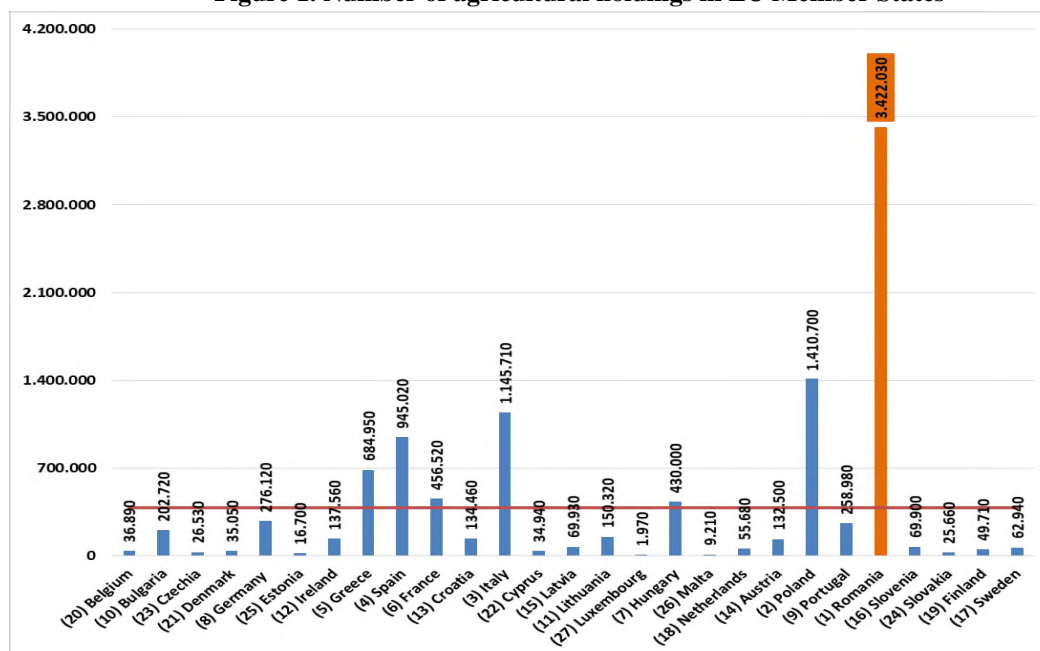
<sup>1</sup> PhD. Researcher, Research Institute for Agriculture Economy and Rural Development, [petre.ionut@iceadr.ro](mailto:petre.ionut@iceadr.ro)

competitiveness it has. For this purpose, European statistical databases were used with the help of Eurostat to identify data on the agricultural sectors of the Member States, corresponding to the last agricultural survey in 2016. The number of farms, the agricultural areas used, the number of farms holding animals, the standard output value of farms and the number of farms whose household consumes more than half of the obtained production were considered, depending on these data other indicators were determined, which can capture competitiveness in the sector. These data were analyzed quantitatively and qualitatively, as well as comparatively intra-Community.

## RESULTS AND DISCUSSIONS

In order to determine the competitiveness of the Romanian agricultural sector, a comparison was needed with the other members of the European Union on the main indicators of the agricultural structure, analysis conducted using the latest surveys in 2016. , economic size and yield per hectare.

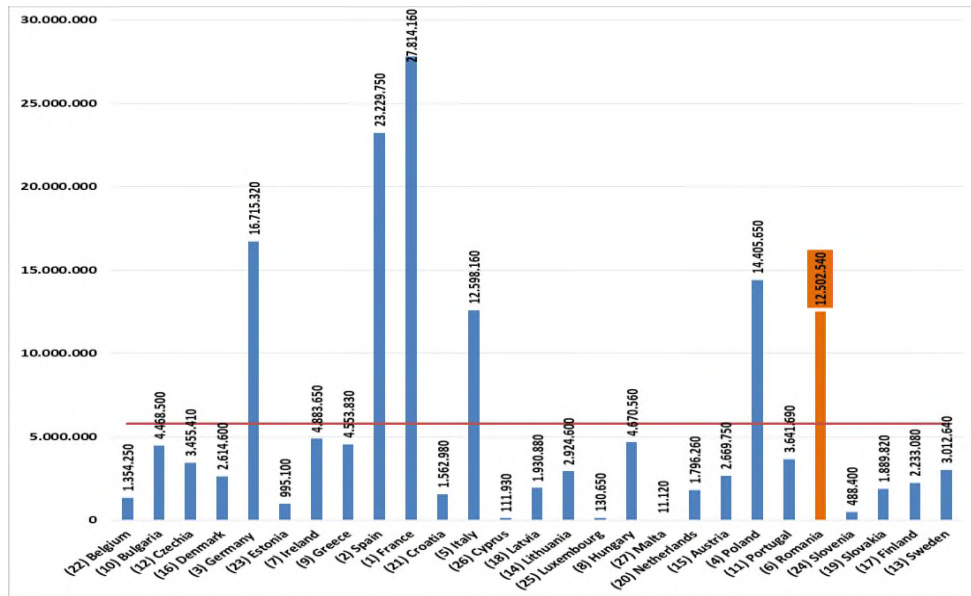
**Figure 1. Number of agricultural holdings in EU Member States**



Source: own processing based on Eurostat data (survey 2016)

Analyzing the number of farms in all 27 states and ranking them in descending order, we can see the following. In 2016, Romania stands out with the most farms in the European Union, the total being about 3.422 million farms. In second place is Poland with 1.41 million farms, followed by Italy with 1.145 million farms. At the opposite pole, Luxembourg has the fewest farms, about 2,000 farms. Although Romania has the most farms, this aspect is not necessarily a positive one, given the distance between this value and the European Union average, it is observed that the EU average is about 381 thousand farms per Member State, which means that Romania exceeds this average by almost 9 times, this situation leading to a very small size of the farm in Romania. Of the 27 Member States, only the first 7 exceed the Union average, the closest to the average being Hungary with 430 thousand farms.

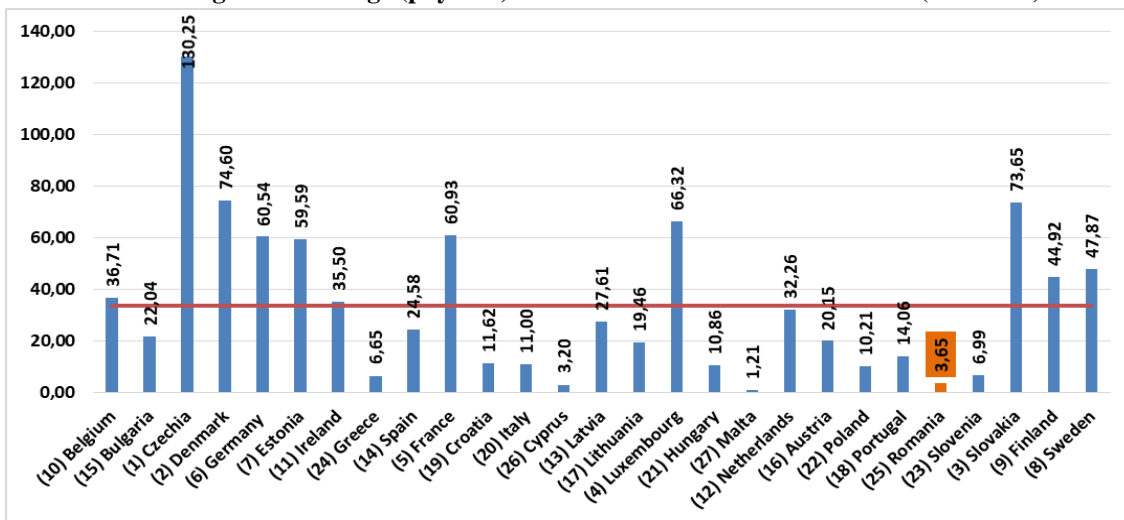
**Figure 2. Agricultural area used in EU Member States (hectares)**



Source: own processing based on Eurostat data (survey 2016)

Although Romania holds the first position in terms of the number of farms, in terms of agricultural area used, Romania occupies the sixth position with an area of 12.5 million hectares, which once again strengthens the idea of excessive fragmentation of farms. At European level, France has the largest agricultural area of 27.8 million hectares, followed by Spain with 23.23 million hectares, and at the opposite pole Malta has only 11 thousand hectares. Realizing the average at the level of the 27 states, regarding the agricultural area used, it would be about 5.8 million hectares, Romania exceeding this average by 115%.

Figure 3. Average (physical) size of farms in EU Member States (ha / farm)

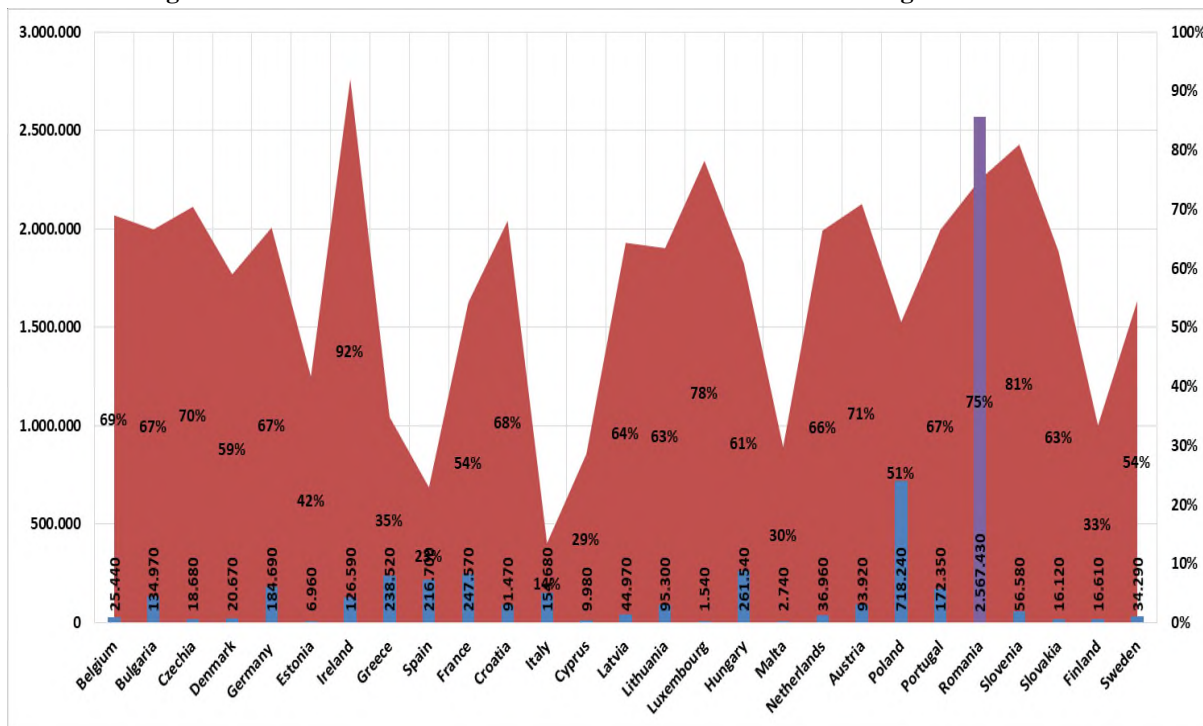


Source: own processing based on Eurostat data (survey 2016)

By making the ratio between the second indicator, compared to the first one can determine the average (physical) size of farms in the European Union, in order to determine its size and degree of fragmentation. Given that Romania has the most farms, but does not have the largest area of agricultural area used, this led to the positioning of Romania, in terms of average size, at the bottom of the ranking, respectively on the 25th place out of 27 states, with an average size of 3.65 hectares per farm, Romania surpassing countries such as Cyprus and Malta. As for the country with the most

compact holdings, the Czech Republic has a farm size of 130 hectares, followed by Denmark with 74.6 hectares per farm. Regarding the average of the 27 states, the average size at European level of a farm is about 34 hectares, being almost 10 times larger than in Romania.

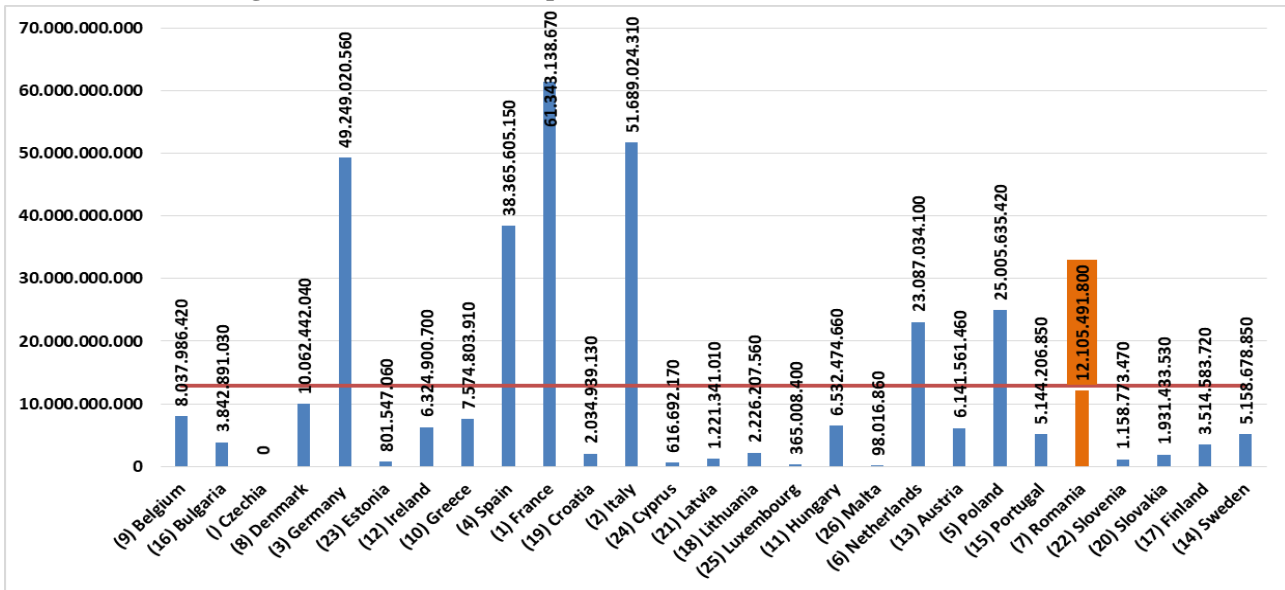
**Figure 4. Number of livestock farms and their share in total holdings in EU Member States**



Source: own processing based on Eurostat data (survey 2016)

The figure above shows graphically the number of farms in each of the 27 Member States raising animals, as well as their share of total farms in the Member States. Thus, it can be observed, once again, that Romania holds the first position, out of the total holdings, 75% are holdings with animals, respectively about 2.57 million farms. Also, the ranking of farms is maintained in this case, Poland occupying the second position with a number of 718 thousand farms, representing, however, 51% of the total farms. At European level, the average number of farms raising animals is 207 thousand farms, representing 57.2% of the average number of total farms. It should be noted that, although Italy ranks first both in terms of the total number of holdings and in terms of the agricultural area used, it is noted in this situation that only 155 are registered in Italy. thousands of farms with animals, representing only 14% of the total holdings.

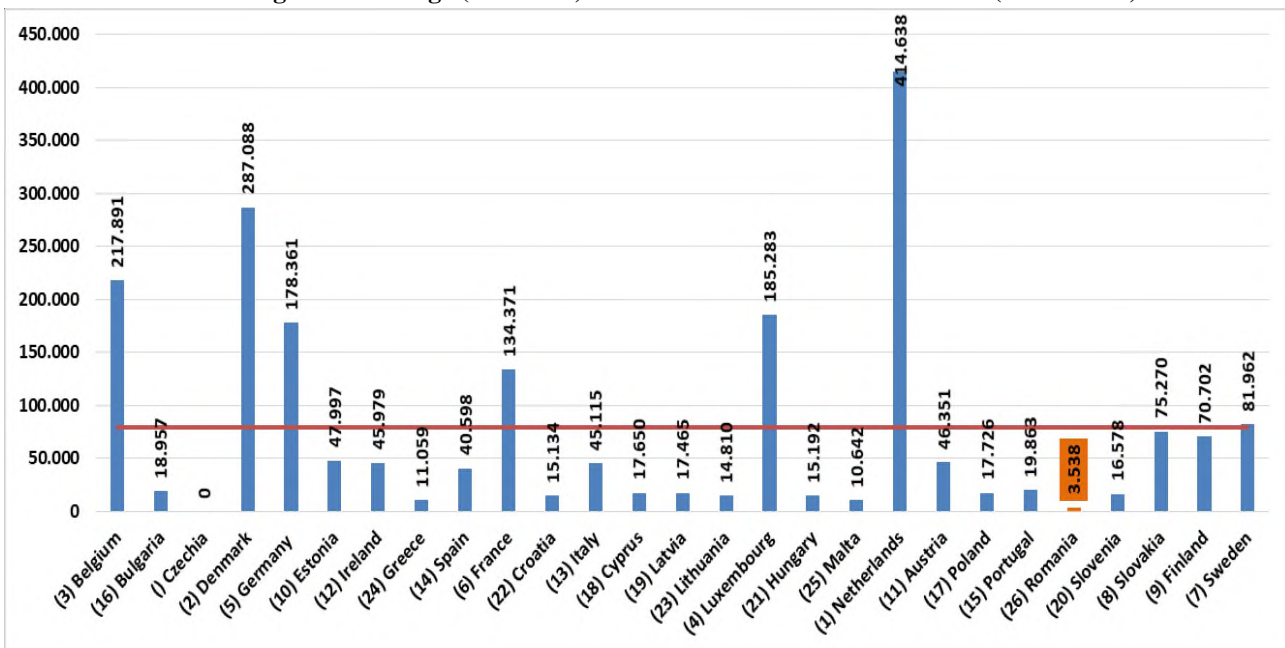
**Figure 5. Value of standard production (SO) of farms in EU Member States (euro)**



Source: own processing based on Eurostat data (survey 2016)

A comparison of the standard value of farm production at EU-27 level shows that the highest value in France is around 61.34 billion euros, the country with the largest agricultural area used, in second place. positions Italy with 51.69 billion euros, followed by Germany with 49.3 billion euros. Romania ranks seventh in terms of Standard Output, reaching about 12.1 billion euros, close to the European Union average, the position being almost correlated with the agricultural area used, but not the value. The country with the lowest value of agricultural production is Malta with 98 million euros and on the penultimate place Luxembourg with 365 million euros. The EU-27 average per Member State is about 12.83 billion euros, Romania being 5.7% below this average.

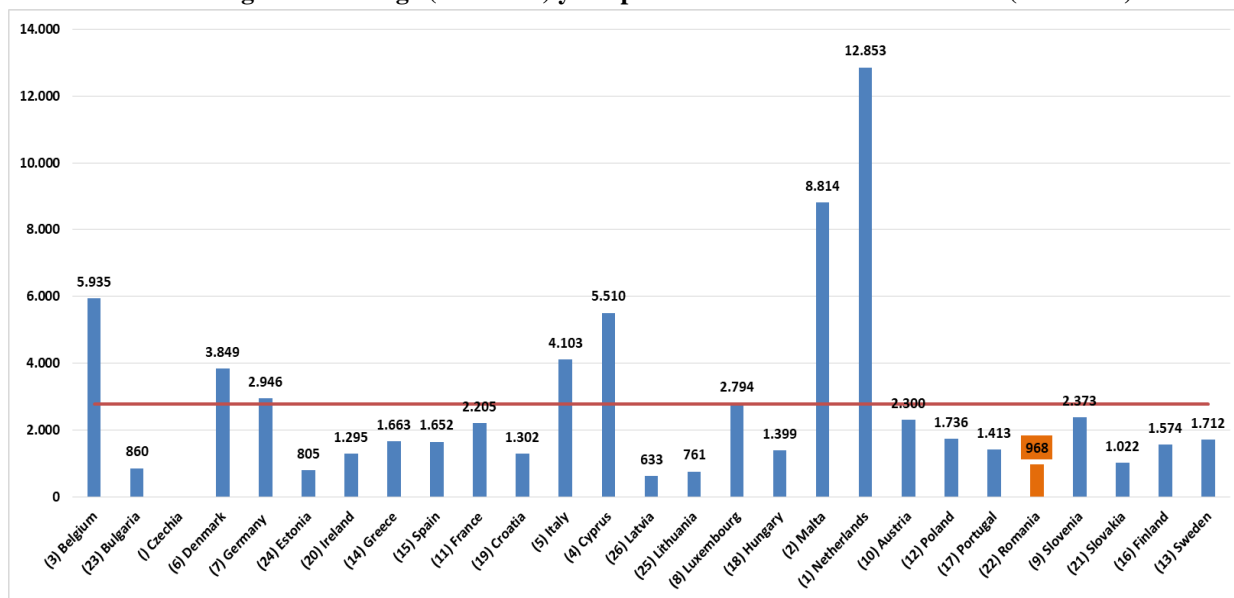
**Figure 6. Average (economic) size of farms in EU Member States (euro / farm)**



Source: own processing based on Eurostat data (survey 2016)

Depending on the value of agricultural production for each Member State and the number of farms, the average economic size of the farm could be determined. In terms of this indicator, the Netherlands is in first place with an average size of 414.6 thousand euros, followed by Denmark with 287 thousand euros and Belgium with 218 thousand euros. Unfortunately, it can be seen that at the opposite pole, Romania ranks last with an average value of agricultural production per farm of 3,538 euros. At the average level, each member state reaches a threshold of the economic dimension of 78.8 thousand euros, Romania being well below this threshold, the average being more than 22 times.

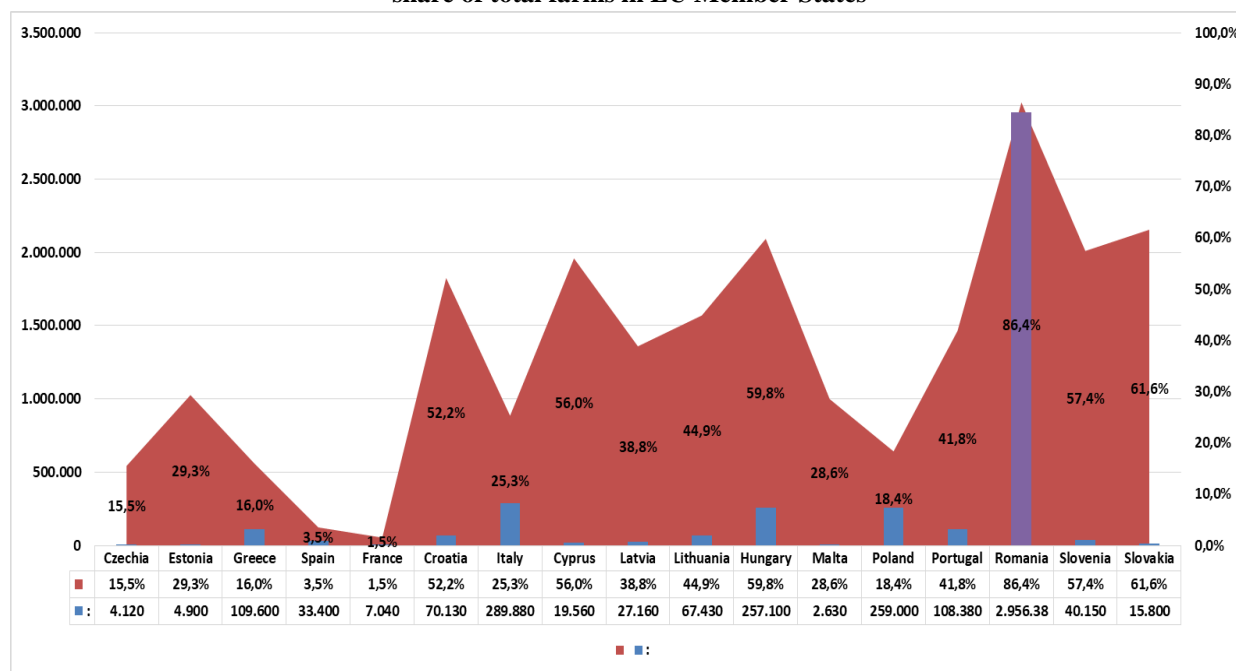
**Figure 7. Average (economic) yield per hectare in EU Member States (euro / ha.)**



Source: own processing based on Eurostat data (survey 2016)

Depending on the value of agricultural production and the agricultural area used, the average economic yield per hectare could be determined for farms in the Member States of the European Union. The Netherlands maintains its leading position with an average yield per hectare of 12,853 euros, followed by Malta with 8,814 euros / hectare and Belgium with 5,935 euros / hectare. In this case, Romania is no longer at the bottom of the ranking, but it is still in the last 5, being on the 22nd position with an average value per hectare of 968 euros, on the last position being Latvia with 633 euros / hectare. At the average level, in the European Union an SO value per hectare of 2,788 euros is obtained, Romania being below this average by 65%.

**Figure 8. Number of farms whose household consumes more than 50% of final production and their share of total farms in EU Member States**



Source: own processing based on Eurostat data (survey 2016)

Analyzing the last indicator, respectively the number of farms whose household consumes more than 50% of the final production, calculating their share in the total number of farms, can explain the situation presented by the previous indicators, in which Romania is. As it can be seen, about 2.956 million farms consume more than 50% of the final production in their own household, in Romania, representing over 85% of the total farms at national level, thus, it is not possible to discuss a very competitive sector. The next country according to the number of farms is Italy with 290 thousand farms (10 times less than Romania) but these representing only 25% of Italian farms, and depending on the share, the next country is Slovakia with a share of farms which consumes more than 50% of production in its own household of 61.6%, representing 15,800 farms. France has 7,000 farms in this situation, representing only 1.5%, being the country with the lowest share of these types of households, and Poland, the country with which we can compare, has 260,000 farms (being on the third position in number), but representing only 18.4% of all farms.

## CONCLUSIONS

Although Romania has the most farms, this aspect is not necessarily a positive one, given the distance between this value and the European Union average, it is observed that the EU average is about 381 thousand farms per Member State, which means that Romania exceeds this average by almost 9 times, this situation leading to a very small size of the farm in Romania.

Although Romania holds the first position in terms of the number of farms, in terms of agricultural area used, Romania occupies the sixth position with an area of 12.5 million hectares, which once again strengthens the idea of excessive fragmentation of farms.

Given that Romania has the most farms, but does not have the largest area of agricultural area used, this led to the positioning of Romania, in terms of average size, at the bottom of the ranking, respectively on the 25th place out of 27 states, with an average size of 3.65 hectares per farm, Romania surpassing countries such as Cyprus and Malta.



Romania ranks seventh in terms of Standard Output, reaching about 12.1 billion euros, close to the European Union average, the position being almost correlated with the agricultural area used, but not the value.

Given the relatively small value of agricultural production compared to the extent of agricultural land used, there is a very small economic dimension in the case of Romania, among the smallest in the EU, being 3.5 thousand euros.

Regarding the economic yield per hectare, Romania obtains for each hectare from the agricultural area used on farms a value of standard production of about 970 euros, quite low compared to the EU average of 2,800 euros.

All these aspects that do not favor the agricultural sector in Romania lead to the decrease of competitiveness in the single free market at EU level, the main reason being the extensive nature of agriculture and the high share of subsistence and semi-subsistence farms presented graphically in the last part. 85% of farms in Romania consume more than 50% of their own production.

## REFERENCES

1. Andreea, I. R., Iuliana, D., & Darie, S. V. (2019). efficiency versus competitiveness in romanian agriculture. case study. *Ekonomika Poljoprivrede*, 66(3), 691-705. doi:<http://dx.doi.org/10.5937/ekoPolj1903691R>
2. Andrei, T., Oancea, B., & Profiroiu, M. (2011). An analysis of the romanian agriculture using quantitative methods. *Agricultural Economics*, 57(2), 85-92. doi:<http://dx.doi.org/10.17221/2609-AGRICECON>
3. Buzoianu, O., Pascu, B., Popescu, M.L., 2017, Analiza sectorului agricol în cadrul Uniunii Europene, Conferința Științifică Internațională „Competitivitatea și Inovarea în Economia Cunoașterii”, Vol. IV, Chișinău, accessed on [https://ibn.idsi.md/sites/default/files/imag\\_file/57-62.pdf](https://ibn.idsi.md/sites/default/files/imag_file/57-62.pdf)
4. Cotelnilc, A., & Cimpoieș, L. (2010). Asigurarea subvenționată a riscurilor de producție în sectorul agricol al RM.
5. Dachin, A. (2011). Contribuții ale agriculturii la fluctuațiile economice în România. *Economie teoretică*.
6. Donea, S. (2019). Eficientizarea activității economice prin măsuri de gestiune a riscurilor în sectorul agricol. In *Проблемы и вызовы экономики региона в условиях глобализации* (pp. 264-267).
7. Gavrilesu, D. (2005). Agricultura românească de la subzistență la eficiență. lucrare on-line.
8. Mihalciuc, C., Grosu, M., & Botnar, M. (2021). Specificul organizării contabilității entităților din sectorul agricol.
9. Tîntarcu, G. (2012). ROMANIAN AGRICULTURE STRUCTURAL PROBLEMS. The Research Institute for Agriculture Economy and Rural Development. *International Symposium. Agrarian Economy and Rural Development: Realities and Perspectives for Romania. Proceedings*, , 336-340. Retrieved from <https://am.e-nformation.ro/scholarly-journals/romanian-agriculture-structural-problems/docview/1461729084/se-2?accountid=136549>
10. \*\*\*Data base Eurostat, <https://ec.europa.eu/eurostat/data/database>, accessed on 20.09.2021