

## Analysis of export competitiveness of Romanian agricultural products

Mihaela-Carmen MUNTEAN

[mihaela.muntean@ugal.ro](mailto:mihaela.muntean@ugal.ro)

Rozalia NISTOR

[rozalia.nistor@ugal.ro](mailto:rozalia.nistor@ugal.ro)

Ludmila Daniela MANEA

[daniela.manea@ugal.ro](mailto:daniela.manea@ugal.ro)

Florina Oana VÎRLĂNUȚĂ

[florinaoana27@yahoo.com](mailto:florinaoana27@yahoo.com)

Dunarea de Jos University of Galati, Romania

### Abstract

The term of competitiveness has different meanings and uses in various areas. The concept of competitiveness is used in the technological field, in the consumer goods market, in the international trade. By its characteristics, competitiveness is generated and analysed at microeconomic level. This paper aims to analyse the competitiveness of Romanian foreign trade with products at European level and to establish the place in the European hierarchy.

**Keywords:** competitiveness, foreign trade, Romania, products,

### 1. Introduction

The trade is one of those things we naturally understand, but we have difficulties when we need to define it. This barrier or difficulty is due to the very different content that the term itself receives in expressions or derivative forms.

Trade is the condition of an active factor in the economy as it achieves and maintains the balance between production and consumption, between supply and demand, generating economic growth. The conduct of economic activities in normal parameters is conditional on the permanent maintenance of the level of trade development and its links with the rest of the economic sectors, otherwise the efficiency of the economy can be affected by underdevelopment, slowing the movement of the product or by over-dimensioning, costing the distribution.

In order to be able to determine the place of trade in the whole commercial activity, it is necessary to consider the transformations that the state and its societies know in the analysed and prospective period, as well as the changes that these transformations generate on the evolution of the international trade. The foreign trade has to face a complex of issues at present, but also in the future, of which the major ones are:

- increasing the degree of opening of the economy, in the conditions of the expansion of the effects of globalization;
- the need to increase the level of economic competitiveness in general and that of exports;
- the adaptation to the new global and European trends, theoretically analysed in the literature and demonstrated empirically through the results of studies based on the latest published statistical data;
- tightening competition on international markets, including European markets;
- high upgrading the potential of internal resources and labour resources through external trade relations, in particular by increasing the share of exports of sectors with a high specific value added;

- the amplification in the national economy of the direct and propagated effect of the external economic relations, reflected by the increase of the so-called multiplication factor of the foreign trade.

In the current period, economic activities result in a particularly strong competitive environment, with the issue of competitiveness being current, suggesting adaptability, modern managerial system, increasing productivity, safety, higher products with lower prices, quality and efficiency.

The increased competitiveness is seen as the basis for the development of an economy in the conditions of globalization and the tendency of each nation to expand its sales markets. Enhanced competitiveness at country level is influenced by the activity of all economic actors, all national organizations and the competitiveness of each sector. The level of competitiveness of a nation is influenced by the policies, trade plans the state has at its disposal, the modalities of its application and control, with particular attention to the share of GDP allocated to the development of education, infrastructure, health care, justice, to be competitive, an economy must be based on a skilled population, an innovative system and a strong informational society.

The competitiveness of a nation is the "level at which a country, under fair and free market conditions, produces goods and services that respond to the tastes of the international market, which simultaneously maintains and increases the real incomes of the population in the long terms.

Competitiveness, which is often confused with such financial indicators as profitability and productivity, is the ability of a firm to resist competition at one time. Competitiveness is, therefore, a potential which is characterized by an advantage over competitors on the same market. Profitability or productivity are only partial measures of competitiveness.

The paper is structured in 5 sections, each of them addressing theories on the concept of foreign trade, competitiveness, analysis of exports and imports of Romanian foreign trade, as well as the place in the hierarchy of international competitiveness.

The first chapter “Introduction” presents the topic on the subject. The second chapter, entitled “General considerations on external trade”, is dedicated to the definition of essential terms and aims to define the foreign trade by mentioning its importance in the economy, concepts and factors of influence. Chapter 3 “International competitiveness and determinants” presents the notion of competitiveness, the interpretation of the phenomenon as well as the factors of influence. The fourth chapter “The competitiveness of the Romanian foreign trade with agricultural products” presents the analysis of Romania's foreign trade, the situation of imports and exports with the European Union, the situation at the level of development regions, as well as the evolution of Romanian agricultural products for export. The paper ends with a series of Conclusions.

## **2. General considerations on external trade**

The foreign trade is economic transactions, production co-operation, technology and science, bilateral exchanges, established in the medium and long term, in order to obtain mutually beneficial benefits. National economies are the underlying factors for the development of production factors, playing a decisive role in international economic relations. The way in which the economy operates is based on interdependent relationships both between business areas and between different outlets, both internal and external, generating trade relationships according to supply and demand.

In a free, competitive and developed market economy, the pace of trading of goods and services is sustained. Under the influence of competitiveness and sustained progress, factors that influence competitiveness are highlighted:

- the foreign investments that positively influence the size of domestic demand and help economic development (in some sectors domestic firms do not have the opportunity to defend their market positions vis-à-vis foreign firms);

- the evolution of processes and phenomena in the global economy. In the opinion of Michael Porter, the main factor of a company's profitability is generated by the attractiveness of the field of activity for the economic agents.

International competition is defined as "the extent to which a nation can produce and exploit, on free and competitive market conditions, products and services that can be sold on foreign markets". The competition of a nation depends on the level of competition shown by each actor who is involved in the country's economy. In order to achieve a nation's competition, all sectors of the national economy contribute, all organizations in each branch of the country's economy.

The economic flows must ensure a fair and balanced development on the foreign market, influencing the country's economic development, determining internal and external factors to major changes in vision and strategy. Due to the dynamics of trade development, globalization-driven trade policies, each economy (especially the emerging) must make sustained efforts in the face of fierce competition from developed countries. The economic performance can be offset and capitalized by using raw materials and labor at lower production costs and finding external markets with high economic potential. To capitalize on this potential, government strategies should take into account the factors contributing to the development of this sector of the economy, i.e. the share of exports in gross domestic product.

Globalization and market alignment led to the globalization of marketing, and the immediate consequence was research to identify new market opportunities to grow and capitalize on external production. The market globalization has had an indirect effect by individualising consumer needs. The companies have had to change their trade policy and attract new customers through identical behaviour in many countries. Therefore, the product-market relationship has expanded from national to European or even international level, the production being individualized and the economic unit maintaining long-term collaboration and operation relationships with suppliers and distributors.

### **3. International competitiveness and the determinants**

Competitiveness can be defined as a complex economic process with multiple and different measurement methods, using unique indicators, composite indicators, allowing their analysis in a relationship of interdependence with other factors or concepts.

The analyse of competitive position is a traditional research area at the firm level but has been vigorously introduced to explain the strengths or vulnerabilities of an economy as a whole by assessing the performance of the sectors in the destination markets. The radiography of the competitive position on foreign markets is used to measure national and industrial performance efficiency and to identify products and markets for the development of trade in both the public and the business sector. This is an indispensable part of promoting and developing trade. At national level, governments need to monitor trade performance to provide adequate trade policy support, institutions need to outline strategies for exporting and partner countries to make better use of scarce resources, and businesses need to know the world market for opportunities to diversify products and market.

Thus, the competitiveness of products and firms in world markets results in specialization and structuring at the level of national economies. Sectorial specialization reveals the competitive advantages of a nation, both those based on local factors and political decisions, but also those based on capital and innovation. From this point of view, the sectorial specialization studies complement and help to interpret the results obtained mainly from the foreign trade indicators. The structure of national economies depends on the level of

resources and the way they are exploited in a competitive and competitive way. The notion of national competitiveness as a term that has more meaning for prosperity needs to be addressed. National prosperity may be another meaning of the notion of economic competitiveness of that country. The ability and consistency with which resources (human and capital) are exploited are factors that determine competitiveness and are not just an amorphous notion in itself.

In order to have a fair and complete picture of competitiveness, it must be seen and analysed from two points of view: the competitiveness of nations and the competitiveness of companies.

The main factors of competitiveness at national level are:

- the local resources (labor force, natural resources, technological and financial resources, existing infrastructure etc.);
- the size and structure of internal demand;
- the technological level and the efficiency of the subassembly and sub-suppliers industry;
- the industrial structure and competition.

These economic factors succeed in creating a favorable economic environment, so that firms can develop and compete freely, detaching themselves from a competitive point of view, and their advantage to be used later on internationally. The local resources are those that contribute specifically and directly through their particulates to the evolution and balanced development of the national economy. In order to gain a competitive advantage in the internal market, there must be direct competition, which can lead to a faster pace of innovation and development, increasing customer requirements, thus contributing to higher quality standards, increased technological change and improved service. By creating efficient suppliers and new or related industrial branches directly contributing to the development of the activity sectors, the prerequisites for gaining a competitive advantage.

The oligopolistic competition structures ensure the guarantee of expansion into new markets due to the following reasons:

- national rivalries generate pressure for innovation by contributing to increasing competitive advantage;
- the oligopolistic competition structure also creates advantages for other industrial activities by obtaining competitive prices, higher quality and long-term contracts;
- this structure ensures an external competitive economic environment.

The role of government is to positively influence and potentiate national economic factors so as to create competitive advantages. This influence can be exercised directly by providing subsidies, industrial policies or support in some areas of national strategic interest, or indirectly by directing domestic demand through non-discriminatory regulations addressed to a population segment. The Government has an important and strategic role as a buyer of advanced technology, telecommunications equipment, transport, computing, weapons and energy.

As the acceleration of the globalization of the national economies, the increase of the national and international competitiveness, the human resources management becomes a strategic element, with special significance for all categories of organizations. In today's changing environment, with a growing degree of uncertainty, the human resource must become the element of stability and security, providing the organization with the necessary human capital, with the highest professional skills, to face all the challenges at national and international level. In the context of globalization, human resources are becoming the main tool and means by which organizations can secure their competitive edge, and managers' strategic decisions must reflect the commitment to people in an increasing proportion. The absence of coherent human resources strategies and policies makes it impossible to adapt

organizations to competitive changes and the international environment, as staffing needs to be understood in interdependence with all other processes at the level of an organization. In the age of globalization, people are the spring that determines how organizations respond to the challenges of the environment. As a strategic managerial process, human resource management must take into account their requirements and demands, in addition to provoking technical progress or the use of financial resources.

Romania, currently, has an important structural vulnerability in the labour market due to the demographic problem, generated, on the one hand, by the natural decline of the population and, on the other hand, by the phenomenon of emigration. The negative natural growth of the population has deteriorated significantly in recent years (at -3 per 1,000 inhabitants in 2016 compared to -1.6 per 1,000 inhabitants in 2013), our country having the highest values in the EU. The average age of the population increased in 2016 to 41.4 years from 37.3 years in 2007 to below the European average (42.6 years in 2016) and near the values of other region, such as Hungary (41.9 years), Czech Republic (41.5 years), Poland (39.9 years). These demographic developments contribute to potential GDP decline. According to statistical data for 2005-2016 for Central and Eastern European countries, a 1 percentage point increase in the share of the population aged 65 or over leads to a fall in potential GDP growth of 1.3 points percentage.

Another reason for the labour market imbalance is the migration that has reached a worrying level: about 15% of the country's population and 25% of the active population. Romania is the second country in the world according to the United Nations' annual population growth rate (7.3% per year on average over the period 2000-2015, above the values of other states in the region, such as Poland, which recorded only 5.1 % during the same period). This phenomenon affects the young labour force, given that most people who decide to leave the country are aged between 20 and 35. The main target countries are Italy and Spain (these two countries account for over 60% of the number of Romanians who emigrated, according to Eurostat data). The share of women's employment is only 57.4%, compared with 75% for men (2016 representative dates for the 20-64 age group). An important problem is the integration of young people into production. The share of young people aged 15-34 who do not carry out contract activities was 20.8% in 2016 compared to the EU average of 15.6%.

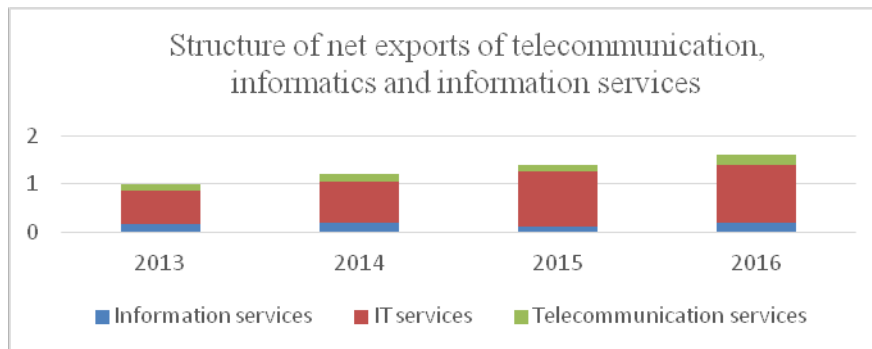
An important cause of the lack of workforce is the low level of adequacy of human resource training. Romania has the lowest share of young graduates completed in the EU (25% of people aged 25-34 had tertiary studies completed in 2016, compared with 33% in the Czech Republic or 43% in Poland) and lower rate of people involved in continuous training (1.2% of the population aged 25-64, compared with 3.7% in Poland or 8.8% in the Czech Republic in 2016).

Employing labour must be a priority for the Romanian state through direct and long-term involvement in stable and predictable and motivating labour market and labour supply so as to create added value for the national economy.

The technological innovation process has gained multiple valences in the knowledge society as a trigger in the development of new products, the emergence of emerging technologies and the development of business management techniques.

A major importance is the involvement of IT & C employees to constantly optimize ongoing processes, using the latest practices and innovating. The specific infrastructure (speed of data transfer, which in Romania is one of the fastest in the world). Secondary negative effects on this sector are due to the increasing difficulties of employers to find qualified workforce, plus the uncertainty surrounding the legislative framework. A significant long-term increase in added value in the national economy could be achieved by focusing on information technology delivery activities, to the detriment of implementation or outsourcing. The favourable effects on the growth potential of the economy would also come from changing

the strategy of the IT & C clients' structure in order to increase the share of the domestic ones.

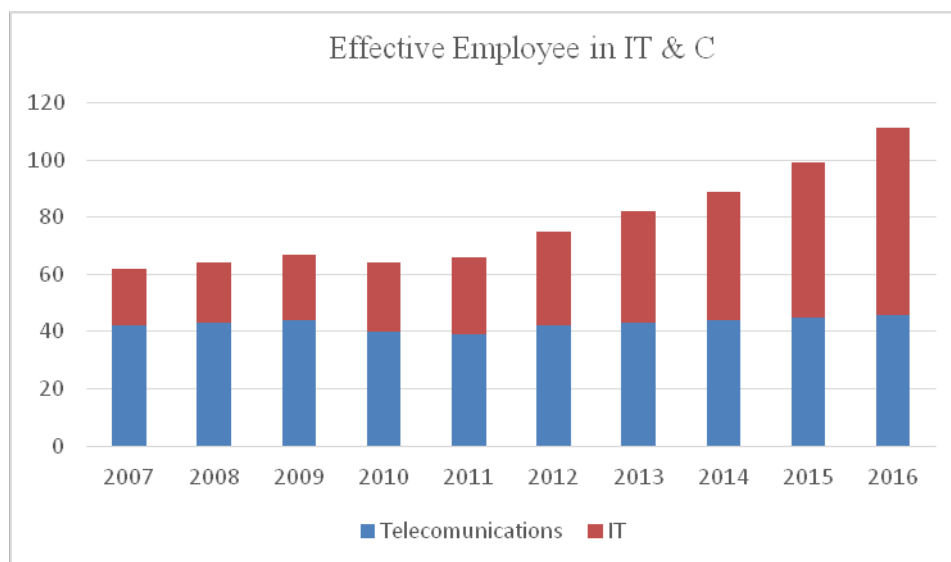


Source: Study of developments in the ITC sector in Romania, [www.bnr.ro/DocumentInformation.aspx](http://www.bnr.ro/DocumentInformation.aspx)

**Figure 1. The structure of net exports of telecommunication, information and information services**

An important feature of the development of the sector relates to the permanent increase of the flock of employees; the IT component experienced a more dynamic growth rate than that of the telecommunications sector. An effect, in the sense of increasing the number of employees, had it in the year 2015 and the amendment of the legislative framework, namely the elimination of the criterion of graduated education specializing in order for the employee to benefit from the grant of income tax exemption.

The growth of IT employees experienced an annual development of about three thousand people, and since 2013 the growth is much higher, and six thousand employees, and for the year 2016 the increase is 9000 employees compared to the previous year.



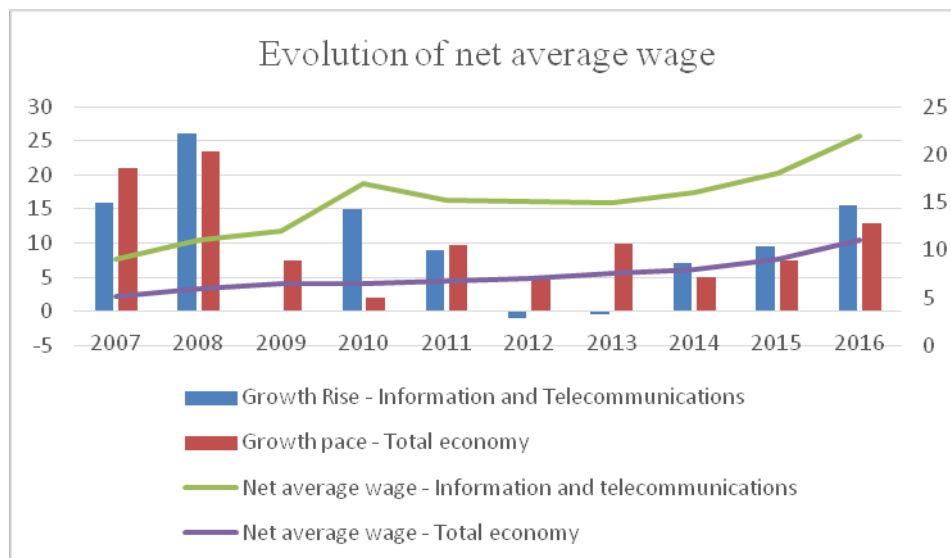
Source: [insse.ro](http://insse.ro)

**Figure 2. Effective employee in IT&C**

It is worth noting that large companies prefer Romania not only because of their tax benefits and relatively lower labor costs-among the smallest in the EU, but also because of the culture close to that of Western states. Production in IT&C in countries positioned in the Far East, which have a cheaper workforce (such as India), would also imply a greater difference

between spindles, which would hinder communication and coordination with the beneficiaries of the services, and thus affect Effectiveness of the activities carried out.

It is worth noting the increase in the net average wage in IT&C which is much higher than the average net salary on economy and its evolution and the ascendant trend that indicates.



Source: BNR calculations based on data from the National Institute of Statistics

**Figure 3. Evolution of net average wage**

The frequency of gross added value of the IT&C sector in nominal GDP has increased in recent years, supported by both tax advantages and relatively low labour costs compared to other EU countries. The number of employees in the IT field has increased significantly, its dynamics being among the highest in the EU. In addition, there is still a fierce competition for skilled workforce.

The IT sector is among the most dynamic in the economy in terms of the number of new companies, and compared to other European countries, the increase in the number of companies in the IT sector places Romania at the top of the rankings. The development of the IT&C sector has favourable effects on the growth potential of the economy, amid an upward dynamic of staff in the field, relatively investment making, but also the capacity of employees to optimise processes in progress. An additional impetus could be achieved by focusing on the provision of information solutions with higher value added.

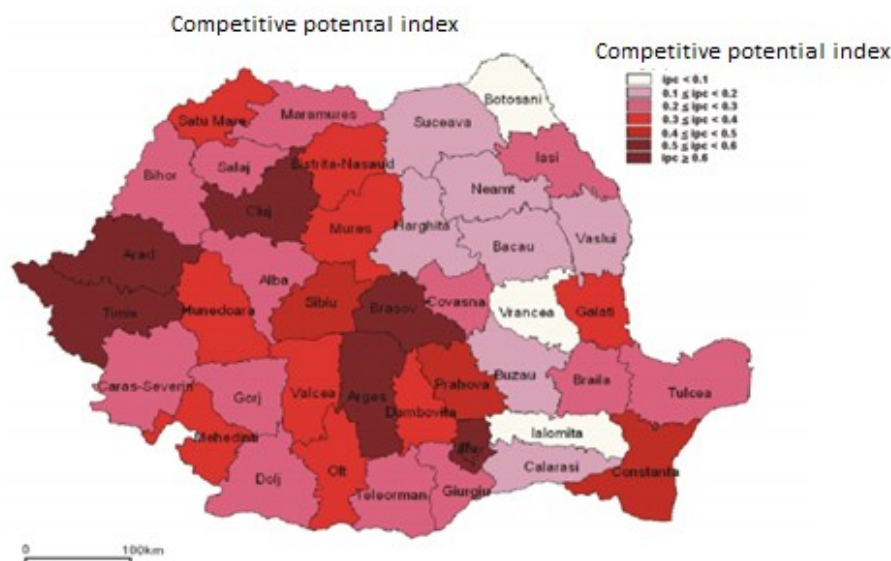
In order to evaluate the prospects of increasing the GVA share "information and communication" in nominal GDP, several alternative evolution scenarios have been built, the simulations indicate the possibility of reaching a weight of 12% of GDP in the year 2025 under the conditions in which the sector maintains the notable evolution of 2016 in the next 9 years. In this case, the contribution to GDP growth would double, reaching 1.5 percentage points, compared to 0.7 percentage points in 2016.

#### 4. The competitiveness of the Romanian foreign trade with agricultural products

With a total area of 238 thousand km<sup>2</sup> and a population of over 19 million inhabitants, Romania represents 6% of the total area of the European Union and 4% of its population. The investments and competitiveness of Romania as an emerging country are basic but need to be improved in order to achieve an acceleration of economic growth and to ensure a convergence of revenue with those in the EU. Rural areas, representative for Romania, have substantial development resources. Thus, in the year 2012, the rural area had an area of 207.52

thousand km<sup>2</sup>. The rural population is not distributed evenly across the country, with more crowded areas and isolated and depopulated areas. Thus, the rural population has a high share in certain regions (South Muntenia – 58.6%, North East – 56.8% and Southwest Oltenia – 51.9%), the highest density, excluding the Bucharest-Ilfov region, registering in the Northeast region (63.24/km<sup>2</sup>), while in the western part of the country the rural area is less populated (26.51/km<sup>2</sup> (2/km<sup>2</sup>) in the West region). These disparities put their mark on the socio-economic development of the area concerned and on the quality of life of the rural population. From the total area of the country, about 87.1% represent the rural area (as defined in national law) consisting of the communes, as territorial administrative units together with the component villages, and in this territory 43.6% of the population is living Romania.

#### The spatial distribution of the competitive potential index



**Figure 4. The spatial distribution of the competitive potential index**

Source: Cojano V. – *Competitive potential of economic growth, guidelines for a new industrial policy in Romania*, European Institute of Romania, Bucharest, 2010

At the local economy level, according to the hierarchy of the values of the competitive potential index (CPI), in the first place is Argeș County, with an index value of 0.78, compared to an average per country of 0.31, which reflects a large volume of total exports (of Country), the largest ratio of exports and the occupied population (10,925 Euro/employee) and the largest share of exports of medium-high technology (20.3% of total per country and 24% of total per county). In the second place, with a value of the index of 0.68, is the municipality of Bucharest, with the highest values of the export, but also the most numerous occupied population. Timiș County ranks 3rd with highest high-tech exports. No county in the region does not rank between the top 20 of the rankings, as competitive potential. Bacăul, in the 4th place in terms of high-tech exports, it is only 34 of 42, due to the high share of low-tech exports in the county total (almost 70%) and the low value of exports/occupied population, only 1,099 euro. Only two counties in the SE – Constanța and Galati – exceed the country's average in terms of the value of the competitive potential index, with the main branches of the shipbuilding and the steel industry. The situation is also similar for most other regions, each of which usually has two or more three counties with values above the average per country. Romania's trade surplus depends in very high proportion on the development of the

automotive industry in Argeş, and the Bucharest-Ilfov region contributes more through demand for imports than by the surplus of foreign sales. Competitive advantages, measured by participation 18 on exports, are concentrated in seven counties, mainly located in the western and middle of the country (Argeş 10%, Timiș 9%, Arad 5%, Constanța 5%, Bihor 4%, Brasov 4%, Sibiu 4%), which together with Bucharest (17%) Achieves 60% of Romania's exports. Calarasi, Ialomița, Mehedinți, Neamț, Olt, Tulcea and Vrancea counties do not have high technology exports, and 29 counties of 42 total do not exceed 1% of total per country. On the other hand, the absence of participation in international networks of production and trade has immediate effect on the health of the local economy. Counties such as Bistrița Năsăud, Brăila, Buzău, Caraș Severin, Calarasi, Dâmbovița, Hunedoara, Olt, Sălaj, Tulcea, Vâlcea, face a potential social risk resulting from the presence of companies with a large number of employees, but with performance relatively weak economic.

Due to the country's specific geo-economic features, analyses of evolution and development in different sectors should be viewed very carefully, in order to have a fair picture and to identify the development directions with optimum potential.

Analyses are designed to identify the natural potential of regions, to measure, quantify and compare the economic outcomes achieved within a certain timeframe, so that development strategies are realistic and achievable, competitive and generate plus value to the national economy.

The country's economic potential for production, processing and export must represent a central element in safe and sustainable development from the perspective of strong competitiveness with EU countries.

This "radiography" of the regional economy highlights several features of territorial specialisation: firstly, the prerequisites of competitive advance are very different between regions because the structure of the economy is very different. Some regional economies, for example south-west, south-east and west, specialize in a very small number of sectors, other regions, for example, South, Northwest and Centre are very diversified. Although none of the situations are favourable or unfavourable to competitiveness, clearly this diverse image suggests different needs at local level of education, qualification and research, industrial restructuring and technological needs.

Secondly, it is worth noting that agglomerations are already a visible presence in most regions, by the participation of two or more adjacent counties in the same branch of activity and by diversifying economic activity; less favourable things just stand in the Northeast, Southwest and Northwest. However, this trend must be strengthened and begin to produce effects in the plan to improve competitive advantages.

Infrastructure requires continuous improvement, so investment must be made according to certain economic criteria in order to produce economic, social and financial benefits.

**Table 1. Export situation by geographical regions in the year 2016  
(thousand euro)**

| Region                          | 2014     | 2015     | 2016     | Value increase 2016/2015 | Increase % 2015/2014 | Increase % 2016/2015 | Share of exports of the region in total export Romania 2016 |
|---------------------------------|----------|----------|----------|--------------------------|----------------------|----------------------|---|
| Total export Romania, of which: | 43996252 | 45904765 | 47767303 | 1862539                  | 4,34                 | 4,06                 | 100,00  |
| NORTH-EAST                      | 2017480  | 2118872  | 2185883  | 67011                    | 5,03                 | 3,16                 | 4,58  |

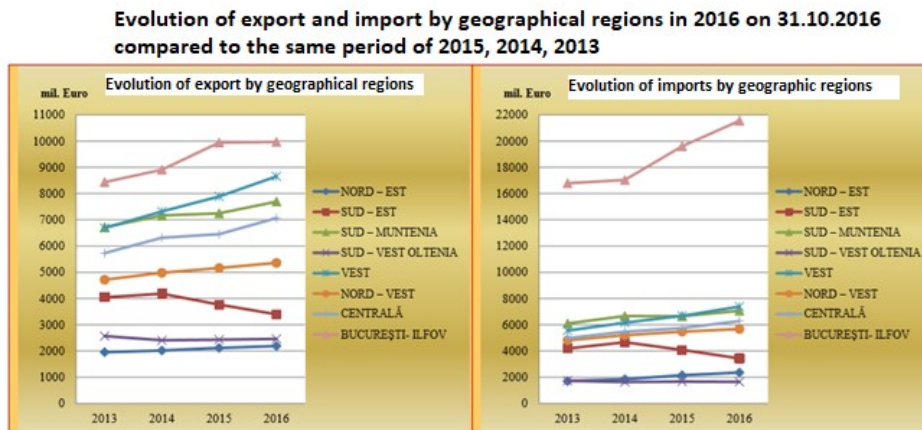
| Region                    |         |         |         |         |       |       |       |
|---------------------------|---------|---------|---------|---------|-------|-------|-------|
| SOUTH-EAST Region         | 4182738 | 3768737 | 3396761 | -371976 | -9,90 | -9,87 | 7,11  |
| SOUTH-MUNTENIA Region     | 7163019 | 7245629 | 7693795 | 448167  | 1,15  | 6,19  | 16,11 |
| SOUTH-WEST OLTENIA Region | 2409187 | 2431154 | 2458246 | 27091   | 0,91  | 1,11  | 5,15  |
| WEST Region               | 7317864 | 7887558 | 8655799 | 768240  | 7,78  | 9,74  | 18,12 |
| NORTH-WEST Region         | 4980990 | 5163511 | 5359547 | 196036  | 3,66  | 3,80  | 11,22 |
| CENTRAL Region            | 6319230 | 6450306 | 7066535 | 616229  | 2,07  | 9,55  | 14,79 |
| BUCHAREST-ILFOV Region    | 8911332 | 9945933 | 9969945 | 24012   | 11,61 | 0,24  | 20,87 |

Source: Statistical Yearbook of Romania, 2017

**Table 2. The situation of imports by geographical regions in the year 2016 (thousand euro)**

| Region                          | 2014     | 2015     | 2016     | Value increase 2016/2015 | Increase % 2015/2014 | Increase % 2016/2015 | Share of imports of the region in total import Romania 2016 |
|---------------------------------|----------|----------|----------|--------------------------|----------------------|----------------------|---|
| Total import Romania, of which: | 48864687 | 52319055 | 55671763 | 3352708                  | 7,07                 | 6,41                 | 100,00  |
| NORTH-EAST Region               | 1842608  | 2147296  | 2356753  | 209457                   | 16,54                | 9,75                 | 4,23  |
| SOUTH-EAST Region               | 4665428  | 4088168  | 3431242  | -656926                  | -12,37               | -16,07               | 6,16  |
| SOUTH-MUNTENIA Region           | 6661800  | 6644906  | 7063546  | 418639                   | -0,25                | 6,30                 | 12,69   |
| SOUTH-WEST OLTENIA Region       | 1631124  | 1664701  | 1646799  | -17901                   | 2,06                 | -1,08                | 2,96  |
| WEST Region                     | 6154896  | 7386021  | 7386021  | 716481                   | 8,36                 | 10,74                | 13,27   |
| NORTH-WEST Region               | 5206666  | 5675340  | 5675340  | 204868                   | 5,07                 | 3,74                 | 10,19   |
| CENTRAL Region                  | 5470115  | 6284860  | 6284860  | 542661                   | 4,97                 | 9,45                 | 11,29   |
| BUCHAREST-ILFOV Region          | 17038606 | 21546525 | 21546525 | 1942508                  | 15,06                | 9,91                 | 38,70   |

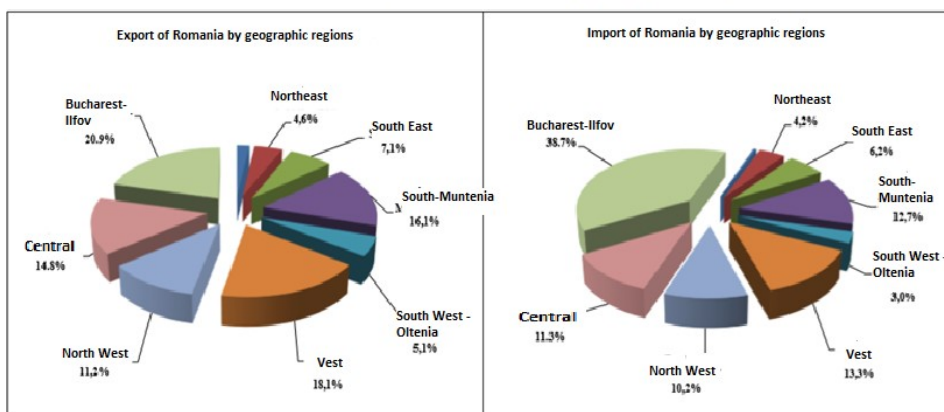
Source: Statistical Yearbook of Romania, 2017



Source: Statistical Yearbook of Romania, 2017

**Figure 5. Evolution of export and import by geographical regions, 2013 - 2016**

**Export and import of Romania by geographic regions**



Source: Statistical Yearbook of Romania, 2017

**Figure 6. Export and import of Romania by geographic region 2016**

Analysing the evolution of intra-Community trade, for the years 2014-2015 to 2006, there is a substantial increase in agriculture, forestry and fisheries, respectively + 28% compared to the previous year. Decreases in intra-Community trade shall be recorded in the field of motor vehicles and engines, respectively-22% compared to the previous year, food production-2% and in the transport area an easy decrease by 1%. In other areas subject to commercial exchange there are no major developments or changes in the time frame analysed. The significant differences, from the point of view of the level of development from one year to the next, in the field of agriculture, forestry and fisheries, prove the capacity of production and recovery that our country has, and also the availability utilisation of this area.

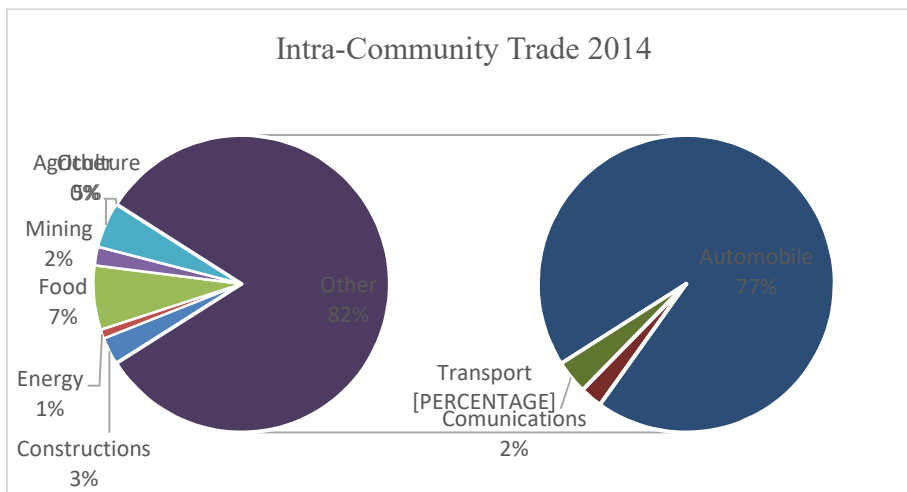
From the point of view of the extra trade, in the year 2015 there were registered increases in exports in the field of motor vehicles and engines, respectively + 3%, but also in the field of food production an increase of 1%, but also registered and developments in the field of electricity energy and gas-2% and in agriculture, forestry and fishing with a percentage point.

Each percentage point growth represents, in fact, winning new markets, extending customer portfolio and diversifying the supply of products, which denotes the ability to adapt and perform, for all market requirements.

**Table 3. Types of intra-Community trade (mil Euro)**

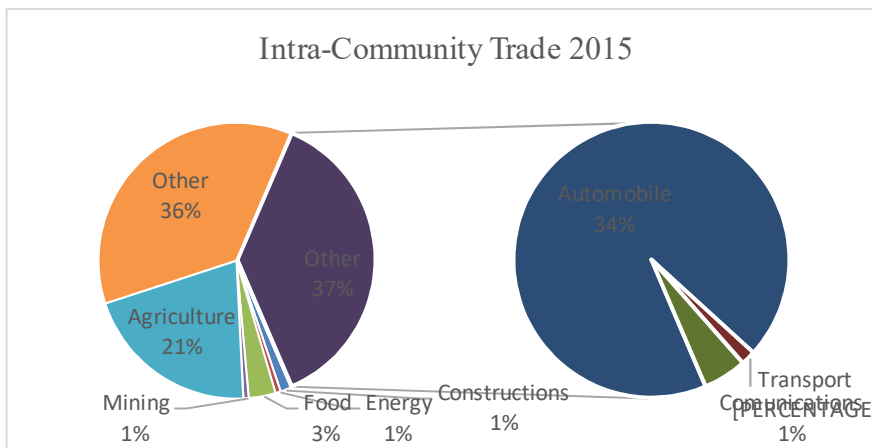
| Types of trade | Agriculture, forestry and fisheries | Mining and Careers | Manufacture of food products | Electricity and gas | Construction | Motor vehicles, engines | Transport and Storage | Communications |
|----------------|-------------------------------------|--------------------|------------------------------|---------------------|--------------|-------------------------|-----------------------|----------------|
| 2014           | 1322031,5                           | 495666,73          | 1915936,95                   | 293061,45           | 798988,34    | 22009123,24             | 831907,81             | 447604,8       |
| 2015           | 1366785,88                          | 544888,46          | 1785113,62                   | 344405,2            | 761097,21    | 19450732                | 675433,75             | 375752,14      |

Source: Statistical data, Statistical Yearbook of Romania, 2017



Source: Statistical data, Statistical Yearbook of Romania, 2017

**Figure 7. Intra-Community trade, 2014**



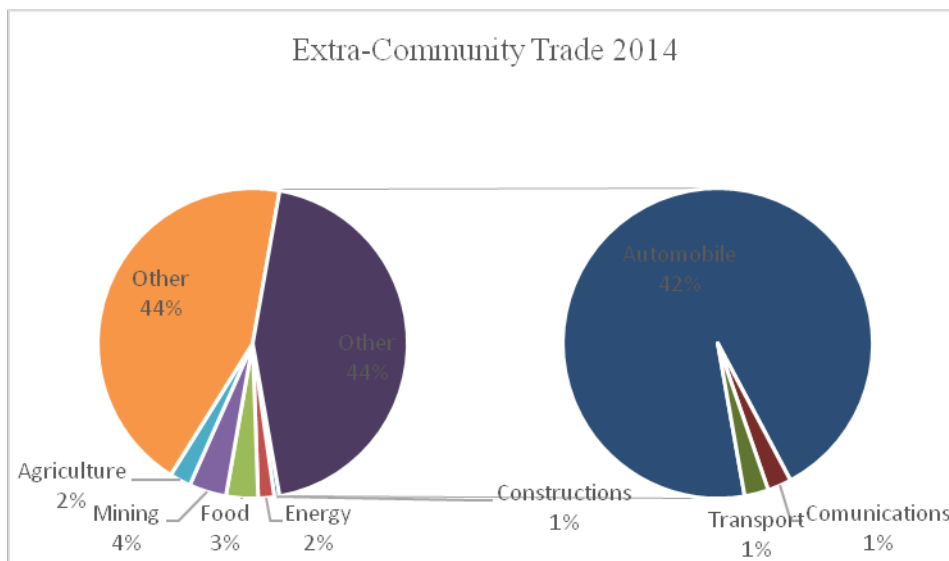
Source: Statistical data, Statistical Yearbook of Romania, 2017

**Figure 8. Intra-Community trade, 2015**

**Table 4. Types of extra-Community trade (mil Euro)**

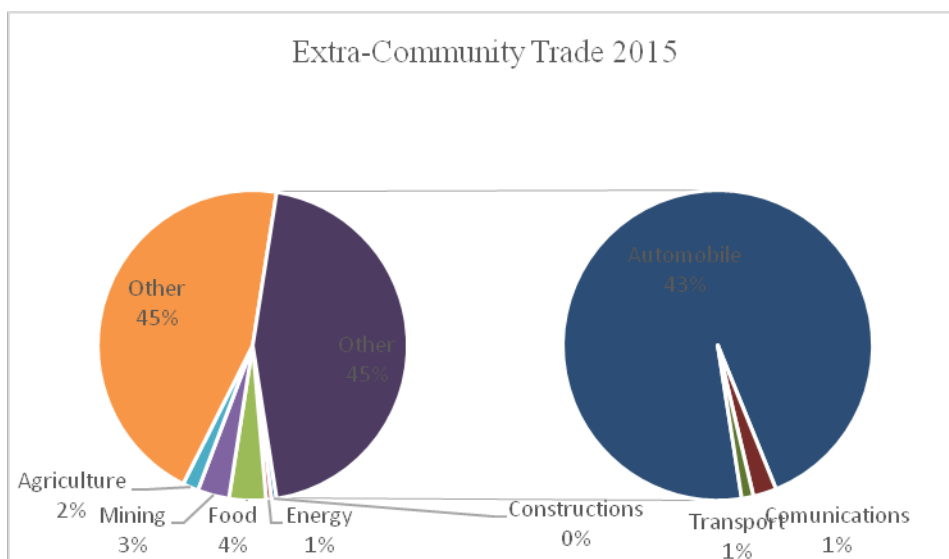
| Types of trade | Agriculture, forestry and fisheries | Mining and Careers | Manufacture of food products | Electricity and gas | Construction | Motor vehicles, engines | Transport and Storage | Communications |
|----------------|-------------------------------------|--------------------|------------------------------|---------------------|--------------|-------------------------|-----------------------|----------------|
| 2014           | 370193,15                           | 580039,5           | 508851,89                    | 230117,77           | 117104,41    | 6456416,36              | 75821,02              | 150992,05      |
| 2015           | 229770,39                           | 483105,47          | 606165,22                    | 126684,71           | 123192,05    | 6573762,4               | 67536,79              | 136653,62      |

Source: Statistical data, Statistical Yearbook of Romania, 2017



Source: Statistical data, Statistical Yearbook of Romania, 2017

**Figure 9. Extra-Community trade, 2014**



Source: Statistical data, Statistical Yearbook of Romania, 2017

**Figure 10. Extra-Community trade, 2014**

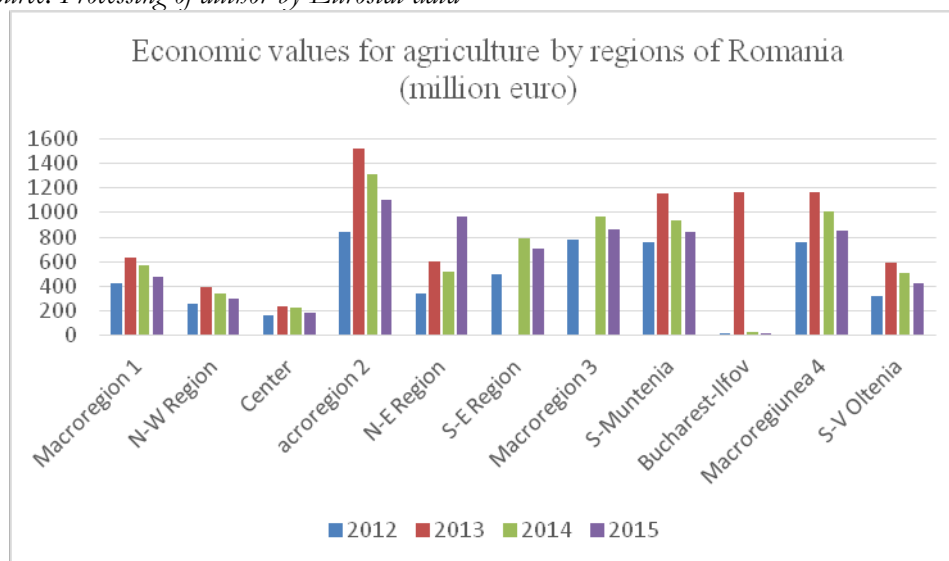
Intra-Community exports exceeded the value of 25 million euros, in the year 2015, by companies with foreign capital, followed by companies with domestic capital, having a trading value of about 14 million euros achieved on 2015. The immediately following position is occupied by enterprises with household owners, with appropriate values generating market competition between them. The analysis of the data submitted on intra-Community exports shows a constant ascendant and uniform trend on the two comparative years, as opposed to outside exports where the values are considerably higher and the position of leader is owned by foreign capital firms. Both in the year 2014 and 2015 transactions carried out by these companies exceeds the value of 100 million euros, being used by domestic capital enterprises with a trading value of 4 million euros in 2014, and in 2015, in a mild decline, EUR 3.3 million.

As exports are proof of the competitiveness and quality of our products, the analysis of the data presented above can be concluded that the potential for economic development is sustainable and performs the engine function of the national economy.

**Table 5. Economic values for agriculture by regions in Romania (million euro)**

| Macroregions         | Years         |                |                |                |
|----------------------|---------------|----------------|----------------|----------------|
|                      | 2012          | 2013           | 2014           | 2015           |
| <b>Macroregion 1</b> | <b>424,93</b> | <b>628,88</b>  | <b>570,42</b>  | <b>480,69</b>  |
| North-West           | 260,93        | 390,45         | 343,84         | 297,23         |
| Center               | 164           | 238,43         | 226,58         | 183,46         |
| <b>Macroregion 2</b> | <b>845,53</b> | <b>1516,94</b> | <b>1313,69</b> | <b>1103,25</b> |
| North-East           | 346,45        | 605,47         | 524,16         | 401,01         |
| South-East           | 499,08        | 911,47         | 789,53         | 702,24         |
| <b>Macroregion 3</b> | <b>776,22</b> | <b>1190,34</b> | <b>962,90</b>  | <b>866,73</b>  |
| South-Muntenia       | 759,05        | 1157,23        | 936,41         | 842,69         |
| Bucharest-Ilfov      | 17,17         | 33,11          | 26,49          | 24,04          |
| <b>Macroregion 4</b> | <b>760,41</b> | <b>1164,73</b> | <b>1005,85</b> | <b>865,66</b>  |
| South-West Oltenia   | 321,63        | 590,87         | 503,50         | 427,42         |
| West                 | 438,78        | 573,86         | 502,35         | 438,24         |

Source: Processing of author by Eurostat data



Source: Processing of author by Eurostat data

**Figure 11. Economic values for agriculture by regions of Romania**

As seen from the chart above, differences from one region to another are marked, and the time interval represented by the four years is enlightening to understand the economic evolution of Romanian agriculture.

The agricultural economic potential and the yield achieved on macroregions and geographical regions in particular, highlight the unevenness of the economic potential of the country, but also their evolution in the time frame analyzed.

It clearly distances the economic performance of Macroregions 2, represented by the North-East and South-East areas of the country, predominantly agricultural areas and which

have succeeded in reaching 2013 to an economic value of 1517 million euros, compared with the year 2012, only 845 million euros.

The second position is occupied by Macroregion 3, overwhelming by the South-Muntenia Region (breadbasket Romania) which managed to perform in the years 2013 and 2014 contributing to economic growth by 1190 million euros, respectively 963 million euros. Macroregion 4 is supported by the two regions: South-West Oltenia and the Western region, which together sum up the similar economic values Macroregion 3, with the same economic achievements in the years 2013 and 2014.

Macroregion 1 concludes this ranking of economic competitiveness in agriculture, due to the particularities of relief of the areas, the yield being quite low within the time frame analyzed.

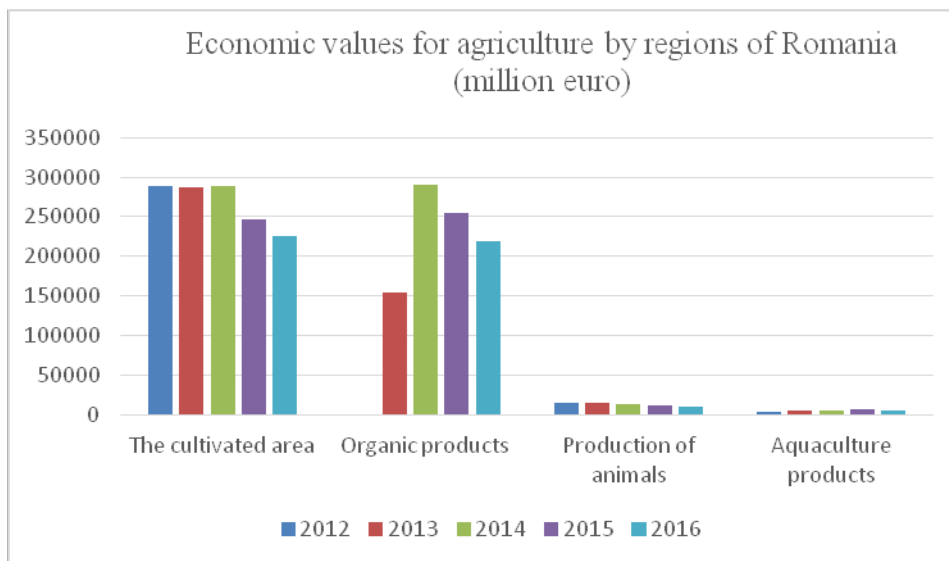
Due to Romania's potential in the agricultural field, its exploitation and recovery is no longer regarded as a seasonal occupation but has become an area of national strategic interest, with potential for increasing performance of economic indicators. Each agricultural sector has developed through the introduction of new technologies, through investments that made it possible to obtain significant productions, and by acquiring them on export, increased revenue to the consolidated annual budget of the state. The sectors that have contributed substantially to the growth of exports have made a major contribution to the development of this sector, successfully exploiting the natural geographical potential, pedo-climatic conditions and human passion and perseverance.

**Table 6. Evolution of organic production in Romania**

| Organic Products          | Years  |        |        |        |        |
|---------------------------|--------|--------|--------|--------|--------|
|                           | 2012   | 2013   | 2014   | 2015   | 2016   |
| Cultivated area (ha)      | 288261 | 286896 | 289252 | 245924 | 226309 |
| Organic products (t)      | -      | 153989 | 290081 | 254867 | 218318 |
| Livestock production (no) | 15280  | 14553  | 14151  | 11812  | 10083  |
| Aquaculture products (t)  | 4428   | 4566   | 4542   | 6384   | 5913   |

*Source: Processing of author by INS*

Romania has developed and diversified, in recent years, both production and products of the ecologically certified category, generating a production and sales market, progressively year after year. It is observed that we had in 2012 a cultivated area of approximately 290000 ha, which subsequently decreased by reaching 2016 to only 226000 ha, but organic products had sustained growth, culminating in 2014 with a production of 290000 t. The actual number of animals registered in this category, started from a flock of 15280 in 2012 and followed a slightly descending trend until 2016 to about 10000 copies, which represents an efficiency of the respective branch.



Source: Processing of author by Eurostat data

**Figure 12. Economic values for agriculture by regions of Romania**

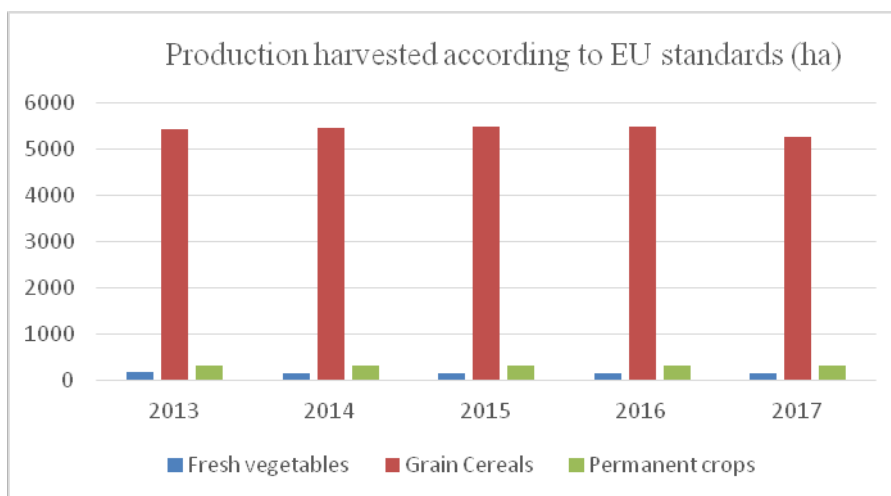
Aquaculture products are the field of novelty and highlight the local potential and the developmental way resulting from demand and supply. Production experienced a remarkable development, from 4428 t in 2012 to 6384 t in 2015.

Agricultural production achieved in compliance with EU standard standards with a high degree of recovery.

**Table 7. Evolution of organic production in Romania**

| Production harvested according to the EU | Years   |         |         |         |         |
|--|---------|---------|---------|---------|---------|
|  | 2013    | 2014    | 2015    | 2016    | 2017    |
| Fresh vegetables (t)                     | 166.06  | 149.76  | 150.57  | 141.50  | 136.88  |
| Cereal grains (t)                        | 5421.80 | 5443.97 | 5471.19 | 5490.20 | 5265.69 |
| Permanent crops (t)                      | 324.65  | 315.92  | 315.08  | 312.27  | 314.4   |

Source: Processing of author by INS



Source: Processing of author by INS

**Figure 13. Production harvested according to EU standards (ha)**

These crops are the standard for Romanian agricultural production, the first place being the production of cereals, for which the yield per hectare exceeds the production of 5200-5400 tonnes annually, the differences being given by the annual climatological fluctuations.

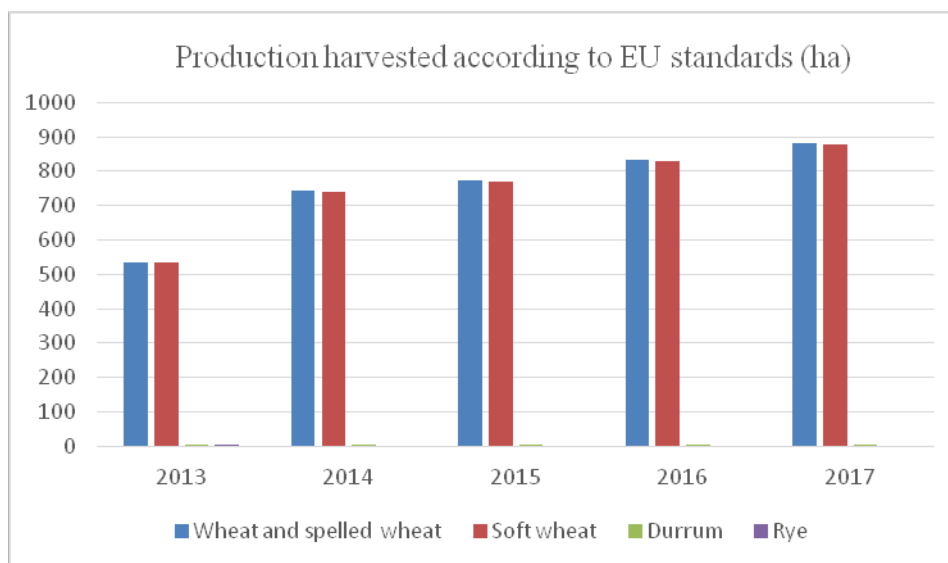
Permanent crops, represented by vine, orchards, oil fruits, are situated as an annual average output of more than 312 tonnes, which demonstrates the competitiveness of the production area, yield on the area cultivated and compliance with the rules of Production and exploitation according to EU requirements.

Fresh vegetables are the category of agricultural products with a still less exploited potential but with non-refundable financial support, can compete in the free market of the European Union.

**Table 8. Economic balance sheet for agriculture - cereal sector (mil. Euro)**

|                         | 2012  | 2013   | 2014   | 2015   | 2016   |
|-------------------------|-------|--------|--------|--------|--------|
| Wheat and spelled wheat | 535.7 | 742.48 | 774.22 | 832.88 | 883.49 |
| Soft wheat              | 533   | 740.63 | 771.59 | 831.47 | 880.09 |
| Durum wheat             | 2.26  | 1.3    | 1.98   | 0.81   | 2.52   |
| Rye and rye flour       | 1.81  | 2.34   | 2.41   | 2.38   | 2.56   |

Source: Processing of author by INS



Source: Processing of author by INS

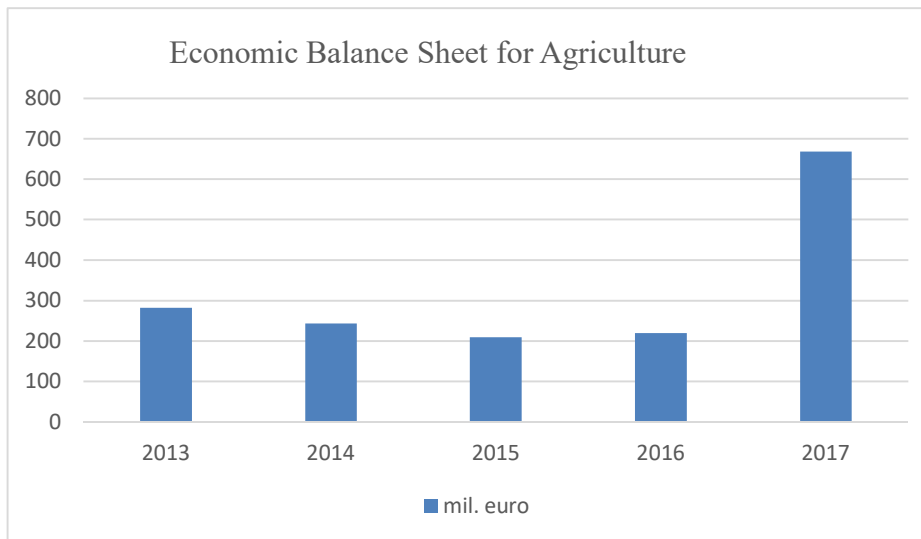
**Figure 14. Production harvested according to EU standards (ha)**

The economic balance sheet in the cereal sector is positive, with sustained and outstanding gains for the year 2016 compared with 2012. The economic efficiency is evident for wheat and washed wheat constituting a substantial contribution to the state budget, equally the economic contribution generated by the production of soft wheat. These types of cereals contribute substantially to the economic growth of the country, which is likely to continue to be possible, with the proven efficiency over the years. The economic efficiency of the production of rye and durum wheat is lower net and strategies for changing or reorganizing them are required.

**Table 8. Economic balance sheet for agriculture**

|                              | Years |       |       |        |        |
|------------------------------|-------|-------|-------|--------|--------|
|                              | 2013  | 2014  | 2015  | 2016   | 2017   |
| Economic balance (mil euros) | 282.4 | 243.1 | 209.3 | 219.90 | 668.00 |

Source: Processing of author by INS



Source: Processing of author by INS

**Figure 15. Economic balance sheet for agriculture**

For economic achievements in the field of agriculture, statistical data show an overview of their evolution, starting from 2013 when a contribution of 282.4 million euros was made to the state budget, following years being aligning around 210-243 million euros, culminating in the year 2017 with a value of 668 million euros due to record production due to investments in the field.

This demonstrates the capacity to develop the agricultural sector which must be supported by concrete internal and external financing measures to increase the default productive and economic competitiveness.

## 5. Conclusions

From the analysis of exports by groups of goods, regions and destination as well as from the analysis of productive activity sectors, irrespective of the form of ownership and from the perspective of the agricultural economic efficiency of Romania, the following conclusions are:

- increasing the competitiveness of Romanian products on foreign markets;
- focusing on exports of value-added products that provide better welfare and living conditions in rural areas;
- the use of optimal land for the elimination of financial constraints;
- investment in breeding and reproduction of animals, certified according to European Union standards, provides the premises for sustainable development;
- the expansion of organic agribusiness with immediate effect on environmental protection and value-added production are highlighted in economic results at national level;

- by supporting local rural community initiatives and implementing the partnership concept for development, interregional projects can be developed that can blur the economic disparities between regions;

- promoting professional agricultural and technical education can provide the new generation of investors with the continuation of economic, cultural and technological traditions offering development prospects within the country compensating for the western mirage;

- accepting the idea of bio-economy, in which all the local resources (traditions, customs, goods, goods and services) that individualize us and which recognize our national identity before the European Union, using our slogan " Unity through Diversity ".

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