

## PERFORMANCE OF MAIN AGRICULTURAL SECTORS – STUDY CASE CENTRAL REGION, ROMANIA

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**Abstract:** Romanian agriculture is one of the sectors that needs significant structural changes in order to become competitive at international level. Integration into the EU increased competition for agrarian sector in the framework of single market and, considering it widely, of the global market. The research aims to analyse the comparative advantages recorded for main agriculture sector at Central Region level, compared with national level. The study underlines a specific regional development evolution in the case of Central Region, considering the framework in which this region does not record the tendency registered at national level. The evolution of commercial flows can validate, in an objective way, the competitive sectors. The analysis intends to show the strengths and opportunities for future development at regional level, underlining the fields that increased their specialization. All this information is important for the stakeholders, which should design and prepare the financial instruments used to support the regional development. The analyse developed in the article intends to design a concept that could be used as an instrument of regional development management. This instrument could be used in order to achieve national objectives settled at national level through strategic documents for European regions. The article is presenting this analyse for Central Region, Romania. The research is built on the analyse of comparative advantage determined for main agricultural sectors. The analysis shows the positive results obtained by the Central Region at national level, being in this way the first Romanian region which has recorded positive results, in the analysed period, for regional balance trade. The analyse points out a certain regional development tendency for Central Region. This tendency does not follow general trend recorded nationally. The authors' intention is to support, scientifically, the tendency shown by the evolution of comparative advantage for Central Region opposite with the tendency recorded at national level, validating in this manner an instrument which can be used to design regional development strategies. In this way, the competitive sectors become objectively determined, validated through the evolution of commercial flows.

**Key words:** regional development; comparative advantage; sector specialization.

### Introduction

European integration process, combined with the globalization process, generated changes for the Romanian economy and all its sectors. Romanian agriculture sectors reveal a reality of a highly fragmented sector, a large number of individual producers, a relatively reduce number of industrial processors and a low interest in cooperatives or producers' organizations representation. In the last decades, in many developing countries, agricultural production was based on activities carried out within the family farms, replaced in present with larger organizations that are more integrated in the agricultural production and distribution chain (see Boehlje, 2000, p. 53-60; Alboiu, 2018, p. 19-22). Romanian agricultural sectors need an integrated approach because the producer organization level is low, although there are areas in which agriculture can be competitive if it is supported with coherent policies integrated in regional development strategies. These challenges are showing the relevance of competitiveness determination, at regional level, for main groups of agricultural goods that can support de regional development policy and represent a basis for creating or adjusting financial instruments that can be used in order to increase regional performances for international trade activity.

### Literature review

Agriculture sector represents a strategic objective in economic and social terms for each country strategic development, which is the reason for de-signing support instruments in order to encourage, protect, promote and maintain agricultural activity (see Dunmore, 1986, p. 21-34; Klomp & Haan, 2013,



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p. 793-818; Arisoy, 2020, p. 286-295). The support of the agricultural sector is intended to offer protection against foreign competition using different instruments such as customs tariffs and quotas, subsidies, prohibitions, voluntary limitations and other criteria (see Moon & Pino, 2018, p. 119-129). On the common market these instruments are disturbing the competition and the chances for each producer to compete fairly. In the last decades, protective policies in agriculture were discussed and changed especially under the influence of World Trade Organization, founded in 1995 (see Russo et al., 2011, p. 1328-1340; Arisoy, 2020, p. 286-295). In the last years a few developments have been observed related to export subsidies, customs tariffs and domestic support, as instruments to support agricultural sector (see Moon & Pino, 2018, p. 119-129; Pawlak, 2018, p. 229–237; Fanelli, 2019; Horská et al., 2019; Berry et al., 2022).

So, the instruments designed at regional level to support and encourage agricultural activities should be developed according to the specific characteristics of each region in order to maximize its potential. Stimulating the development of the small agricultural producers and rural areas during time there have been developed a few models taking into consideration local context and several variables referring to local territories (see Singh et al., 2009, pp. 91-99). At national level, there are differences between characteristics and geographical potential of different regions, which leads to differences in contribution to the macroeconomic indicators at regional and national level.

The authors used for determining the competitiveness at regional level, the revealed Comparative advantage method. The analysis included the determination of relative export performance and also the relative import-export performance for the main groups of goods. The research is focused on the assessment of the revealed comparative advantages held by Central Region in Romania, compared with the other Romanian regions for four categories of agricultural goods recorded by statistics, both nationally and regionally.

## Regional comparative advantages – regional analysis background

Romania holds both, good and weak positions, in the European Competitiveness Report ranking, with an evident focus on strengths and weaknesses for the manufacturing and services areas. During the analyzed period, in 2016 there was recorded a trend of accentuation the current account deficit started in 2014, in the framework of deteriorating the balance of goods and primary incomes. Analyzing the groups of products from the Combined Nomenclature show deficits including for agrifood products, recording 710 million euros at national level. Considering the commercial partners from countries, the deficit in the balance of goods was the result of intra-community trade (97.6 percent), the extra-community trade influencing only with 2.4 percent (see Gavrilă-Paven, 2020, p. 618-625).

*Table 1. Evolution of trade balance for Romania and Central Region during 2011-2019 (EUR mil-lion)*

	2011		2012		2013		2014		2015		2016		2017		2018		2019	
Exports – Romania	45292	100%	45069	100%	45706	100%	56322	100%	54596	100%	57386	100%	62644	100%	67723	100%	69003	100%
Exports – Central Region	5800	2.81%	6037	3.39%	6343	3.88%	7913	4.05%	7662	4.03%	8489	4.79%	9043	4.43%	10840	6.00%	11327	6.41%
Imports – Romania	54952	100%	54703	100%	55317	100%	58522	100%	62962	100%	67344	100%	75604	100%	82840	100%	86285	100%
Imports – Central Region	5578	0.15%	5733	0.48%	5959	0.77%	6560	1.21%	6876	0.92%	7627	1.33%	8770	1.59%	9899	1.94%	9980	1.56%
Trade Balance – Romania	-9660	-7.25%	-9634	-7.22%	-9611	-6.66%	-2201	-1.46%	-8366	-5.23%	-9958	-5.84	-12960	-6.90%	15117	-	17282	-
Trade Balance – Central Region	222	1.52%	304	2.01%	383	2.40%	1353	8.22%	785	4.52%	861	4.46%	273	1.28%	941	-	1347	-

Source: INS Romania, Tempo Online Database, July 2020.



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The analysis of the data presented at national level and for Central Region, shows the negative evolution of the balance trade, as well as for the two elements, import and export. The diminishing of exports and imports was also determined by the slight appreciation of the national currency. Against this background, the positive element of the appreciation (instability) of the Romanian currency has a negative effect on exports. Many of the exporters have either tempered their business or, if they did not recorded losses, at most they had modest profits.

## Discussion

RSCA is a measure of specialization. It represents a way of transforming the RCA and measuring the relative performance of exports not the competitiveness. In our case, the values recorded are showing regardless of how weak or strong a region is acting, by definition the region usually are specialized in specific group of products, and will record high values for RCA and RSCA for some products groups and low values for others.

Vollrath (1991, p. 265-280) suggests the logarithm applied for RCA represents an objective solution to solve the asymmetry problem of the RCA index, but the adjusted index thus obtained is not defined in the case of a region with zero product in a sector. Because RSCA index, having similar properties to the logarithm solution, it can be defined in the case of zero product from a sector, we prefer this measure in our study.

**Table 2. Revealed Symmetric Comparative Advantage (RSCA) determined for Central Region compared with national level (2011 – 2019)**

Year	I.	II.	III.	IV.	VIII.
Average 2011	0.06	-0.87	0.14	0.70	0.89
Average 2012	0.07	-0.87	0.06	0.71	0.86
Average 2013	0.13	-0.89	0.12	0.66	0.85
Average 2014	0.17	-0.90	-0.03	0.67	0.88
Average 2015	0.10	-0.89	-0.23	0.75	0.89
Average 2016	0.04	-0.87	-0.32	0.78	0.86
Average 2017	-0.01	-0.82	-0.44	0.80	0.84
Average 2018	0.05	-0.90	-0.92	0.98	0.87
Average 2019	0.05	-0.89	-0.94	0.99	0.86

Source: own computation of authors. Note: I. Live animals and animal products; II. Vegetable products, III. Animal or vegetable fats; IV. Prepared foodstuffs, beverages and tobacco; VIII. Raw hides and skins and leather, furs and manufactures thereof.

This symmetric RSCA (Belassa 1965, p. 99-123; Belassa 1977, p. 327-344) index is used in analyzing persistence and specialization trends of trade patterns. The specialization trends are being tested using a regression equation developed and applied for our Central Region of Romania:

$$RSCA_i^t = \alpha_i + \beta_i RSCA_i^{t-1} + \varepsilon_i.$$

The superscripts  $t$  and  $t-1$  refer to two consecutive time periods, in our case two

## Conclusions

The analysis reveals the competitive categories of goods for Central Region determined based on the comparative advantage analyze using the methods presented above. Surprisingly, although for first two categories, I and II, Romanian economy is not competitive at international level, still for live animals and animal products, Central Region is competitive at national level (confirmed according all results determined for both indices). The analyze developed in this study shows that we have a reduction in specialization in Vegetable products field for the Central Region within this period, while the specialization in Live animals and animal products remains constant (according to Table no. 4), but

Central Region became more specialized in the other three fields: III, IV and VIII. For the last three categories it is an increasing of specialization, not a spectacular one, but an increasing that should be supported through regional development strategies designed at regional level.

In conclusion, the analysis conducted reveals the strengths and opportunities for future development for the analyzed region, underlining the fields that increased their specialization. This is an important information that should be considered by the stakeholders, which are designing and preparing the financial instruments development.

This analyze is proposing a new approach for the regional development management. The analysis presented could be used as an instrument based on the comparative advantage for the main agricultural sectors in order to determine the guiding lines for regional strategies. In this manner the financing programs could be focused on the agricultural sectors that bring added value at regional level and transform regions in competitive actors at European level. This instrument could be used in order to achieve national objectives settled at national level though strategic documents for European regions.

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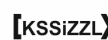
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