

## THE ROMANIAN AGROFOOD INDUSTRY'S CHALLENGE AND PERFORMANCE<sup>1</sup>

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**A b s t r a c t.** Europe 2020 relies on smart growth. Romanian food industry is competitive in terms of possible integration of domestic agricultural production and increase of employment. There was no territorial correlation between agricultural production and the absorption capacity of the food industry, and any reference to the final consumer. The animal production is being used in totally other counties than those who really have the highest number of animals.

### INTRODUCTION

Romanian food industry is competitive in terms of possible vertical integration of domestic agricultural production and employment. Economists and engineers, public policy makers say that Romanian food industry may be a key issue for Romanian economic future. In order to provide success to food industry, Romania should integrate the national agricultural production with food processing [Ignat 2012a]. Why? Because Romanian agricultural potential is consistent. In addition to it, there is available labour force, both in rural and urban centres.

Before 1990, food companies had territorial positioning criteria, according to their dependence on agricultural centres and the degree of processing of the finished products [Voicu, Radulescu 2003]:

- first level processing enterprises that were located in rural areas, very closed to agricultural centres;
- companies of second and the third processing level, which were placed near the urban centres with high consumption.

This first criterion was used in all regions, for almost all products: bakery products, milk and dairy products, meat and meat products, vegetable oil, sugar. In the same time, it is important to consider also the local demand for food products and to build companies, which are able to cover the consumption needs of the locals. These situations are most relevant for centralized economy, but not suitable for present market economy.

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As expected, the food industry evolves. Food production and consumption can only be understood in rational terms of efficiency and economies of scale, nutritional values, pricing policies, product quality, accessibility and availability, but should be seen as an emotional, ethical and aesthetic problem as well [Bunte, Dagevos 2009, p. 20]. The current results of research in the food industry demonstrate the need to look perfect as an unbreakable connection between agriculture and final consumer. In fact, the motto of European public policy is “from farm to fork”. There are authors who consider important elements such as consumer demand, quality standards and food safety, competition and local concentration, communication and information technologies, human skills and entrepreneurial activities of the local population in order to locate a processing centre [Hartmann et al. 2010].

The food industry is a complex system. Food quantity and quality depend on agriculture. However, multinational companies are controlling this system, and squaring it despite having less than 3% of total food sales [Bunte, Dagevos 2009, 18].

The forms of relationships between farmers, food industry and retailers can be explained and arranged by various criteria. Thus, we may consider market relations, horizontal links (between the players in the same market or industry), vertical (between suppliers and customers in a product chain) and among industries (between players in different markets or industries are different). But, in order to make connections we must consider the transaction costs [Chaddad, Rodriguez-Alcalá 2010, p. 45].

On the other hand, links can become sustainable if the benefit of collaborative relationship is intended [Fischer, Reynolds 2010, p. 30-44]. Vertical integration can provide routes “from farm to fork” for all market actors. In terms of sophistication, agriculture is before other companies in industries that barely understood the benefits of collaborative learning groups network [Jack 2009, p. 100].

## THE RESEARCH METHODOLOGY

The paper is a part of the larger study “*Agro-food industrial centre – A modern conceptual model for a new identity of Romanian rurality in knowledge based society*”. The research motivation is given by the interest for the higher added value for Romanian industry, in special, and Romanian economy, in general, that may create the relation between the food industry and animal production.

The research question was: is a territorial positioning criterion for the food industry activity developed in each Romanian region? What is the territorial connection between the region’s agricultural output and the local food industry’s type?

The research objective is to discover the criterion for the capitalization of agricultural production centres in order to further identify a conceptual model to succeed the vertical integration of agricultural production, for rising performance of the sector.

The tested hypothesis is if there are Romanian regions, where agriculture focuses on these results, but fail with the food industry vertical integration, respective in using the results. The study started by analysing livestock for pigs, poultry, and cattle. Each county’s animal production and use of animal production were analysed and a hierarchy by size was made. For each product we made two groups: one of the first five regions with the highest number of animals and a second one with the highest number of used animals into production/food processing activity. For each group results were compared with national averages.

The findings have revealed that, generally the top five regions in the hierarchy of the largest producers manage high national results, but there is no territorial connection between them and those that use the highest number of animal production, exception in some cases, proximity and neighbourliness between counties.

#### THE GAP BETWEEN PERFORMANCE AND CHALLENGES IN ROMANIAN AGROFOOD INDUSTRY

In the transition to market economy after 1990, the Romanian food industry has faced many limitations. Some specific restrictions were added to those of the national economy: the natural confrontation of supply and demand was emphasized by the sometimes un-loyal competition of the imported products [Ignat 2011].

Along with this, food industry was hit by another problem: the results of research and innovation worldwide have turned it into a dependent by the chemical industry, especially by the additives.

Table 1. The Romanian food industry evolution

Indicator	Year		
	2009	2010	2011
Net average income [lei]	1,361	1,391	1,467*
Net average income in food industry [lei]	948	993**	1,055*
Number of employees in food industry [no.]	144,000	143,600**	148,000*
Labour productivity index (2005=100)	133.1	135.3*	127.2*
Industry production index (2005=100)	134.6	125.5	124.3***

\* December 2011; \*\* December 2010; \*\*\* June 2011

Source: own concept after Căştigul salarial mediul net în luna ianuarie 2012, [www.insse.ro](http://www.insse.ro), România în cifre 2011, Anuarul statistic al României 2010.

We need to consider that Romanian agriculture, even as an European agriculture, has yet strong difficulties with propagated effects on Romanian food industry. The main challenges of the Romanian agro-food system are:

1. Lack of a clear, easy to follow policy, with annual plans and specific purpose for the farmer. The idea is to have well applied policy, with long-term correlations and very sound. The Romanian National Rural Development Programme 2007-2013 is a well organised instrument, but its problem concerns its implementation, its incapacity to be annually adjusted, considering exogenous factors. Each of the main fields of interest of Romania's public policy like agriculture, rural development, European affairs, inspection, European Fisheries Fund, ministry's budget for year 2011, shows the specific approach. Efforts are large and the articulation with EU requirements is not easy. The challenge is to find these efforts' convergence.
2. Unbalanced access (in time and space) to pre-accession and now to the structural funds which is caused by social and economic differences, and the excessive bureaucracy in accessing EU funds. The accessed amounts for rural development are not adjusted to the regional needs, but have a national call of proposals. Therefore, most developed

regions are those, which had better accession of EU funds, and the gap between the development levels of regions was deepened [Raportul Anual ... 2009, p. 66]. In the same Report we may see the important investments in the food processing made in rural areas, without any economic criterion for the factories' positioning decision.

3. Existence of a vicious circle in which the Romanian farmer is caged, which does not allow him neither to perform nor to become competitive. The challenge is to find niches where public policy should intervene.
4. Above mentioned limits that determine part of the challenges that Romanian food industry confronts to, we may add the following:
  - absence of great value of standardised agricultural products;
  - lack of stabile annual production;
  - huge number of possible partners for inputs delivery from rural areas, given the high number of agricultural producers.

Thus, food industry has no outstanding performance. According to the Romanian Statistical Yearbook 2010, food industry represents 11% of industrial activity. The importance of this industry might be expressed by 1 employee per 135 Romanians, and this takes place while 148 000 employees feed all people in Romania. 10% of total employment generates 11% of industrial activities and added value in Romanian industry. An average net salary is much lower than in the overall industry, twice lower than in the beverage industry and arguably three times smaller than in the tobacco industry. Besides the labour productivity index is among the lowest in Romanian industry and is still decreasing. Correlated to these, industrial production index is among the largest, but with annual fluctuations. Food import (CIF – cost, insurance, and frieght) in October 2011 reached 256.2 million euro, twice as much as the food export (FOB – free on board) in October 2011, only 123.5 million euro.

The quality and quantity of inputs in the agro-food system are very important nowadays. Therefore, we consider an analysis of the connection between food and agriculture production, from the perspective of territorial positioning criterion to be appropriate. Food industry and animal husbandry have strategic importance for Romania. As traditional activity of our country, livestock aims at creating direct links, immediate performance in the food industry, and to achieve sustainable economic growth.

Because the higher added value is provided by the livestock – food processors connection, we analysed this relation first, before analysing the connection between crops - food processors. We conducted a review of the sector, highlighting the main producing regions in the food industry and a detailed analysis of milk production and milk processing industry.

Pork is particularly important for Romania, from several points of view [Ignat 2012b]:

- it represents a traditional activity, households in rural areas are traditionally raising a pig in order to slaughter it during Christmas holidays for their own members;
- it is a traditional activity for firms growth's perspectives, and Romania managed in this way to stabilize employment in rural areas; the population is employed in the animal farm activity has a continuity, while the crop activities require a temporary labour involvement;
- it has a major importance in meat chains, as pork represents the main ingredient for meat products;
- the average consumption/capita is high, given the tradition in this field; Romania in 2009 had an average annual net consumption/capita of 32.5 kg, and a net average daily consumption/capita of 71.1 g [INS 2010].

Table 2. Number of pigs and results and use of animal production (tons) at 29<sup>th</sup> of February 2012

Number of pigs	Total	Results and use of animal production – pigs	Total production
Total – 41 de centres	727,136	Total – 41 de centres	65,544
Timiș	212,515	Timiș	17,814
Brăila	57,188	Brăila	4,449
Constanța	37,383	Suceava	3,341
Bihor	36,690	Bihor	2,753
Ialomița	35,438	Prahova	2,539
Average production/county	17,312	Average production/county	1598,63
Total of first five	379,214	Total of first five	30,896
% of total	52.1	% of total	47.13

Source: Data analysis from [*Technical and Operational Report ... 2012*].

Table 3. Number of poultry and poultry meat production (tons) at 29<sup>th</sup> of February 2012

Number of poultry	Total	Poultry meat production [tons]	Total production
Total – 41 de centres	69,543,812	Total – 41 de centres	34,558,442
Vaslui	3,569,900	Prahova	3,792,767
Prahova	3,341,092	Buzău	3,637,955
Bacău	3,301,653	Călărași	3,601,794
Călărași	3,220,926	Bacău	2,707,821
Alba	2,857,649	Dâmbovița	1,984,000
Average production/county	1,696,190	Average production/county	842,888
Total of first five	16,291,220	Total of first five	15,724,337
% of total	23.42	% of total	45.5

Source: Data analysis from [*Technical and Operational Report ... 2012*].

Efforts of authorities have been directed to obtain high performance of this sector, by increasing exports and creating high value of the pig carcass.

Pig farms are present in all regions of Romania. Total production obtained at February 29, 2012 was 727,136 effectives, with an average/region of 17,312. The five regions that gather the highest number of pigs are: Timis, Braila, Constanta, Bihor and Ialomita, and they provide 52.1% of the total number produced in Romania (Tab. 2).

On the other hand, the highest pork production, in tonnes, belongs to counties of Timis, Braila, Suceava, Bihor and Prahova. Also, these five counties are concentrated territorially, but gather about 47.13% of total production. These are not the same counties with those gathering the higher number of pigs. Therefore, any of the groups of the five counties have territorial concentration, and they have no processing facilities, nor consumption centres in their proximity, in order to provide vertical integration of their animal production.

Poultry meat and poultry production have somewhat the same situation.

In Romania, on February 29<sup>th</sup>, 2012 there were 2,171,733 cattle herds, and 24.58% of total were recorded in five counties: Suceava, Botosani, Maramures, Iasi, Neamt. Meanwhile, the five counties in which obtain and exploit beef are: Arges, Suceava, Bacau, Botosani, Cluj. About 46% of total output produced and valued belonging to the following

Table 4. Number of cattle and results and use of animal production (tons) at 29<sup>th</sup> of February 2012

Number of cattle	Total	Results and use of animal production (tons)	Total production
Total – 41 de centres	2,171,733	Total – 41 de centres	30,240
Suceava	169,193	Suceava	4,616
Botoşani	108,727	Argeş	3,289
Maramureş	86,648	Bacău	2,376
Iaşi	85,288	Botoşani	1,956
Neamţ	84,034	Neamţ	1,678
Average production/county	52,969	Average production/county	737,56
Total of first five	533,890	Total of first five	13,915
% of total	24.58	% of total	46.01

Source: Data analysis from [Technical and Operational Report ...2012].

Table 5. Milk production and processed milk<sup>c</sup> production capacity at 31<sup>st</sup> of January 2012

County	Total Average number	Thous. hl	Total of first five	% of total	Average production/county	Production capacity
Total	1,229,555	3,070	759	24.72	73.09	county capacity tons/24 h
Suceava	80,500	225				Ilfov 1,200.3
Botoşani	60,171	91				Mureş 319.7
Maramureş	54,568	182				Bistriţa 310
						Năsăud
Mureş	46,677	145				Giurgiu 300
Argeş	45,763	116				Suceava 257.4

Source: Data analysis from [Technical and Operational Report ...2012].

five counties: Suceava, Arges, Bacau, Botosani, Neamt. Suceava county is the only one county that manages to obtain a three times higher number of than the county average and production six times higher and has possibilities of vertical integration of production.

The cattle tradition of this county is, however, known. We considered the territorial connection criterion of establishing business in cow milk production and milk production in this county.

With a total of 1 229 555 cattle heads, Romania obtained at the end of the January, 2012 about 3.07 million hectolitres of milk, with an average of 73,090 hl milk/region.

Classifying the 41 cattle breeding centres in Romania, we obtained the following top five regions: Suceava, Botosani, Maramures, Mures, and Arges. The first two counties have tradition in cattle, and in the consumption of milk and milk products. Local cuisine uses sour cream, butter, yogurt, cheese etc. The existence of dairy farms and dairy products factories is justified in this case. The regions of Ilfov, Mures, Bistrita Nasaud, Giurgiu and Suceava have the largest production capacity in milk processing industry at national level. The two categories of five leading regions, the leading dairy processors and the leading milk producers are the identical. Thus, we identify two categories of settlement the processing industry:

- location in proximity to centres of consumption, as proximity to Bucharest Ilfov and Giurgiu regions;
- location in proximity to production centres.

This classification may lead to a conceptualization of a possible allocation model of animal production closed to food processing centres, on the grounds of proximity and low transportation expenditures, and aiming at efficiency and economic performance of the agro-food sector, which can induce growth patterns of quality of life in rural areas.

## CONCLUSIONS

The challenges of Romanian food industry are neither few nor small. They come from a historical perspective and still propagate. The agro-food sector itself couldn't reach the expected results. Putting pressures on the sector without support it is unjustified.

European funds were targeted towards production capacity and product quality and had no factories' poisoning criterion. There was no territorial correlation between agricultural production and the absorption capacity of the food industry, and any reference to the final consumer, except the situation of milk production in Ilfov county.

In general, the group of the top five regions that obtained the largest agricultural production is different than the group of the top of first five regions which obtained the higher value of processed food; even both groups manage to obtain high national results. There were any positioning criteria used for the investments in food industry which haven't taken into consideration an agricultural production, except Suceava county.

Therefore, the tested hypothesis was: if there are regions where agriculture focuses on its outputs' integration to food processing, or they fail with the food industry vertical integration. This hypothesis was demonstrated. The animal production is being used in totally other regions than those who really have the highest number of animals.

In order to become more competitive, farmers, when establishing the main domain of their farms, should take into consideration the possibilities production integration and the value of the transaction costs.

The study was facing some limits represented by the number of agricultural products and absence of information on export-import activity for regional level. Research can be extended by the analysis of the other categories of products, especially vegetable products, and enhancement of information on export-import activity in each region. The analysis should consider public policy in order to articulate the food industry to the real needs of Romanian agriculture and to obtain competitive results in food industry.

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## RUMUŃSKI PRZEMYSŁ SPOŻYWCZY: WYZWANIA I EFEKTYWNOŚĆ

### Streszczenie

Europa 2020 opiera się na inteligentnym wzroście. Rumuński przemysł spożywczy jest konkurencyjny pod względem krajowej produkcji rolnej i zwiększenia zatrudnienia. Nie potwierdzono jednak tezy o związku pomiędzy lokalizacją produkcji rolnej a lokalizacją przemysłu spożywczego czy też rynku zbytu. Produkcja rolna w Rumunii jest przetwarzana w zupełnie innych regionach kraju niż te, które charakteryzują się największą liczbą zwierząt.

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