

ASPECTS REGARDING THE ROLE OF THE FOOD INDUSTRY IN THE SOCIAL AND ECONOMIC DEVELOPMENT OF CARAȘ-SEVERIN COUNTY

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Abstract: The aim of this study is to evaluate the level of food industry development in the Caraș-Severin County, one of the most affected counties in Romania by the destructuring of heavy industry. The development potential of this branch is presented, then an analysis of the production units, taking into view the localization, profile and employee number. Case studies are presented in order to reveal the factors of success. From the development point of view, the food industry still occupies a modest role in the economy of the settlements, especially the rural ones.

Key words: local development, entrepreneurial initiative, cluster, Banat, agricultural potential, economic transition

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INTRODUCTION

Caraș-Severin County is situated in the south-west of Romania. With a population of 330,517 inhabitants and an area of 8,520 km² it is known for the low population density, only 38,79 inhabitants/km², as a result of the mostly mountainous terrain (65,4 % of the area). This county also corresponds in the regional mental to the *Mountainous Banat*, which, along with *Plain Banat* comprises the historical region of Romanian Banat (figure 1).

The same collective mental associates Mountainous Banat with ferrous metallurgy and extractive industry. The richness in metal resources has been exploited as early as the Iron Age by the Dacians and later by all the governing peoples of the region (Romans, Hungarians, Ottomans, Austrians) and beginning with the 18th century lead to the creation of an industrial region based on mining, ferrous metallurgy and machine construction industry (beginin with the 19th century).

In the communist period (1945-1989), this industrial profile has been emphasized, the economical preoccupations of the communist regime being based upon resources and heavy industry. The high production capacities developed especially in the urban centres, needed centripetal demographic flows from outside the region, but also from the regional rural space. Urban space became the equivalent of industry and the rural space became almost empty.

Suffering from a masked decline as early as the 80's, the extractive and heavy industry of the region has been maintained alive through aid from the state, until the years 1997-1998. The

withdrawal of this aid determined the destructuring of a large part of the traditional industry in Mountainous Banat.

The social and economic evolution from those years, in the context of transition from a centralised, politically controlled economy, to a market economy, has led to the changing of the functioning profile of the industry in the region, with new optimum perspectives for other activities, such as food industry.

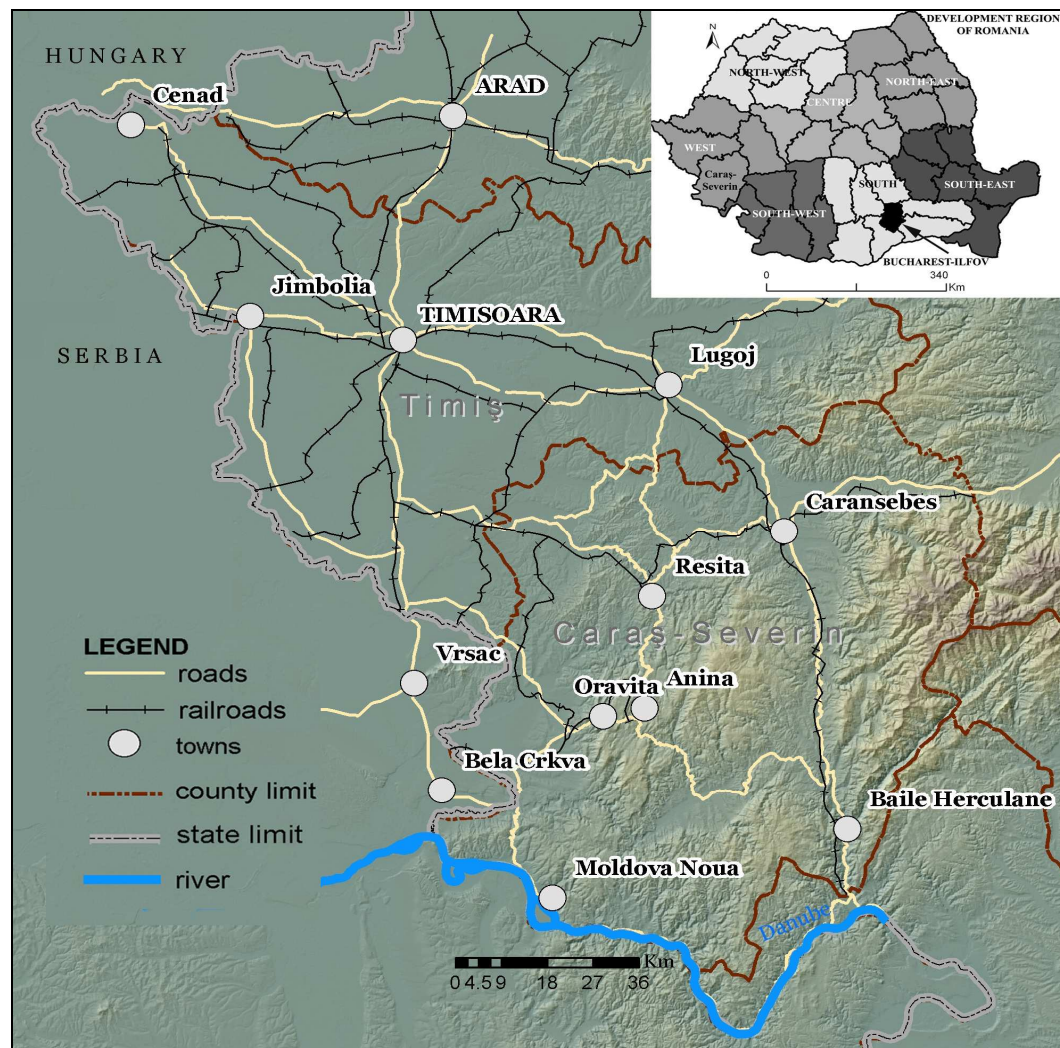


Figure 1. Geographical position of Caraș-Severin County

THE METHOD

The article starts from the premise that in the context of transition to the market economy and of industrial restructuring, the food industry could have imposed itself because of some important strong points:

- the market niche present in the 90's: perceived as a *reflection of the bourgeois consumption preference* (Popescu, 2000), the food industry has been one of the economic branches that were ignored by the communist regime. In Caraș-Severin County it was considered underdeveloped (Sencu and Băcănar, 1976) there were only few slaughter-houses;

- the development of this branch is an optimal solution for the economic revitalization of the rural environment in Mountainous Banat, greatly affected by the destructuring of the extractive industry, of which it was dependent; the village residents can become providers of raw materials for the units in the urban centers and even potential entrepreneurs;

- the food industry, through its own production relations, can create new complementarities between urban and rural space, assuring the re-establishment of the coherence of the county economic space, that is greatly affected by the destructuring and restructuring of the traditional industries.

- the place of the food industry in the industrial profile of Caraș-Severin County;

An analysis in terms of location, profile and employee number is done with the main objective to reveal:

- the place of the food industry in the industrial profile of Caraș-Severin County;

- the role of this branch in diminishing the social costs of transition;

- the group of factors that explain the present level of development of this industry;

- the explaining of the spatial organization of the food industry at county level: to what degree did the geographical inertia and/or the new dynamics count?

Changing the scale of the analysis is considered compulsory in the geographical approach, having the virtue to point out both the exceptional factors and the general ones (Jones, 1998). Thus, the analysis at county level is completed with 4 study-cases one of a public-private company and three of private ones with the objective to highlight the factors that assured the success of the 4 companies, which can be an example for other companies and authorities and can have a multiplying effect.

THE PREMISES OF THE RECENT DEVELOPMENT OF FOOD INDUSTRY IN CARAȘ-SEVERIN COUNTY

The emergence and development of industrial activities are conditioned by a series of factors. For the analyzed industry and the chosen laboratory space, the main factors are: raw material resources, human resources, the demand potential, the characteristics of the political environment.

The natural agricultural potential. The natural characteristics confer to Caraș-Severin County a complex agricultural potential (Ancuța, 2007; Olaru, 1981; Sencu, 1976).

Mountains have the greatest extent, with 65.4 % from the total area of the county. They mainly represent the forest domain of the region, but also have agricultural potential, as a result of the presence of: leveled surfaces used for traditional pastoral activities, karst highlands with agricultural use and discontinuity areas: depressions, valleys with well developed terraces.

Hills – 16.5 % from the total area – have an altitude of 200-300 m; they have very wide ridges, separated by evolved valleys and also a plateau appearance. The altitudes of the hills sink below 200 m in the depression areas, which are formed by the terraces of the main rivers, which have wide valleys (up to 3 km). The hills have soils with modest fertility, which can be improved through technical (the removal of excess humidity) and chemical (correcting the acidity and increasing the amount of humus and nutrients) interventions. These could be the premises for a production well above the natural fertility.

Plains represent 7.3 % of the total area and are situated in the north-western part of the county. The altitude is low (160-170 m) as well as the slopes (3 ‰) which are favourable for arable use. The chernozems present here, although rich in humus and azote, are not very favourable for crops due to the physical and hydrological parameters. Thus, they are more suitable for use as meadows or hay fields. The vertisols have a low fertility in natural conditions; the improvements through irrigation, draining, organic fertilizers can assure big productions, but with the restrictions in the optimal work period, the difficulty in processing and the high energy consumption (Ianoș et al, cf. Ancuța, 2007, page 86).

The structure of the agricultural land also comes to show the variety of the agricultural potential: pastures (45.8 %), arable land (32 %), hay fields and natural pastures (19.07 %), vineyards (0.19 %), orchards (2.94 %) (Development Strategy of Caraș-Severin County 2007-2013).

There can be individualized: mountainous agriculture type, oriented towards extensive cattle raising, the hill agriculture type (cattle raising, orchards, vineyards, grain crops) and plain agriculture type (intensive cattle raising and grain cultivation) (Sencu, 1976).

The agricultural potential presents, thus, development opportunities for a great variety of food industry branches.

Social and economic premises. The social costs of the transition period have materialized in high unemployment rate (with about 2 % superior to the regional average (table 1) and gave the potential investors an important comparative advantage: available workforce at good prices (Ancuța, 2007).

Table 1. Evolution of unemployment rate (%)

Source: Development Strategy of Caraș-Severin County 2007-2013, p. 11, <http://www.cjcs.ro/strategie-2007-2013.php>

Region/county	1998	1999	2000	2001	2001	2003	2004	2005	2006
West Development Region	10,6	12,6	10,4	9,5	6,6	7,0	5,8	5,1	4,1
Caraș-Severin County	10,2	11,4	9,7	11,6	9,8	9,8	9,0	7,9	6,4

Agriculture represents the main source of income for a large part of the county's population, as 36 % of the people are working in this field of activity (Development Strategy of Caraș-Severin County, 2010), but in the rural area this percent is 40-85 % (Ancuța, 2007, page 189). This data outlines the existence of an important group of providers for the food industry. In fact, the farmers already sell on the market important part of their productions: 25 %-90 % from the pork production, in the south of the county, 51 % to 90 % from milk productions, in the south-east, 50 % to 90 % from the beef production, in over 50 % of rural communes (Ancuța, 2007, pages 132-134). Thus, one can outline the important amount of local raw material that is already available for the food industry.

The demand for food products in the region is outlined by the percent of the urban population; at county level this is 56.53 %, at the West Region level this value is 63.51 %. Even rural households that practice agriculture are far from being self sustained, being in need of food products.

The good accessibility of the region – situated near the state border and having European and national roads, as well as important railways – has stimulated the arrival of international supermarket and hypermarket chains which offer a large array of food products. The awareness of the people towards the low quality of these products, however, together with the importance of traditional food products in the consumption habits have outlined an important niche on the market for local producers.

Also important for the favorable context are some other psychological and social elements, such as:

- the increased preoccupation with health, especially in urban population;
- the progress of preventive medicine and the campaigns for health education;
- the large promotion in media for healthy products – *bio* or *ecological*.

All these constitute favorable premises for the successful emergence of local producers.

Political factors. Some of the factors with direct or indirect potential effect on the development of food industry that are linked with local and regional development policies are:

- the creation of the West Development Region (together with 7 other development regions in the country) (figure 1) and the Development Agency for the West Region (ADR VEST), which was responsible until 2007 for administrating European financing programs. Among these, SAPARD (Special Accession Programme for Agriculture and Rural Development) included measure 1.1 which had into view the *improving of transformation and marketing of agricultural products* (Ancuța et al, 2008, page 83). Once Romania joined the EU in 2007, the role of ADR Vest became that of *implication in the strategic programming of the economical and social development of the region, together with local actors, to efficiently manage the programs and*

projects financed from structural funds allocated for the development of the region, to initiate programs for the strategic promotion of the West Region and to attract new resources with impact for the well being of the community (<http://www.adrvest.ro/>);

- the Development Agency of Caraș-Severin County, which performs services for identifying and fundamenting ways to improve the infrastructure of county public administration and administrative territorial units, as well as putting to good use of resources and local interest zones, which would lead to encouraging the small and medium companies, entrepreneurs, in initiating and undertaking of actions that are favourable to the economic and social development of the county (<http://www.cjcs.ro/a-d-e-c-s.php>);

- the institutions that give counseling to agricultural producers at local and county level: The County Office for Agricultural Consultancy Caraș-Severin, The Agricultural Chamber of the Caraș-Severin County, local centers for agricultural consultancy. Their objectives are: informing the producers in agriculture and direct work with them for creating projects in order to gain access to funding, for developing and modernization of farms, implementing new technologies of plant cultivation and cattle raising and creating and diversifying the economical activities in the rural area (<http://www.consultantaagricola.ro/>);

- the inclusion in the operational documents of regional and local development of the concept of sustainable rural development, which, according to Agenda 2000 represents an integrated development, with a vertical nature, endogenous and participatory development which can assure a viable market economy and a prosperous rural society (Ancuța et al, 2008; Palicica and Palicica, 2005).

THE ROLE OF FOOD INDUSTRY IN THE ECONOMICAL AND SOCIAL DEVELOPMENT OF CARAȘ-SEVERIN COUNTY

In this sector of the industry, there have been 209 economic agents in 2006, with multiple profiles: milling and breeding, meat processing, milk processing, alcoholic drinks production, vegetable oil production, sugar processing (according to The Development Strategy of Caraș-Severin County 2007-2013, page 74). In 2007, 44 % of these agents have discontinued their activity, because of not adapting to the EU regulations (idem). Also, the average number of employees in the food industry decreased from 2,842 in 2006 to 2,370, in 2007.

Nevertheless, the economic role of this branch at county level is quasi stationary, as the contribution of food industry in the turnover of the county was about 6.99 % in 2006 and 6.89 % in 2007, which is a good proof for the sustainability and competitiveness of the producers which resisted on the market.

In the structure of profile activity, the breeding units prevail, representing 30 % of the total units; pastry units represent 10.8 %, followed by meat products units, drinks and milling, with approximately 6 % each. Only 2 % of the units process fruits and vegetables (figure 2).

The rural area holds 22 % of the production units. All of them have a small production capacity and mostly one employee. Bakeries are predominant (54 %), followed by units for producing alcoholic drinks from fruits (10 %). The figures show once again the reduced capacity of the rural area to produce added value to the local agriculture products and to enter in economic circuits at county and extra regional levels. The explanations reside in the absence of financial capital necessary to produce and sale products according to European Union standards.

The rare exceptions that represent units for processing fruit for drinks (11) or milk (only two in the rural area) refer to traditional products: *răchie* – Banat *țuica* and *blueberry drink* - , ewe's milk cheese, goat's cheese, Oravița honey.

For these products, considered traditional, the necessary steps are being made to enlist them in the Traditional Products List and to obtain the original protected name (Caraș-Severin County Development Strategy, page 74, <http://stiri.rol.ro/Razboiul-branzei-in-Muntii-Banatului-39141.html>).

Most of the food products units are located in towns. The number and complexity of the units' profile are in direct relation to the rank of the towns. Thus, the county capital, Reșița,

concentrates 25 % of the units from the urban area and half the workplaces and the town of Caransebeș (rank 2 in the urban hierarchy of the county) occupies the second place, with 15 % from the food industry units.

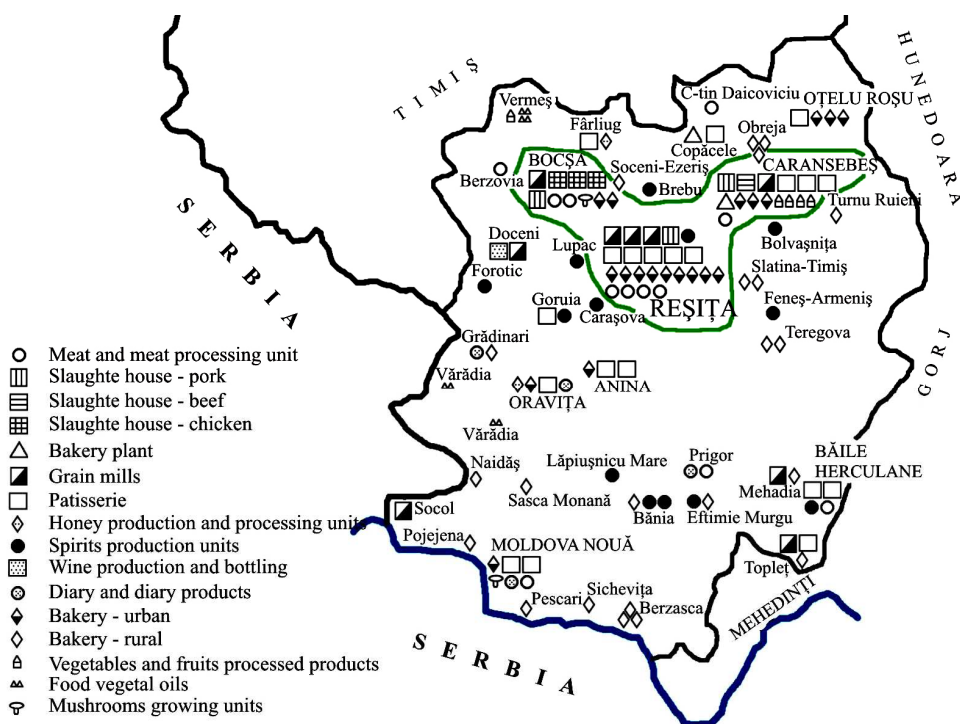


Figure 2. Food industry in Caraș-Severin County (2008)

Here there are also the units with the biggest production capacities.

Small towns have units for serving the local population (bakeries, pastries) and – at most – units based on the agricultural products from the immediate area of urban influence.

An exception is Bocșa, a small town that holds 10 % of the food industry units in the urban area thanks to a favorable geographical position, along the axis that links Mountainous Banat with Plain (Lowland) Banat and to the tradition in this field.

The analysis of spatial distribution of food industry reveals disparities at county level: the greatest density of production units is found in the north part of the county, especially because of the axis created by the towns of Bocșa-Reșița-Caransebeș. In general, the presence of production units corresponds to the areas of plain-hills contact, depression areas, valleys and natural corridors – areas of traditional convergence of economic flows.

ENTREPRENEURIAL INITIATIVE IN THE FOOD INDUSTRY: CASE STUDIES

Only few medium and large capacity production units of food industry exist in Caraș-Severin County. One corresponds to a local market, the three others have managed to occupy an important market niche, an important place not only in the economy of the county, but also in the regional and national economy.

Oravița dairy factory. The factory was created in 2005 by a Swedish investor and Lyon's Club, the associates in the present being Caraș-Severin County Council and 6 other town halls from the Oravița area.

The main activity consists in processing milk, the products being sold in Caraş-Severin and Timiş Counties.

At present it has 42 employees and the production is 3600 liters of milk/year. There are projects for restructuring and modernization so as the production capacity and the milk collecting area would increase.

This company is, at the moment, the only example of public-private partnership in the county.

Agro-Banat joint-stock company Caransebeş. Founded in 1994, the company started to function in 1995, in the fields of grinding mill, bakery, production of concentrated fodder, natural alcohol distillery and fruit drying.

The company holds shares at Agro Banat ltd Bocşa as well and has production relations with other firms in the region: Food 2000 ltd (Bocşa), Agricola Banat (Timişoara), Agrobiomix (Timişoara).

The rising evolution has materialized in the increase in turnover of over 21 times in the period 1994-2004, which led to an increase in employees up to 569 in 2006, as well as modernization according to EU standards. The daily production capacity is 37700 breads of different sorts, as well as 30 t of wheat and corn flour (<http://www.agrobanat.ro/agrobanat.html>).

Bread is sold throughout the county at a competitive price, to ensure market success.

As for combined fodder production, the company has important warehouse capacities, including in the neighbouring county of Timiş and imports silos from Spain, Italy and Hungary.

The company also has plantations that provide raw material for distilleries.

The most recent field of production is that of pasta.

The company sells its products in Caraş-Severin County and 4 other neighbouring counties (Timiş, Hunedoara, Mehedinţi and Gorj), in a network of 67 shops out of which 17 are its own and 50 are rented (figure 3). The distribution of finished articles is made through its own transport vehicles.

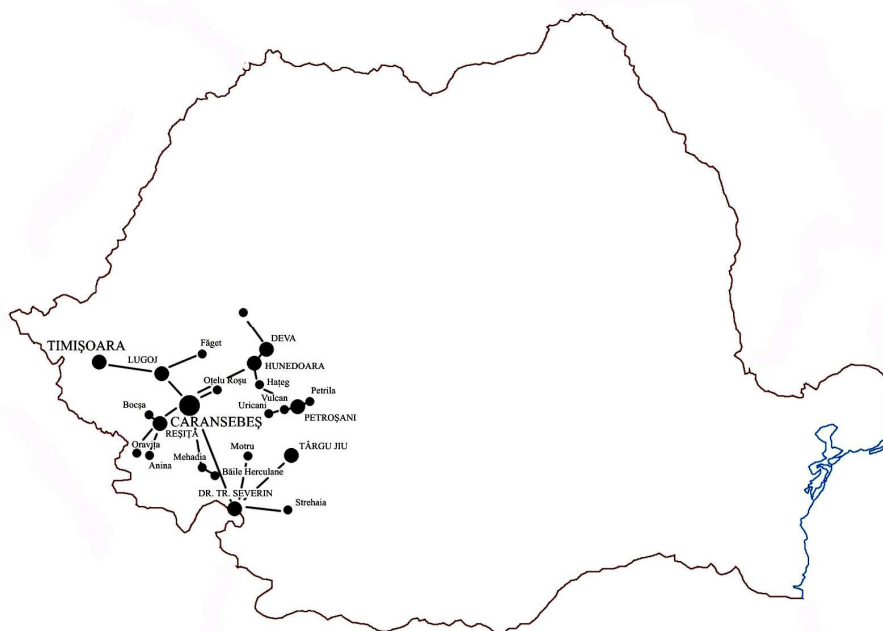


Figure 3. Agro-Banat company market area (2008)

An explanatory factor of the development of this company is represented by the remarkable entrepreneurial culture and managerial experience of the main shareholder, a former director of a big agricultural company before 1989, which he organized at the time, following similar examples from the USA. The very good knowledge of development opportunities in this business – space economic potential, market niche, institutional and political factors, at regional and county level – has been an important factor of success for this company.

“C+C” joint-stock company Reșița. This company was founded in 1990 and activates in the meat industry:

- swine raising, sacrificing and processing the animals it owns or it acquires from the private sector;

- processing and selling meat products (swine, cow and chicken) .

It is the holder of the trade mark “C+C” – *the quality champion* (*campionul calității*, in Romanian) and of the license for every product it produces, for which it has obtained international certificates for quality. The capacity of processing is 25 t of finished products/day which will increase with 16 t at the completion of the extension project financed by the SAPARD program. Also, the number of employees will increase from 300 (in 2006) to 450.

The company has production relations with two other producers in the region: SC Agil Timișoara (Timiș County) and SC Jumb Bocșa (Caraș-Severin County).

Most of the company’s products are sold in the West Region (60 %). It sells cca 10 % of its production through an important network of storehouses and shops that it owns. This network extends well beyond the boundaries of the West Region, especially in the south of the country (fig. 4).

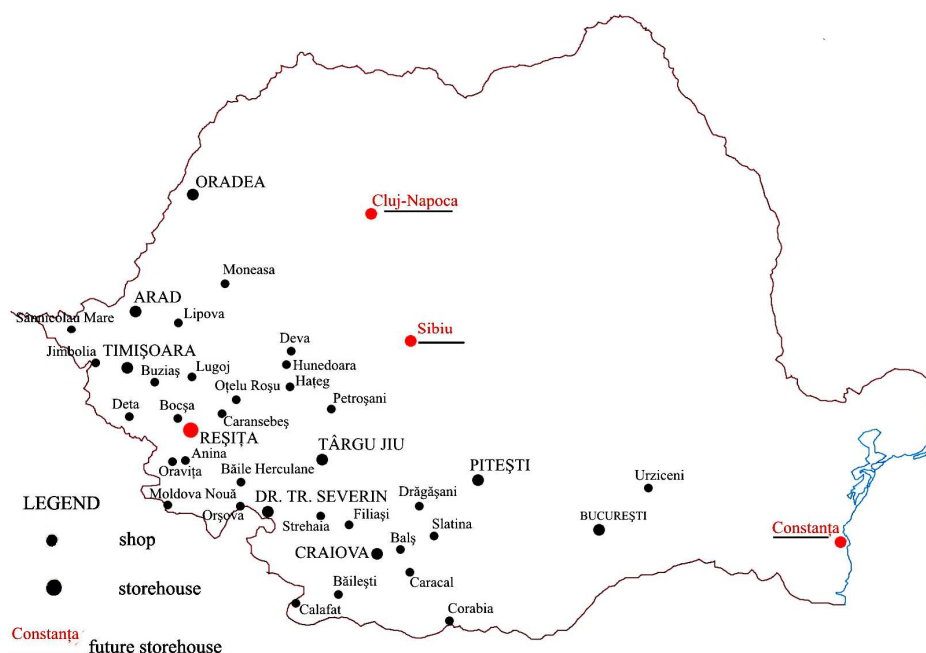


Figure 4. The network of storehouses and shops of “C+C” company (2008)

An important accomplishment in marketing is the fact that 9 % of the daily production is taken by 14 international supermarkets (Metro, Pic, Real) from the west and south-west part of the country. The extending of commercial relations with the supermarkets from the centre and north parts of the country is the main objective of the company.

The impressive evolution of this company, which started in 1990 with only 4 employees, is the result of a professional management, based on the knowledge of the market at micro and macro scale, of the business environment and following the declared objective: assuring quality standards and correlating production diversification with the extending of production capacity.

Pangram joint-stock company Monte Banato Reșița. Founded in 1994, this company had a pronounced upwards evolution materialized in the diversification and the increase in production quantity, the increase of 40 times of the employees number and the increase in turnover of over 170 times in the 1994-2006 period.

The company produces 18 sortiments of pasta, plus two more artisanal types, as well as canned tomatoes. It has production capacities in Italy.

The company sells products in all Romania as well as in The Republic of Moldova and Italy.

The number of clients is impressive: 7000, among which 18 international supermarket chains (Metro, Cora, Billa, Selgros, Rewe-XXL, Penny Market, Profi, Gim Rom Holding, Artima, Mega Image, Plus Discount, Kaufland, VP Market, CDE Interex, Pic, Hiporoma, REAL, Auchan, Spar). It has a central storehouse in Reșița and 13 other storehouse all the regions of the country (figure 5).

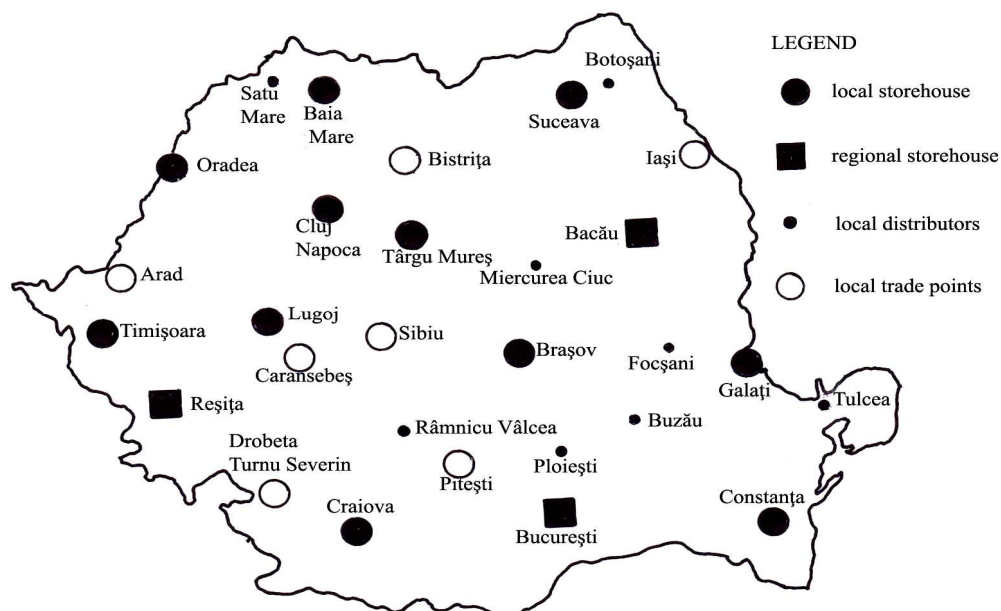


Figure 5. The distribution network of Pangram Monte Banato Reșița (2008)

It also has an impressive fleet of motor vehicles, over 100, that sustain the direct delivery flows of products in the country. The only indirect delivery is to the Republic of Moldova.

From the words of the owner himself, the essential elements of success are: strong bond with tradition, constant attention to raw material quality, advanced technologies, research-innovation efforts, the importance given to human resources.

CONCLUSIONS

Although the presence of food industry in the economic landscape of Caraș-Severin County is relatively important and diffused in the territory (figure 2), the analysis reveals that this sector is still underdeveloped.

The structure of food industry units points out the high percent of small companies, fact that highlights the small financial potential of the most part of entrepreneurs from this field.

On the other hand, it is obvious that the most numerous are the bakeries. Based on a local demand, these units belong to the category of *endogenous activities*, cf. Sombart, respectively *non-basic activities*, cf. Waimer and Hoyt (Ianoș, 2000), activities which have modest economical and social effects in the respective communities.

The urban environment – as a relatively prosperous environment at county level and with sufficient resources to help transform ideas into action and assure its durability (Ianoș and Heller, 2006, cf. Ișfănescu, 2008) – is proving to be the most favourable for the development of food industry units that produce higher added value goods.

The analysis of the territorial distribution of the food industry shows that it is concentrated in the northern part of the county, near the Bocșa – Reșița – Caransebeș axis.

Together with the predominance of food industry in the urban space, this fact reveals that the analyzed activity is emphasizing the existed/inertial spatial organization, and does not participate to new spatial dynamics.

It can be stated that at county level the food industry still has a modest role in participating at the economic function of the settlements, especially rural ones related to the development potential (position potential, market potential and the context created by the interest in local development). Some of the explanatory factors are:

- *the reduced importance given by the local and county authorities* to increasing the economic role of rural communities, by creating processing capacities of agricultural products;

- *the weaknesses of human capital*: the village population is generally old, lacks education, information and availability necessary for attracting capital and modern management of units that process agricultural products;

- *the decline of local raw agricultural material over the last years*: the reduction of live stock is because of the financial and organizational impossibility of the farmers to comply with EU standards. This reduction also leads to the decrease in size of pastures and hay fields, as a result of not applying the necessary technologies to maintain them. The reduction of cultivated land is explained by the structural deficiencies of agriculture: 97 % of the agricultural area of the county is worked individually, with high costs and minimal profitability (Development Strategy of Caraș-Severin County 2007-2013, 68-69).

In this area there are some successful companies, with vast market space, that go beyond the county boundary, extended to regional, national and even international level. These study cases revealed certain factors which together can create the necessary synergy for the success in this field:

- the qualities of the entrepreneur: creativity, capacity to grasp the opportunities, to draw and administrate resources, the ability to take risks, the need for independence, the managerial culture;

- efficient management, centered on: correlating extension with diversification, quality of human resources, best technologies, research, innovation;

- the real interest for creating regional clusters (Porter, cf. GEA, Group of Applied Economy, <http://www.gea.org.ro/documente/ro/clustere/identificareclusterdragospislaru.pdf>) in the food industry at county and regional level; together with the use of name *Banat* in the name of their companies, this is a proof of the awareness of the affiliation to a well defined regional space (Popa, 2007).

There is only one example of public – private partnership in initiating and sustaining activities of food industry in underprivileged areas.

Given the social and economic characteristics of this former classic industrial region that has been recently de-structured, it can be emphasize that the development of the food industry at its full potential would need a more active implication of the institutions created for this role.

These institutions are in position to put to good use more efficiently the contexts created by the operational documents of regional and local development, especially since the priority axis 4 of the Regional Operational Plan aims *the sustainable development of the structures that sustain businesses of regional and local importance*, the strategic axis 3, from the County Development Strategy refers to *economic competitiveness* and the axis 6 aims *rural development*.

Thus, the food industry could become an important component of the sustainable economic development acting both for the social and economic *cohesion* – at intra regional level - and for economic *competitiveness* – at inter regional level.

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REFERENCE

- Ancuța C., (2007), *Studiul geografic al disparităților teritoriale în Banatul românesc*, Editura Mirton, Timișoara;
- Ancuța C., Ardelean F., Arba A., (2008), *Impact des politiques européennes sur l'espace rural roumain: le cas des financements SAPARD in Méditerranée*. Revue géographique des pays méditerranéens, 110, 79-93, Publications de l'Université de Provence, Aix-en-Provence;
- Ianoș I., (2000), *Teoria sistemelor de așezări*, Editura Tehnică, București;
- Ișfănescu R., (2008), *Rolul inițiativei antreprenoriale în organizarea spațiului geografic din Banat (PhD thesis summary)*, manuscript;
- Jones K., (1998), *Scale as epistemology in Political Geography*, 17, 25-28, Elsevier, Amsterdam;
- Olaru M., (1981), *Relieful județului Caraș-Severin* in Jurjică, T. (ed.), Monografia Județului Caraș-Severin, 11-37, Editura Sport-Turism, București;
- Palicica L.I., Palicica M., (2005), *Resursele umane și pregătirea forței de muncă din mediul rural*, Editura Orizonturi Universitare, Timișoara;
- Popa N., (2007), *Banatul, spațiu laborator de analiză social-economică în contextual regional românesc* in Popa, N. (ed.), Banatul. Identitate, dezvoltare, colaborare regională, 9-18, Editura Mirton, Timișoara;
- Popescu C., (2000), *Industria României în secolul XX: analiză geografică*, Oscar Print, București;
- Sencu V., Băcănu I., (1976), *Județul Caraș-Severin*, Editura Academiei R.S.R., București;
- ***, (2004), *Către o politică industrială bazată pe aglomerări industriale competitive*, <http://www.gea.org.ro/documente/ro/clustere/identificareclusteredragospislaru.pdf>; Grupul de Economie Aplicată-GEA, <http://www.agrobanat.ro/agrobanat.html>;
- <http://www.consultantaagricola.ro/>;
- <http://www.cjcs.ro/strategie-2007-2013.php>;
- <http://stiri.rol.ro/Razboiul-branzei-in-Muntii-Banatului-39141.html>;
- <http://www.adrvest.ro/index.php?page=articol&aid=334>.

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