

THE LOCATION OF ZĂRNEȘTI CITY IN ROMANIA IN THE SYSTEM OF SMALL AND MEDIUM URBAN LOCATIONS OF BRAȘOV COUNTY

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Abstract: Regardless of its size as a population, or the area in which it takes place, each city has relationships of different types, relationships that ensure its existence and that can define its area of urban influence. In other words, the area of influence of a city has its own structure and is expressed through the very close relations between that city and the other urban and rural localities around it. Depending on certain elements (the level of development of the country, the geographical position of the city, the density of urban centers and the size of the city), we can determine the size of the area of influence of that city.

This study aims to evaluate the influence of Zărnești City (Romania) on the system of localities of Brașov County, in the context of urban competitiveness. The classical methods of human geography will allow the quantitative and qualitative appreciation of the influences of the researched city, in time and space, which is part of a doctoral study.

Key words: urban area of influence, Zărnești, small and medium towns.

JEL CLASSIFICATION: R, P 25

1. INTRODUCTION

The city of Zărnești is located in the center of Romania and belongs to the Center Development Region. This Development Region, in turn, includes 5 counties, including Brașov County, a county in which both the city of Zărnești and the other cities described below in the current study are located.

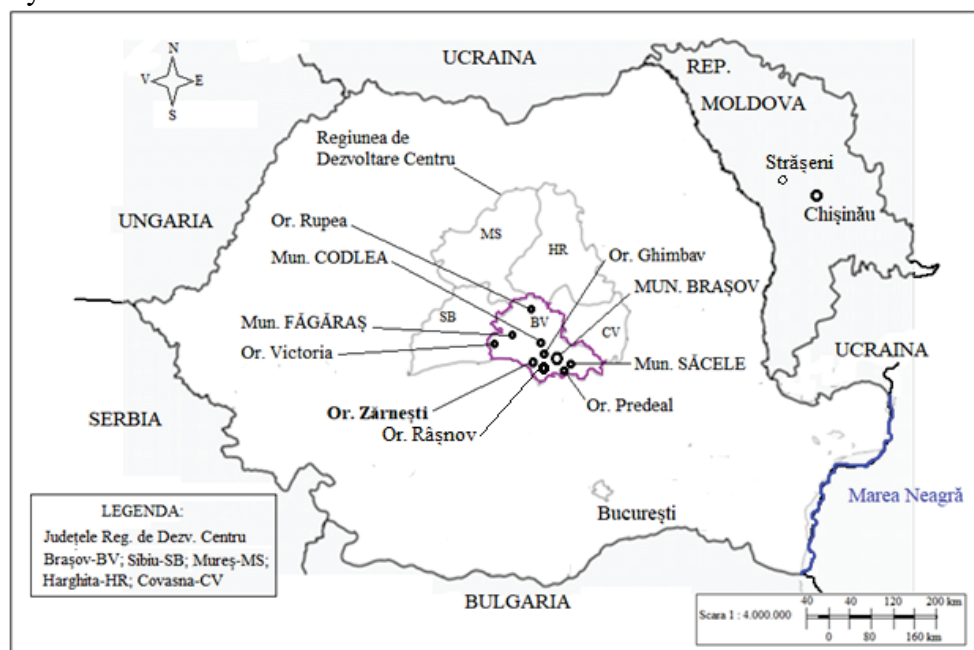


Figure 1. The cities of Brașov County

Source: Processed map. Contour Source Map of Romania - Romania Map Contour Clip Art

At the level of Brașov county, Zărnești locality is located in the southern part and belongs to the network of localities adjacent to Brașov Municipality. We specify that Zărnești is part of

the network of localities that revolve around the Municipality of Braşov, being an integral part of the system of localities located near this municipality. (Local Development Strategy of Zărneşti City, 2015-2025).

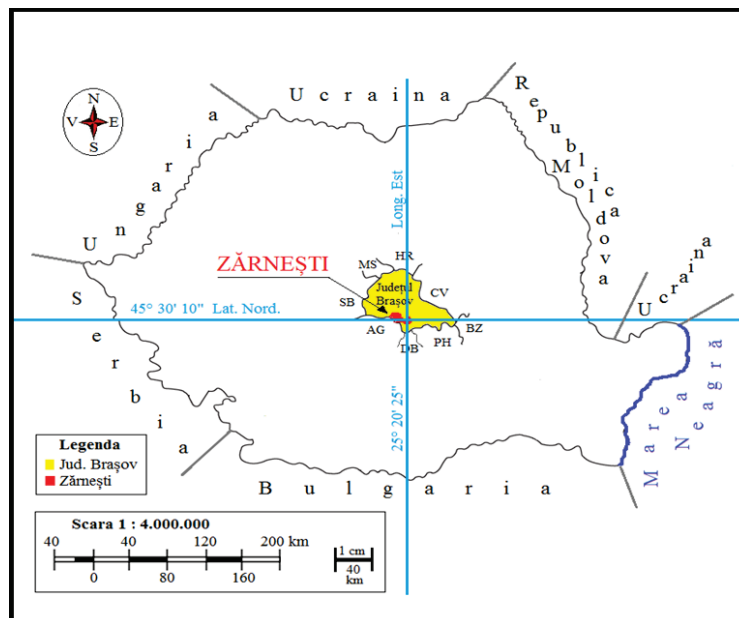


Figure 2. Zărneşti on the map of Romania and Braşov county. Processed map.
 Source: contour map of Romania - Romania Map Contour Clip Art

The locality received the status of a city in 1951 and currently has a population of 26,500 inhabitants, being part of the group of medium-sized cities in Romania (whose population exceeds 20,000 inhabitants). (O.N.U. - quoted by Cujbă Vadim, 2015, p.29); (Crăciun Laurenţiu, 2019). The surface of the city is 204.75 km² and includes urban and extra-urban land (figure 3).

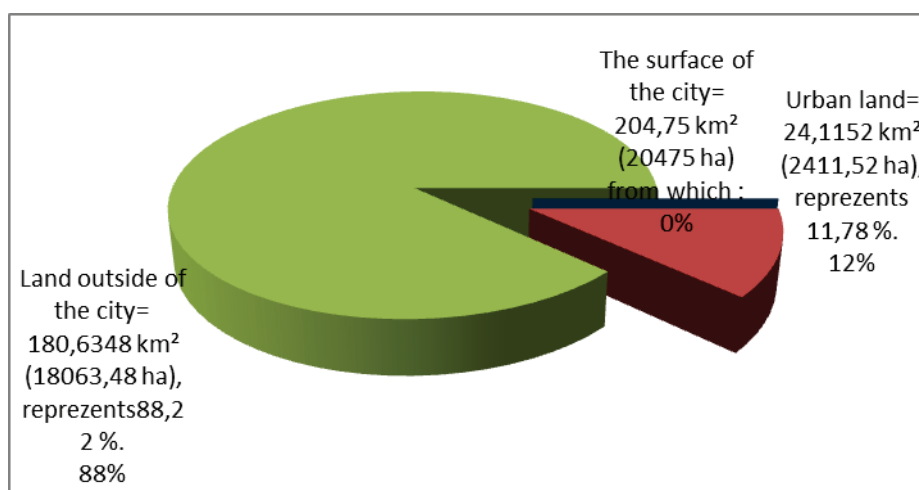


Figure 3. The total area of Zărneşti city
 Source: Zărneşti City Hall

The out-of-town area of Zărnești is very large compared to the in-town area, according to figure 3.

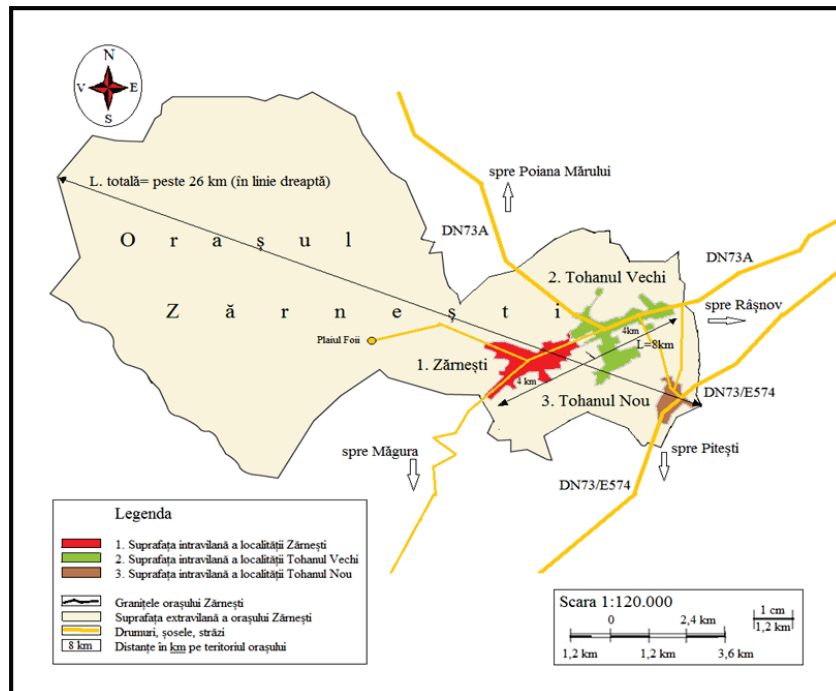


Figure 4. The urban and extra-urban area of Zărnești

Source: <https://www.google.ro/maps/place/Ora%C8%99ul+Z%C4%83rne%C8%99ti/@45.5904029,25.1880802,12z/data=!4m2!3m1!1s0x40b34bbce0d28299:0x567b55985f8ad114>

The city of Zărnești is drained by the rivers Bârsa and Turcu and has in its composition three localities: Zărnești Centru, Tohanul Vechi, summing up the Working District “6 Martie” which is also called “Cartierul Blocuri”, as well as the village Tohanu Nou.

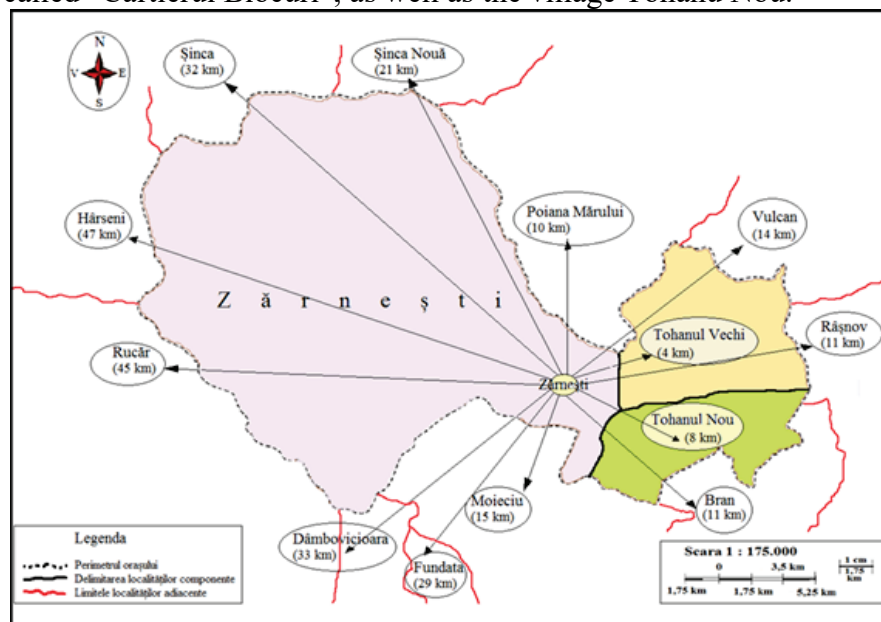


Figure 5. The component localities of Zărnești in relation to the neighboring localities

Source: map outline:
<https://www.google.ro/maps/place/Ora%C8%99ul+Z%C4%83rne%C8%99ti/@45.5904029,25.1880802,12z/data=!4m2!3m1!1s0x40b34bbce0d28299:0x567b55985f8ad114>

The best way for tourists from the country, or from the county, to reach Zărnești, is by car (figure 6).

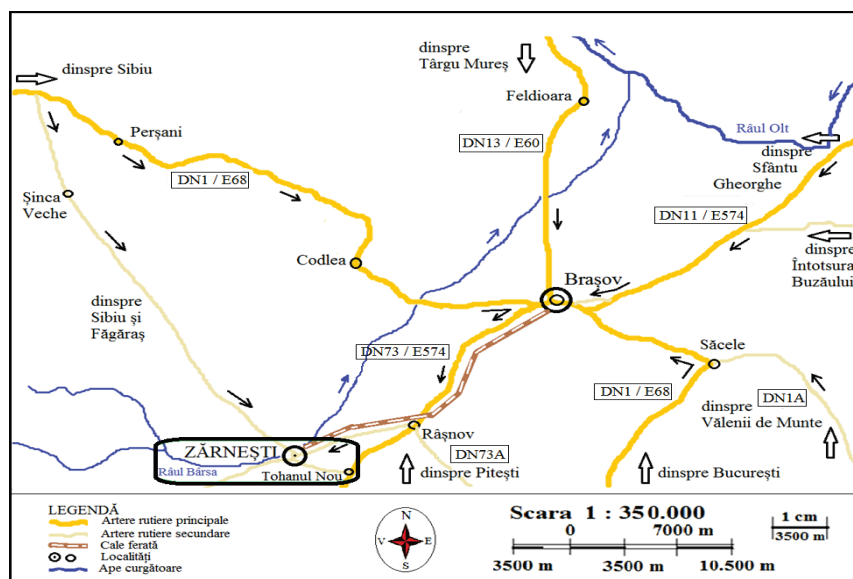


Figure 6. The main access roads to the city of Zărnești

The entire road network of Zărnești, totals more than 145 km and includes roads of all categories: asphalt public roads, cobbled public roads, or modernized and forest roads. New neighborhoods appeared (Tohănița and Pleașa), where new related roads were built.

The previously existing roads were widened, repaired, and some of them were public lighting. "In general, forest roads are well maintained (gravel) and can be used all year round by car. The network of forest roads belonging to Zărnești has a density of 7.4 linear meters / ha and served 48% of the extent of the Zărnești Forest District". (Ocolul Silvic Zărnești).

Because the forest area overlaps over a large part of the mountain area, the access roads created for its economic use (forest roads) - are used in access, or in the spatial organization of a tourist area.

The forest routes generally follow the hydrographic network, a strongly affected network, both as a drainage regime and as a biological potential, presenting many strongly inclined slopes, which imposed a large volume of works and special measures for consolidation and stability.

The city of Zărnești, has close collaboration relations with geographically closer partner localities - Codlea, Râșnov, Ghimbav, Cristian, Vulcan, or more distant-Rupea, Predeal, Făgăraș and Victoria.

2. MATERIALS AND METHODS

The realization of this article has as an important purpose, the comparative analysis of the spheres of influence of the small and medium cities of Brașov county. When studying the cities of this county, various research methods specific to Human Geography (analytical, historical, comparative, statistical-mathematical, observation and geographical description) were used. The statistical data were used from the official sources of the INS in Romania, such as the data collected from primary sources from the Prefecture of Brașov County, this article, referring to the period 1970 and until now.

This study attempts an analysis and a brief presentation of the main characteristics of the areas of influence of each city in Brașov County, targeting all areas of activity of those cities studied.

In carrying out the comparative study, we started from several premises:

- through the comparative analysis, it was found that the cities of Braşov County do not have the same degree of influence on each other;

- in the case of some cities, their influence is greater on the other cities around them (such as Zărneşti which has a great influence on the cities of Râşnov, Ghimbav, Codlea, Predeal, as well as of several communes around it: Poiana Mărului, Cristian, Vulcan); Codlea, which in turn has a fairly large influence on the city of Ghimbav, Râşnov, but also on the communes of Hălchiu, Vulcan, Sânpetru;

- in the case of other cities, their influence on small or medium-sized towns around them is quite low (examples are given by small towns: Predeal, Rupea, Victoria, each having influence only on a few villages around them).

- the influence of Zărneşti city compared to the other cities of Braşov county is different from one city to another of the county, depending on the situation;

- strategic urban development plans do not fully reflect the requirements of sustainable development;

Zărneşti locality still has a great influence in the area and collaborates with a series of urban localities from Braşov County (Râşnov, Codlea, Ghimbav, Făgăraş, Rupea, Victoria, Predeal), but also with a series of rural localities, such as Cristian, Vulcan, Bran, Poiana Mărului, etc., Zărneşti, constituting a polarizing center.

3. RESULTS AND DISCUSSIONS

"In our country, the territorial development of the urban phenomenon was done by increasing each city, by including new localities in the administrative territory of cities, by declaring new cities, to which for certain periods can be added the new category of communes suburban". (Cucu Vasile, 1995).

"The role of cities in the adjacent territory will be defined by their regional function, or by the application of urban functions, but also by their influences on the environment". (Ilinca Nicolae, 1999). "The city itself is the arena of social relations, which has been formed over several millennia and centuries."(Matei Constantin, Mătcu Matei, Sainsus Valeriu, Hachi Mihai, 2008).

In most cases, the relations of cities with the adjacent space are, to a large extent, dependent on the means of transport. In the demographic relations between urban and rural, we distinguish two situations: 1) the city can exert an attraction on the inhabitants that can be temporary, or permanent and on a variable surface; (Hachi Mihai, Crăciun Laurenţiu, 2020); 2) city dwellers can migrate abroad in different forms. People travel abroad often for services and refer to daily migrations for work, as well as changes of residence. An urban locality can have an influence on the peri-urban area, executing a commercial and financial attraction, in the sense that it supplies the inhabitants with goods and offers them financial aid through banks.

On the adjacent territory, the city can have an agricultural, industrial, or administrative influence. "In recent years, the relocation of labor from certain rural localities to urban centers, or from certain urban localities to urban centers, has gained maximum value, generated by the inward migration of economically active people, but also pensioners from areas urban". (Albăstroiu Elena-Simona, 2009).

Among the 14 localities located in the Braşov metropolitan area and around it, there is also the city of Zărneşti. Almost 80% of the county's population is concentrated here, with a density of 202 places / km², which leads to the development of low-cost infrastructure. Today, the city of Zărneşti has a population density of 130 inhabitants / km². In 2010, the number of important companies in Zărneşti, with higher turnover, was 489. In 2021, the situation is

relatively the same, which places the locality on the 5th place between the county cities (Zărnești being positioned after Brașov, Făgăraș, Săcele and Codlea).

Zărnești locality has close collaboration relations with some partner localities, closer from a geographical point of view: Codlea, Râșnov, Ghimbav, Cristian, Vulcan, or more distant: Rupea, Predeal, Făgăraș and Victoria.

These elements are necessary for an accurate assessment of the possibilities that the city offers to the population, as well as to other urban and even rural settlements.

The city itself has a sphere of influence on the other localities around it. The emphasis is on the study, knowledge and evaluation of the economic potential of each city in Brașov County, as well as the collaboration between them.

Due to its geographical location, Brașov County largely overlaps with the Brașov Depression - the largest intracarpethian depression in Romania. From time immemorial, the relief and climatic conditions on the territory of the county have offered favorable opportunities to the living standard of the population, here, being able to cultivate many species of plants that are cultivated in Romania. (Hachi Mihai, Crăciun Laurențiu, 2019).

Considering the fact that on the territory of Brașov county there are old commercial roads, including the old road of Bran, which passes through the Zărnești area, this determined a greater economic development of the area. These roads have been traversed since ancient times by merchants and craftsmen, who were of different ethnicities and cultures. Together with the inhabitants of these lands, they laid the foundations for the later industrialization of these areas of the county. At the beginning of the 1800s, the industrialization process of the city of Brașov begins, as well as of several localities located on the current territory of Brașov County. In 1810, the foundations of the industrialization of today's Zărnești were laid. Then an alcohol factory was set up, and then a mechanical factory to process cotton. In 1860, the cotton factory was redesigned on fabric items, and later a match factory was established. In the years 1850-1880, an alcohol factory operated in Zărnești. From 1860 in Zărnești, a sawmill begins to operate. In 1889, the pulp mill was established. Starting with 1938, the Malaxa Armament Factory of the Malaxa Concern in Bucharest went into production. (Primăria Zărnești).

In the last half of the twentieth century, Zărnești - the city at the foot of Pietra Craiului has undergone significant changes in terms of its economic profile. The Zarnesti industry has grown, diversified, gaining new values. This diversification has long referred to chemicals and paper, construction of bicycles, mopeds, chainsaws, special equipment, armaments), food industry, wood industry represented by S.I.L. (Wood Industry Company), and after the 1990s - petroleum products, offered by the Romoil Company.

The location of the city of Zărnești at the contact of the depressed land with the mountain area, also influenced the structure of agriculture and determined the tourist importance of the city. zarnesti.net

Over 50% of the territory of the city (extra-urban) belongs to the mountainous area, characterized almost exclusively by forest economy, today, forests cover 54.7% of the surface of the administrative territory. (Ocolul Silvic Zărnești).

The basement of the administrative territory of the city, includes limestone, clay, gravel and quartz aggregates. They are extracted from the Bârșa River and are sorted, crushed and processed at the gravel pit at the entrance to the city. All these gravel aggregates are used as construction materials for localities in the area such as Tohan, Zărnești, Râșnov, Ghimbav, Codlea, etc. Many years ago, in Zărnești, a lime industry developed. (Lepădatu Ioan, 1998); (Vlad Ilie, 2004, 2011).

After the Revolution of 1989, the light industry and the food industry in Zarnesti were very poorly represented. Some enterprises in the city were incorporated in commercial companies (eg the Joint Stock Cooperative Company "Voința" Zărnești - former craftsman).

Established on January 1, 1988, "Voința Zărnești" had various objects of activity: it dealt with textile production; Garments and knitwear; Mechanics - production of metal punches, constructions; services-hairdressing, hairdressing, cosmetics, tailoring, shoemaking, carpentry, windows, fur, etc ..

The raw material for garments (textile) was obtained from Codlea, Bucharest and other centers; melanin (from Ghimbav, Buzău, Mizil, Focșani, etc.). Mainly, Societatea Voința Zărnești sold its own products and had contracts with the localities: Brașov, Râșnov, Codlea, Făgăraș, Victoria, Rupea, Săcele, Predeal, Ghimbav, Timișoara, - for the delivery of protective equipment to them, and for Bucharest it produced mattresses, etc. In addition to the mentioned enterprises, the city of Zărnești also had a bakery enterprise. The bakery company existing between 1990 and 2000 produced only plain bread without other assortments, and then expanded to other assortments. (Primăria Zărnești). After 1990, the Zărnești Industrial Park was established, where several companies operate on its premises. (Primăria Zărnești).

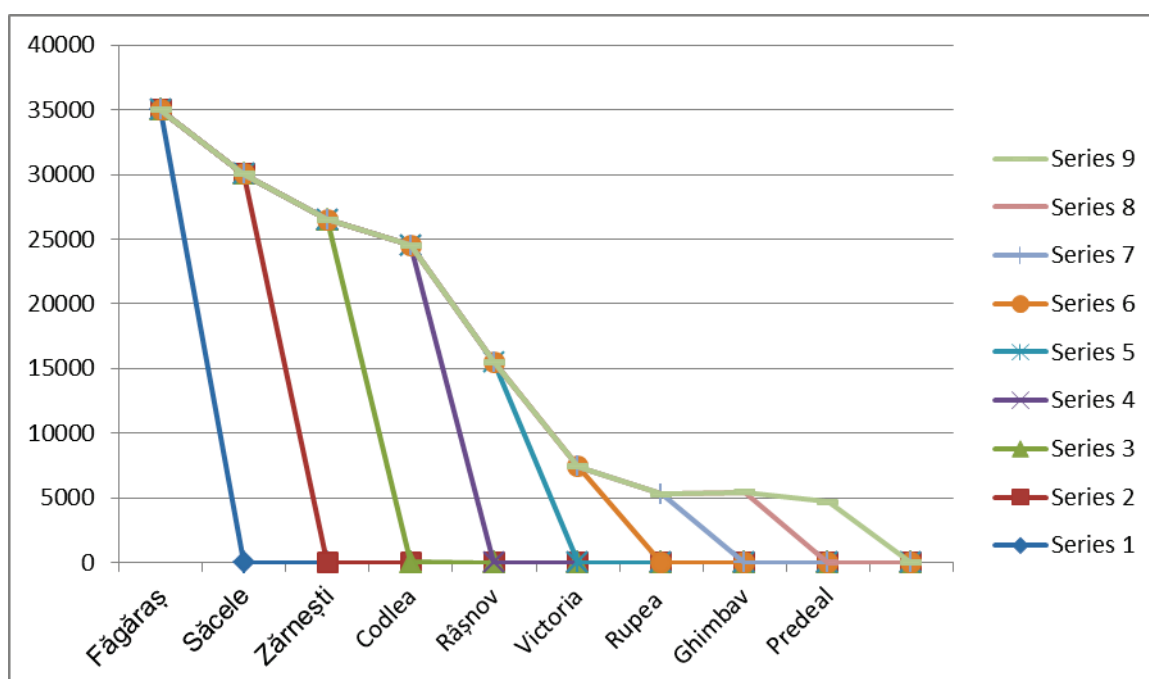


Figure 7. Population of small and medium-sized cities of Brașov County at the 2011 Census
 Source: INS TEMPO online

Among the small and medium-sized towns of the county, (Cujbă Vadim, 2015); (Crăciun Laurențiu 2019). Zărnești currently occupies the third place, with a population of 26,500 inhabitants, slightly increasing (figure 7).

The first description of a road that passed through the Zărnești area refers to the "Bran Road", and dates back almost 2000 years to Roman times. At that time, "the road from the Danube to Rupea appeared on a Roman map (Danube-Zimnicea-Alexandria-Roșiorii de Vede-Pitești-Câmpulung-Bran-Rupea), a paved road called Via Gloria, also used by the Dacians". (Lepădatu Ioan, 1998); (Vlad Ilie 2004; 2011).

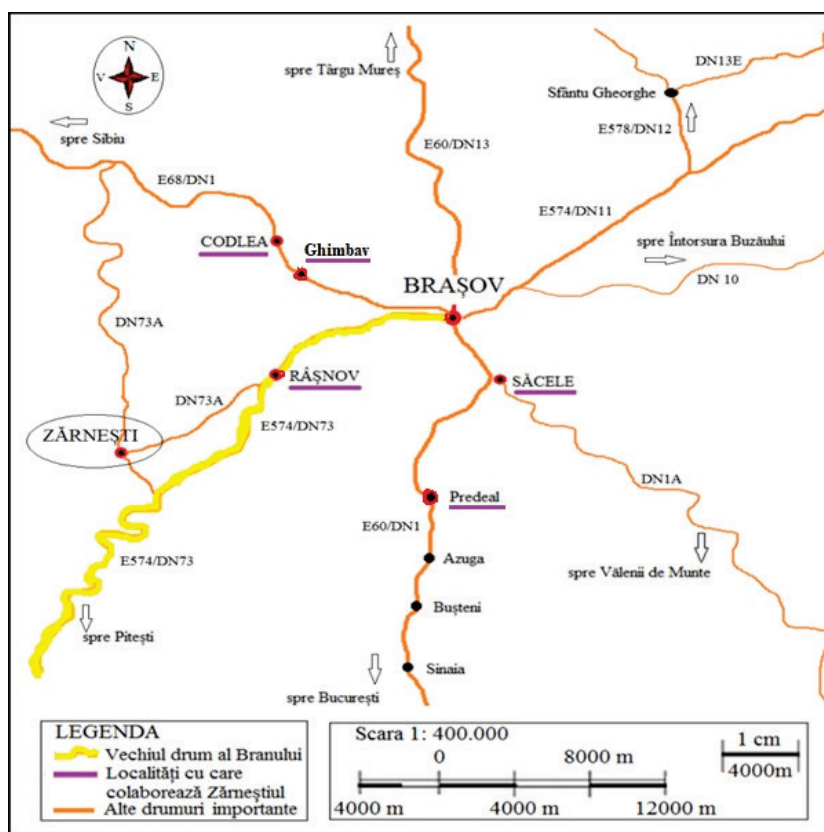


Figure 8. The old "Drum al Branului" located in the Zărneștilor area

For a long time, the traditional transport in the region was the carriage. This method is currently used on a small scale. "Today, the main traffic in Zărnești locality takes place on the national roads DN73 and DN73A, the county roads DJ112G to the relation Măgura, Peștera, Moieciu, DJ112H to the relation Tohanul Vechi-Tohanul Nou".(Primăria Zărnești).

The entire street network of the city, includes road segments of different lengths from categories III-V, "predominant being the modernized roads". (zarnești.net).

Between 1980 and 1990, the city of Zărnești had favorable conditions for carrying out economic activity. The rich resources in the mountain area (wood, limestone, etc.) have led to the amplification of some traditional activities in Zărnești: the exploitation and processing of wood, the pulp and paper industry, the construction materials industry. The city's economy was characterized by strong industrialization.

At that time, the industrial activity predominated over the other activities, namely: 40.3% of the buildable perimeter was occupied by the industrial area, and 43.3% of the total population worked in industry. More than 4,300 people from the neighboring areas commuted to Zărnești, the number of commuters exceeding 6,500 people in the 1990s. (Primăria Zărnești și Prefectura Brașov).

The development of the Zărnești industry increased the capacity to attract the labor force from that time, which moved daily to the city, Zărnești, being the second center after Brașov, within the urban group Brașov. The Zarnesti industry exerts a strong influence, especially on the active population from the adjacent localities.

All the enterprises built in the perimeter of Zărnești city contributed to the development of the city's economy by creating jobs, as well as by labor productivity.

Between 1970 and 1990, the city's economy had an upward curve, and people's living standards began to rise. (Primăria Zărnești). In this sense, people's existence, living, life have changed. Thus, "the way of life of the population was also influenced by the cultural

environment which represents the set of values, norms, beliefs and traditions to which the population of the territory referred" taken into account. (Mihai Hachi, 2005).

Forced industrialization drew a lot of labor from the adjacent localities where the city could not cope with the situation, because "the population of the city in the 1970s was max. 20,000 loc. while the total number of employees providing employment in the area exceeded 35,000. "

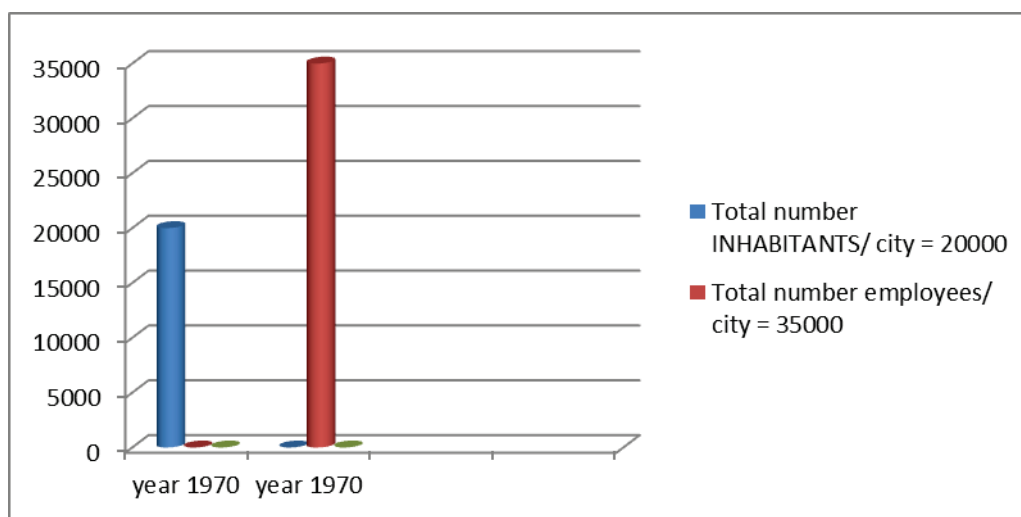


Figure 9. Comparative situation of the population and employees in the city of Zărnești in 1970
 Processed data. (Source-Zărnești City Hall and Brașov Prefecture)

The development of industry in Brașov County led to the formation of general concentrations in the territory, which according to their structure and degree of specialization, played a special role in economic life. (Prefectura Brașov).

Today, more than 30 years after the 1989 revolution, the number of commuters working in Zărnești has dropped by several hundred people. Many Zarnesti units that are still in operation are looking to reduce their activity, reduce their number of employees, or retrain.

Compared to the years 1970-1990, the area of influence of Zărnești, begins to diminish, both on the villages in the area of Bran and Poiana Mărului, as well as on the small and medium towns of the county (Rupea, Predeal, Ghimbav, Râșnov, Victoria, Codlea, Săcele, Făgăraș), Regional development is one of the priorities of the European Union, and the local authorities of Zarnesti are trying to apply these policies. (Zărnești Local Development Strategy, 2015-2025).

Zărnești locality has close commercial relations with many enterprises and sales centers both in the country and abroad. The companies from Zarnesti deliver both to the internal market and to the external market, a wide range of products such as: bicycles, weapons and military components, cellulose, timber, fodder yeast, handicrafts, carpets and much more, the income obtained from following these products delivered contributing to the growth of the city's economy. (Primăria Zărnești).

The relationship of Zărnești with the influential area: Until around the 1990s, the population of Zărnești increased permanently, due to the attraction of labor force through the industrial units in the area.

Therefore, in addition to the natural increase, the towns from the entire area of influence and implicitly from the city of Zărnești, suffered a migratory phenomenon in search of stable jobs and accommodation, or only for stable accommodation, for activities carried out in nearby towns and especially for Brașov. (Crăciun Laurențiu, 2020).

After 1990, mutations took place in Zărnești, as in most localities in Brașov County. With the fairly rapid decrease in natural growth, there is a decrease in labor migration, which now prefers stable accommodation in the locality with employment opportunities.

Zărnești town still has enough influence in the area and collaborates with a series of urban towns from Brașov County (Râșnov, Codlea, Ghimbav, Făgăraș, Rupea, Victoria, Predeal), but also with a series of rural towns, such as Cristian, Vulcan, Bran, Poiana Mărului, etc.), Zărnești, constituting a polarizing center. (Prefectura Brașov).

Through the bread and bakery factories, Zărnești provides daily food not only for its inhabitants, but also for those from the surrounding localities (Poiana Mărului, Vulcan, Branului and Moieciu area, Fundata, etc.).

Also, from the area of Zărnești city, the water necessary for the consumption of the population of this city is provided through pipes by free fall, as well as the technological processes that take place at certain small enterprises and companies from Codlea city. Until their abolition, the necessary water was provided for the former Codlea Greenhouses. (Primăria Zărnești).

For a long time, all the localities around Zărnești provided the city with all the labor force that the companies from Zărnești needed.

After 2002, there is a decrease in population (Crăciun Laurențiu 2020), and the process of deindustrialization begins. Unemployed, people began to migrate to other places in search of a better life. "Migration issues are addressed in close connection with the production forces and the urbanization process. We cannot study the migratory phenomenon, without starting from the premise that the city of Zărnești is a polarizing center". (Elena Sochircă, 2010).

The Local Authorities of Zarnesti, take into account the development of the tourist infrastructure until the end of 2025 and aim at the implementation of the projects that aim to protect the environment and to ensure the increase of the attractiveness of the area.

Due to the fact that at the level of the Center Development Region of which Zărnești is part, several political decisions were taken regarding the sustainable development of the locality in the coming years, there are great chances for the economy of Zărnești to revive and at the same time to have again a greater influence on the surrounding localities than it has at present. (Zărnești Local Development Strategy, 2015-2025).

4. CONCLUSIONS

Most cities in Brașov County have a series of common features, but also distinct in terms of geodemographic evolution, their level of economic and social development, in the current transition period that Romania is going through. Crăciun Laurențiu (2020);

- the transition to a market economy marked the population in terms of demographic evolution in the sense of a slow growth, against the background of an accentuated migration in all the cities of Brașov county;

- several demographic indicators have an involution, some even very accentuated, which will determine the demographic insecurity of the cities taken into account;

- a rapid economic development of the city of Zărnești occurred especially in the period 1960-1970. It continued until 1989-1990 and was based on industrial activities, the first places being through their productions, the bicycle factory, weapons and various technical accessories - S.C. Tohan S.A., Pulp and Paper Plant - S.C. Ecopaper S.A., the Wood Processing, Exploitation and Industrialization Enterprise I.P.E.I.L., the construction materials industry that produced lime from limestone, as well as mining prospecting.

- the industrial function generated new types of relations between the city of Zărnești and other localities in the country, which led to the increase of the degree of integration in the system of the national economy.

- the positive dynamics of the population of Zărnești between 1948-2009, "was the cumulative result of both the positive natural balance, but also of the intensification of the migratory balance as a result of the development of the industrial function". (Braghină Cristian, 2000).

- due to the industrialization of that time, as well as the influx of population, coming from many localities in employment, we note that in 1970 the population of the city was 20,000, while in the enterprises of Zărnești worked 35,000 employees. (Primăria Zărnești).

- the development of Zărnești locality had significant consequences also on the relations established with the surrounding areas, which registered new valences, both from a qualitative and quantitative point of view.

After 1995, the influence of Zărnești locality on the neighboring localities began to decrease, due to many factors generated by the decrease of labor productivity in Zărnești enterprises, the lack of raw materials, jobs, making many inhabitants from adjacent areas no longer commute to factories. the city, and the locals, to migrate to other areas, including abroad in search of jobs.

- in Zărnești, the labor force is qualified for the industrial field, this requiring a specialization for the tertiary sector (service field), which has future prospects (natural tourist potential), but, compared to the other cities of Brașov county, a reconversion and in the field of labor in these cities, which would focus on future local industries. Crăciun Laurențiu (2020).

- The most serious problem facing the small and medium-sized cities of Brașov County is the demographic aging, the lack of qualified labor force, for the fields that are currently required.

- the lack of well-paid jobs, accentuates the seriousness of the employment problem and, correspondingly, of the economic growth, which has worsened in all the cities from Brașov county, but also from Romania.

- economic recovery is possible in almost all cases studied, through major capital investments from within, but especially from outside.

REFERENCES

- Albăstroi, Elena-Simona, (2009)-*Evoluția funcțională, teritorială și urbanistică a municipiului Bârlad*, Editura Taida, Iași.
- Braghină, Cristian, (2000)-*Așezările umane din delurile piemontane dintre Motru și Gilort*, Editura Tehnică, București, 207 p, București, România.
- Crăciun, Laurențiu (2019)-*Criterii de individualizare a orașelor în România și Republica Moldova*, SIMPOZION ȘTIINȚIFIC INTERNAȚIONAL AL TINERILOR CERCETĂTORI, EDIȚIA a-XVII-a (24 – 25 aprilie 2019), p.35-42, Chișinău, 2019, Republica Moldova.
- Crăciun, Laurențiu (2020)-*Probleme socio-demografice și socio-economice ale orașelor Strășeni - Republica Moldova și Zărnești – România*, Conferința Științifică Internațională Virtuală „Dezvoltare prin Cercetare și Inovare - 2020”, Ediția I, ASEM 28 august 2020, Chișinău, 2019, Republica Moldova.
- Cucu, Vasile, (1995)-*România-Geografie umană (pag.136)*. Editura Glasul Bucovinei, Iași.
- Cujbă, Vadim (2015)-*Evoluția orașelor mici și mijlocii din Republica Moldova prin prisma geografiei economice*, Teză de doctor în științe geonomice, pag. 29, ASEMD, Chișinău.
- Hachi, Mihai; Crăciun, Laurențiu (2019)-*Studiul comparativ al utilizării terenurilor în orașele Zărnești (România) și Strășeni (Republica Moldova)*, Simpozionul Internațional „CALITATEA MEDIULUI ȘI UTILIZAREA TERENURILOR”, Ediția a XII-a (17-19 Mai 2019), Suceava, 2019, România.
- Hachi, Mihai; Crăciun, Laurențiu (2020)-*Provocări și tendințe actuale în cercetarea componentelor naturale și socio-economice ale ecosistemelor urbane și rurale /*

- Ministerul Educației, Culturii și Cercetării, Institutul de Ecologie și Geografie, Universitatea de Stat "Dimitrie Cantemir", Agenția de Dezvoltare Regională Nord ; comitetul științific: Maria Nedelcov [et al.]. – Chișinău : Universitatea de Stat "Dimitrie Cantemir", 2020.
- Hachi, Mihai, (2005) - *Modul de trai al populației Republicii Moldova: Abordare socio-geografică*. ASEM, pag 109, Chișinău, Republica Moldova.
- Ilinca, Nicolae, (1999)-*Geografia umană. Populația și așezările*. Editura Corint, București.
- Lepădatu, Ioan (1998)-*Vechi așezări bârsene–Orașul Zărnești*. Editura Transilvania Expres, Brașov.
- Matei, Constantin; Mătcu, Matei; Sainsus, Valeriu; Hachi, Mihai (2008). *Rolul orașelor mici în dezvoltarea complexului agroindustrial al Republicii Moldova*, Editura ASEM, 87p, Chișinău.
- Sochircă, Elena, (2010)-*Studiul geodemografic și social al Municipiului Chișinău*, Teză de Doctorat, ASEM, pag. 102, Chișinău, 2010, Republica Moldova, Strategia de dezvoltare locală a Orașului Zărnești, 2015-2025.
- Vlad, Ilie, (2004). *La cumpăna timpului. Zărnești*, Editura Garofița Pietrei Craiului, Zărnești.
- Vlad, Ilie, (2011). *La cumpăna timpului. Zărnești*, Editura Transilvania Expres, Brașov.
- ***Prefectura Brașov
- ***Primăria orașului Zărnești.
- ***Ocolul Silvic Zărnești).
- ***Romania Map Contour Clip Art.
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