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QUANTITATIVE AND QUALITATIVE STRUCTURAL ECONOMIC CHANGES IN THE CITIES OF ZĂRNEȘTI (ROMÂNIA) AND STRĂȘENI (REPUBLIC OF MOLDOVA) IN THE PRE- AND POST-COVID-19 PERIOD

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Abstract: *Currently, the economic situation of several states on the globe has taken on alarming shapes. The increase in economic vulnerability, against the background of the sharp increase in the cost of energy resources, the global pandemic, the economic crisis generated by the war in Ukraine, the increase in geopolitical tensions in several regions of the world, have led economic entities of different sizes to review their strategy economic development, including structural transformations and traditional markets through foreign trade. The transformations in Romania and the Republic of Moldova, affected by the regional crisis, marked by socio-economic instability, already for more than half a year, are significant. Among the common problems faced by the human settlements in both countries are: the permanent economic adaptation to the changes in the conjuncture, the adjustment of the way of capitalizing the spatial resources by these two administrative-territorial entities, the implementation of economic, administrative and spatial decentralization, etc. The comparative study carried out through this research is part of a larger research of two Romanian cities located in Romania and the Republic of Moldova, being the subject of the doctoral study.*

Key words: *economic vulnerability, structural transformations, socio-economic instability, regional crisis.*

JEL CLASSIFICATION: C54

INTRODUCTION

In the last 3 decades, both in Romania and in the Republic of Moldova, the use of natural resources, as well as heritage, has become a major concern. Among the many common problems faced by the human settlements in Romania, as well as in the Republic of Moldova, are: the re-technology of the industry, the modernization of the transport system, the irrational way of capitalizing the spatial resources by these two administrative-territorial entities.

The difficult path to the market economy, but also the period of the COVID-19 pandemic, have left their mark on the economy of the two Romanian states, which are making special efforts to overcome this situation.[4].

By means of these mentioned problems, we will be able to follow the economic changes of a quantitative and qualitative nature, as well as the transformations produced during the transition to the market economy, which is carried out in both Romanian states on the example of two medium-sized cities. [2], [3],[4]. The present scientific approach, is part of a doctoral study "Integration of small and medium-sized cities in the regional urban system. Comparative study of human geography, on the example of the cities of Zărnești (Romania) and Strășeni (Republic of Moldova)". Through this study, the doctoral student aims to evaluate the degree of integration of small and medium-sized cities in the regional urban system and what quantitative and qualitative structural economic changes

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have taken place on the territory of these two cities in the current context of the regional situation created, both before and after the COVID-19 pandemic, but also caused by the war in Ukraine.

These cities, although they are part of different states, are very close in common interests and problems, which they currently have, under the conditions of their integration in the Romanian urban space, respectively in the urban space of the Republic of Moldova [7]. (Figure 1).



Fig. 1. Geographical position of the cities of Zărnești (Romania) and Strășeni (R. Moldova)

Source: Contour map: https://ro.Romania_location_map.svg Map processed by the author.

The city of Zărnești belongs to Brașov county, a county that is part of the Central Development Region of Romania. [17]. Considering that the territory of Brașov county intersects with old commercial roads, including the old Bran road, which passes through the Zărnești area, this determined a great economic development of the area. [10], [13]. Being located in the central part of the Republic of Moldova, in the Central Development Region, the municipality of Strășeni is crossed by a well-developed road network, which has contributed to the economic growth of the entire Region of Central Development of the Republic of Moldova. [11], [14].

The Geology and Relief of the city of Zărnești

From a geological point of view, the area of Zărnești belongs to the Mesozoic unit related to the Piatra Craiului Massif, as well as to the Bran-Rucăr Corridor. The formations encountered here are composed of crystalline rock deposits with phyllites, sericite-colored schists, ocular gneisses, quartzites, amphibolites, which are partially or totally covered by a layer of sedimentary limestone, clay shale, sandstones, marls and conglomerates. Land degradation as a result of the intensification of current modeling processes has a relatively increased weight in recent years. There were road accidents/collapses - on the road leading to the Zărnești Cliffs, landslides, massive stone falls, degradation of the roads that connect Zărnești to the towns of Măgura, Moieciu, Poiana Mărului and the Brăne villages, all of which resulted in torrents, the strings. [10], [13]. Such phenomena, however, are found in the cryonival floor, where the disaggregation, drift and solifluction, mostly affect both meadows and alpine pastures.

The specifics of the relief.

From a morphological point of view, the relief located in the perimeter of the city of Zărnești can be divided into 3 categories: major forms, medium forms and small forms. Fig. 2.

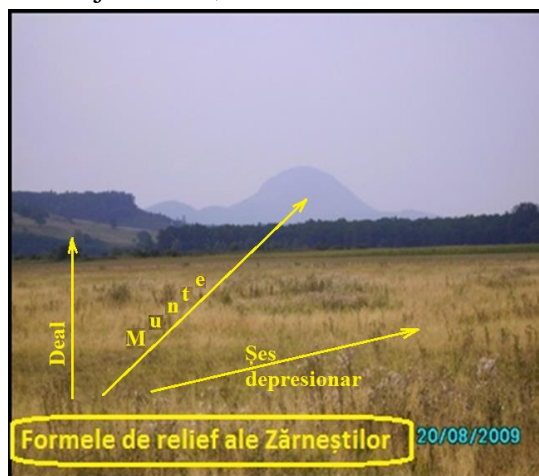


Fig. 2. The relief forms of Zărnești.
(Source - Personal Archive)

Thus, the mountains (Piatra Craiului Massif) occupy 62% of the surface, the hills - 18%, and the lowlands/plains - 20%. [5], [10],[14].

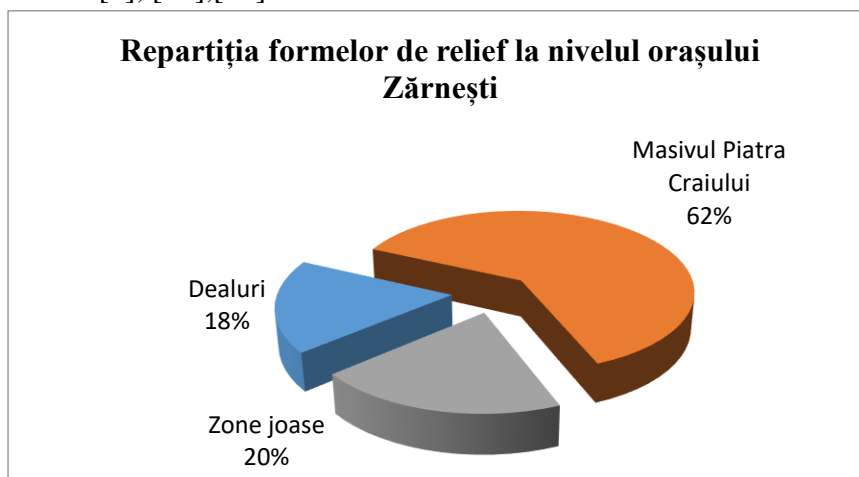


Fig. 3. The distribution of landforms at the level of the city of Zărnești
(Source: processed according to the data of the Zărnești City Hall)

The soils in the perimeter of the city of Zărnești

The territory of Zărnești benefits from a varied range of soils. They are conditioned by the evolution of their fixation, under the influence of natural pedogenetic factors. From a genetic point of view, the soils in the administrative territory of the city can be grouped as follows: [15]

- Brown and yellowish brown forest soils - (also includes podzolic soils);
- Clay podzolic soils - illuvial pseudogley;
- Mountain brown soils - (podzolic soils);
- Rendzine and pseudorendzine;
- Hydromorphic soils;
- Alluvial soils;
- Alluvial - pluvial soils.

In the plateau/plain area, the soils are fertile and are intended for agricultural crops.

In Zărnești, soil resources include: agricultural land, orchards, pastures, hayfields, forest fund (forests) and running water energy, with 2 small hydropower plants. Among the underground resources we mention: underground springs, building rocks (sandstone), limestone, sands, gravels and clay.

Due to the fact that a good part of the Pietra Craiului Massif, with limestone mountains, is located on the administrative territory of the city of Zărnești, the city has large limestone resources, compared to the city of Strășeni, which has no limestone reserves. Years ago, there were two factories in Zărnești that turned limestone into lime, today, the factories have been abolished. [16],[17].

The territory of the city of Zărnești is drained by many flowing waters that make up a rich hydrographic network of particular importance in shaping and fragmenting the relief. Due to the predominantly high relief, here, the precipitation regime has a torrential character, and in soil erosion processes, the hydrographic network can play a role in destroying the organic horizon, which is the essential part of the forest ecosystem. [15], [16]. Changing the zonal climate in the perimeter of the city, as well as the creation of valley and slope topoclimates, with implications in the distribution of forest vegetation, is due to the presence in the area of a rich hydrographic network that implicitly "leads" to the fragmentation of the relief.

Along with other cities located around it, the municipality of Strășeni is included among the human settlements located in the Codrilur Plateau. [6],[12],[14].

The specifics of the relief

Here, the relief is strongly fragmented by a dense network of valleys, torrents and ravines. Compared to the relief of the city of Zărnești, which includes mountains, hills and smooth areas of plains/plains, the localities of the Codrilur Plateau have in their composition some portions that include terraces, meadows, or other surfaces where the degree of fragmentation is less.[5] In the case of the city of Strășeni, the morphological and morphometric structure of the inner city is determined by the position occupied within the limits of the relief unit, the density of the hydrographic network and the intensity of the modeling processes. Thus, in the area that also includes the Codrilur Plateau, there are human settlements located on two altitudinal steps (one lower below 100 m altit) and one slightly higher, exceeding 100 m, where the municipality of Strășeni is also located, at 136 m altit. [2], [9]. On the territory of the Republic of Moldova, respectively in the central part where the city of Strășeni is located, mineral resources are generally reduced in terms of their variety. Building rocks hold the first place in terms of quantity, they are used in the building materials industry, chemical industry, glass and cement industry, etc. (sands, gravels, clays). [11]. Compared to the city of Zărnești, in Strășeni there are more reserves of clay, which is still processed today in the factories of the city, from clay obtaining bricks and tiles. The soils in this area have high fertility, just like most soils in the republic, being much more fertile than the soils in the Zărnești area.

From an economic point of view, both cities described above are mostly facing the same problems.[6], [8], More than two years ago, the global economy started to affect both the developed states of the world, but especially the developing states. The long road of the transition determined the worsening of the economic situation, more recently also in the ex-socialist states, which in their transition to the market economy, faced similar economic transitions, only that they took place in a much longer time frame shorter. The consequences of the economic transformations were similar to developed countries, and the economic problems continue to worsen at an alarming rate. [7]. Among the most acute economic problems, there are: the economic degradation of the last over 30 years, the loss of sales markets, the weak adaptation of the economic structure to the market requirements, structures not adapted to the existing potential. [9].

In Romania, the accession to the European Union in 2007, involved the closure of several enterprises, which, in the view of the European Union, at the time, they were no longer performing. In this sense, many citizens entered the ranks of unemployment, or were forced to go abroad in search of a job, the economic and social situation in the country deteriorating. The same thing happened, in parallel, in the Republic of Moldova. From an economic and social point of view, here, several reminiscences from the Soviet period, from before the year 1989. [6], [8], [12]. As a whole, both in Romania and in the Republic of Moldova, at the present time, the economic structure is poorly adapted to the competitive market situation at the regional and international level.

In general, the economic functions of a territory are based on the following branches of the country's economy:

- Industry,
- Agriculture,
- Forest economy,
- Trade, Tourism, but, also take into account
- Population as well as
- Technical equipment of the territory.

The branches of the economy of the two countries (agriculture, industry, services) no longer have the necessary labor force, in both states, as an aging population has been reported, or one that needs to reconfigure, according to the current requirements of the labor market. Currently, in both countries, there is an increase in the role of population migration, which further worsens the situation on the labor market. All these socio-demographic processes, which directly affect the national security of the two states, highlight the need to be concerned with economic security, which affects all spheres of activity. [5]. The analysis of the economic situation can be carried out for different levels of territorial organization, starting from the idea that each territorial entity, from the state level to the level of primary administrative-territorial units, is marked by a common conjunctural situation of a political, socio-economic order, but also by particular situations. In this context, the author proposed a comparative analysis of the economic situation of two localities: the city of Zărnești in Romania and the Municipality of Strășeni in the Republic of Moldova, as well as how they are affected by the current economic situation. In this sense, the purpose of this study is to analyze the dynamics of economic activity in the pre- and post-Covid-19 period, and the basic objectives include:

- Comparative analysis of the economic dynamics in the cities of Zărnești and Strășeni and the determining factors of this evolution;
- Evaluation of structural changes in the economy of the two cities under the impact of the temporal and spatial situation;
- Formulating some conclusions regarding the economic situation for these cities, in order to overcome this existing situation. At the present time, the problems that attest to economic insecurity, imperatively require, from the authorities of different ranks, the development of strategies and programs, these being for the purpose of not admitting the deepening of economic problems. [4].

MATERIAL AND METHOD

In carrying out this approach, the author proposed for analysis the comparative economic situation and the extent to which it influences the socio-economic security of the cities of Zărnești and Strășeni, relatively similar localities in terms of size and positioning within the system of human settlements, but also in terms of human potential. To carry out this study, several research methods,

specific to geographic and economic sciences, were used: the comparative method for the differentiated study of the geoeconomic components taken into account; the statistical method by capitalizing on the economic data obtained from the National Bureau of Statistics in the Republic of Moldova, the National Institute of Statistics from Romania-through the Braşov County Directorate of Statistics,[18], the local town halls; the cartographic method, used for the development of some thematic maps; the method of analysis and synthesis used for the systematization and interpretation of data that attests to their demographic situation, etc.; qualitative survey its brief description.

To carry out this study, the author started from the following premises:

□ Currently, both cities face similar problems that attest to socio-economic insecurity, based on political, economic and social premises; [4].

□ Through the favorable position they have in relation to a larger urban center (Zărneşti near Braşov, respectively Străşeni, near Chisinau), the big cities have left their mark and influenced the small ones, in the sense of exchange human with these; [12].

□ Due to the long-term transition that the Republic of Moldova is going through, the municipality of Străşeni has socio-demographic and socio-economic structures with a higher degree of instability compared to the city of Zărneşti in Romania; [4].

□ Thanks to the fact that in Romania, the process of territorial decentralization is carried out at a faster pace, as a consequence of the implementation of the regional development policy, the city of Zărneşti is going through a period of demographic and socio-economic stabilization more pronounced than the city of Străşeni. Thus, the experience of the city of Zărneşti can be a model of good practice for the municipality of Străşeni. [11].

RESULTS AND DISCUSSIONS

The two cities, Zărneşti (Romania) and Străşeni (Republic of Moldova), present a series of common features, which aim at demographic dimensions, the trajectory traveled in development socio-economic, the positioning of these cities in relation to an influential and national human center, as well as of urban competitiveness, at the regional level. [4].

Problems with and economic character

□ insufficient capitalization of the economic potential;
□ poor adaptability to internal and external market requirements;
□ the presence of weakly competitive economic entities;
□ labor market instability;
□ the lack of well-paid jobs, the large number of unemployed people of various types, to which are added the unfortunate consequences produced by the global pandemic of COVID-19. [8].

Below are presented a series of companies from the Zărneşti area, in the field of industry, services, etc.

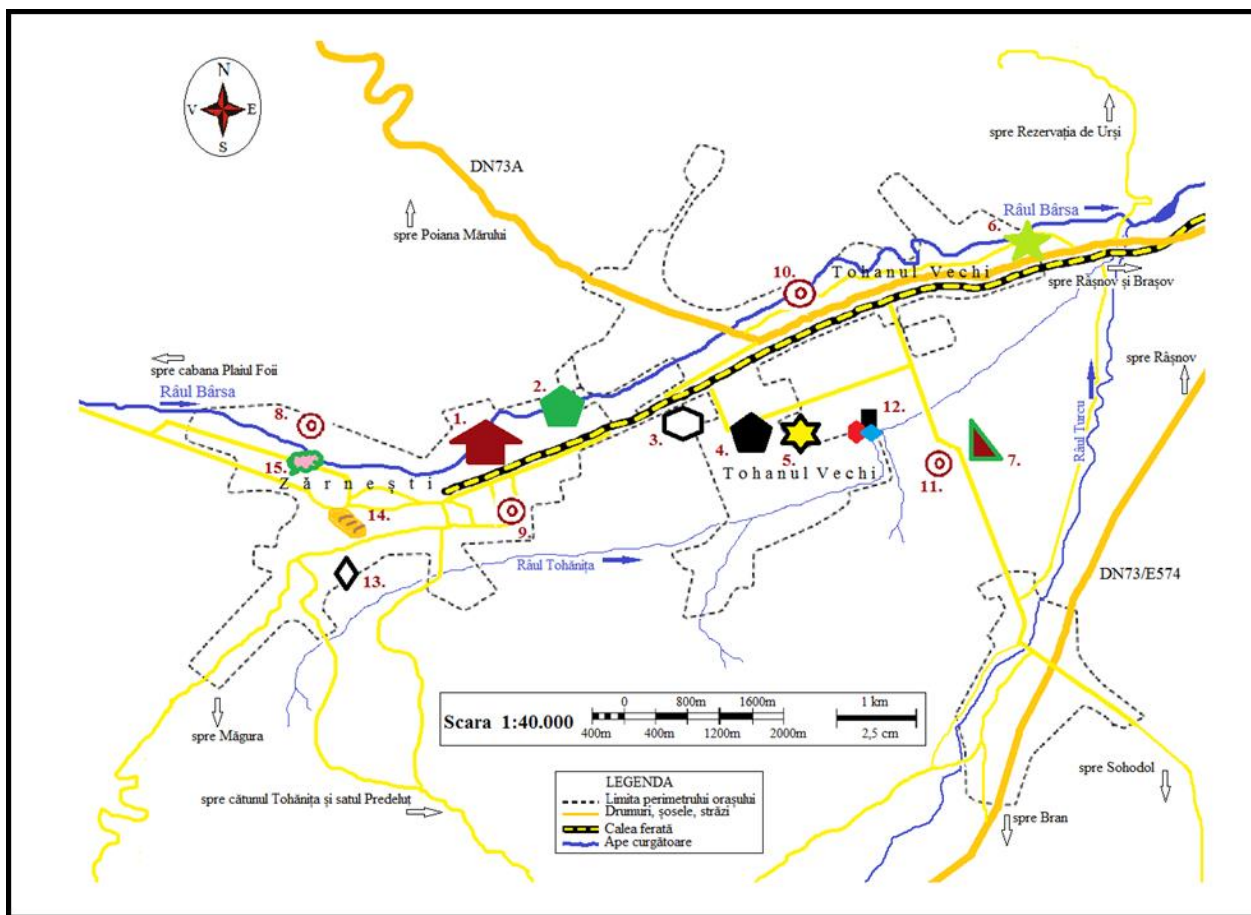


Fig. 4. Industry of Zărnești. Processed map.

Map outline source: <https://www.google.ro/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=harta%20zarnești%20jud%20brasov>

LEGEND no. 2

1. Gara C.F.R. Zărnești	4. SC Tohan SA construcții mașini	7. SC Vectra SRL Servicii, Diverse	10. SC Yvor Prod - ind. lemn	13. Ind. Ușoară. Diverse activități
2. DS Smith Paper Zărnești celuloză și hârtie	5. Parcul Industrial Zărnești	8. SC Ymilrom Prod- ind. Lemn	11. SC Dip&Gip - ind. Lemn	14. SC Buganis Prod. Panificație.
3. SC Romoil SA-Depozit PECO	15. Ind. Alimentară. Diverse activități.	9. SC Alabastru SRL - ind. lemn	12. SC Morani Impex SRL- mat. construcții.	

According to the data received from Zărnești City Hall, Registry Service, on January 1. 2022, there were 921 active economic agents on the territory of the town, represented by a number of approx. 18 (larger) commercial agents, listed below in descending order (somewhat randomly), as income: (S.C. Tohan S.A., S.C. DS Smith Paper Zărnești SRL, SC Lukoil SA, S.C. Vectra S.R.L., S.C. Dip&Gip S.R.L., S.C. Morani Impex S.R.L., S.C. BUGANIS PROD S.R.L., S.C. COSTERA COLȚEI S.R.L., S.C. ALIMPEX S.R.L., S.C. RIAN CONSULT S.R.L., S.C. TINION SERV S.R.L., S.C. RALDACA S.R.L., S.C. Periada COM S.R.L., S.C. STARMOD S.R.L., S.C. Prod S.R.L., S.C. Ymilrom S.R.L., Păstrăvăria Zărnești, Sergiana Alimentary Complex).

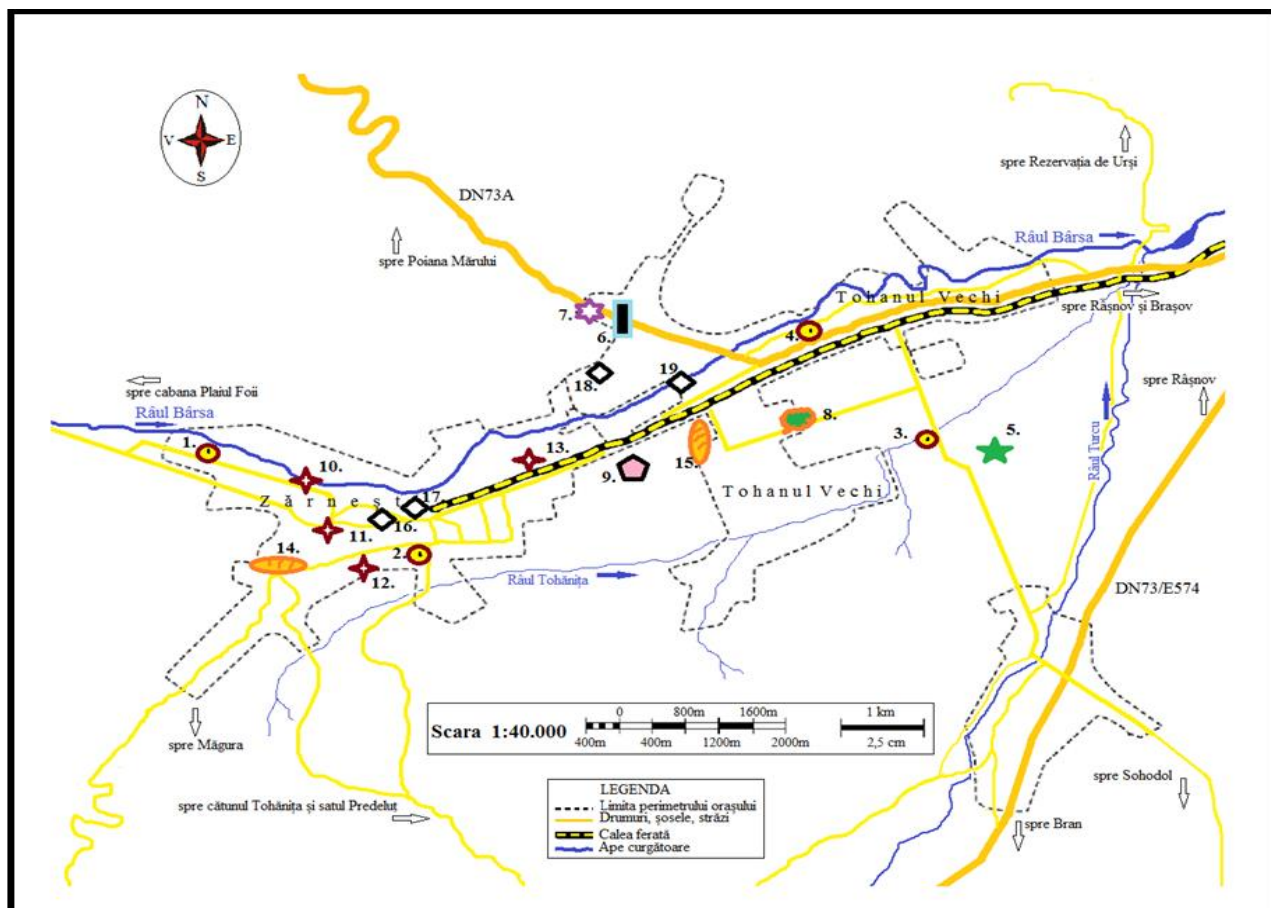


Fig. 5. Commercial companies and companies located in the perimeter of the city of Zărnești. Processed data.

Contour map source: <https://www.google.ro/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=harta%20zarnesti%20jud%20brasov>

LEGEND No.1.	4.SC Yvor Prod SRL-Ind. lemn	8.SC Studio textile- Confecții/Tricotaje	12. Complexul alimentar Sergiana	16.SC Raldaca- Produse alimentare
1.SC Ymilrom Prod-Ind. lemn	5.SC Vectra- Transport/Servicii	9.SC Periada Com-Restaurant	13.SC Oaneș ETCO-Comerț cu amănunt	17.SC Star Mond- Produse alimente
2.SC Alabastru SRL-Ind. lemn	6.SC Morani Impex- Apă/Canal	10.SC Peștera Colțea-Comerț amănunt	14.SC Buganis Prod-Panificație	18.SC Star Mond- Produse alimente
3.SC Dip&Gip SRL-Ind. lemn	7.SC Adciel SRL- Service auto	11.SC Păstrăvăria Zărnești	15.SC Tinion Serv-Depozit Brutărie	19.SC Alimpex- Produse alimentare

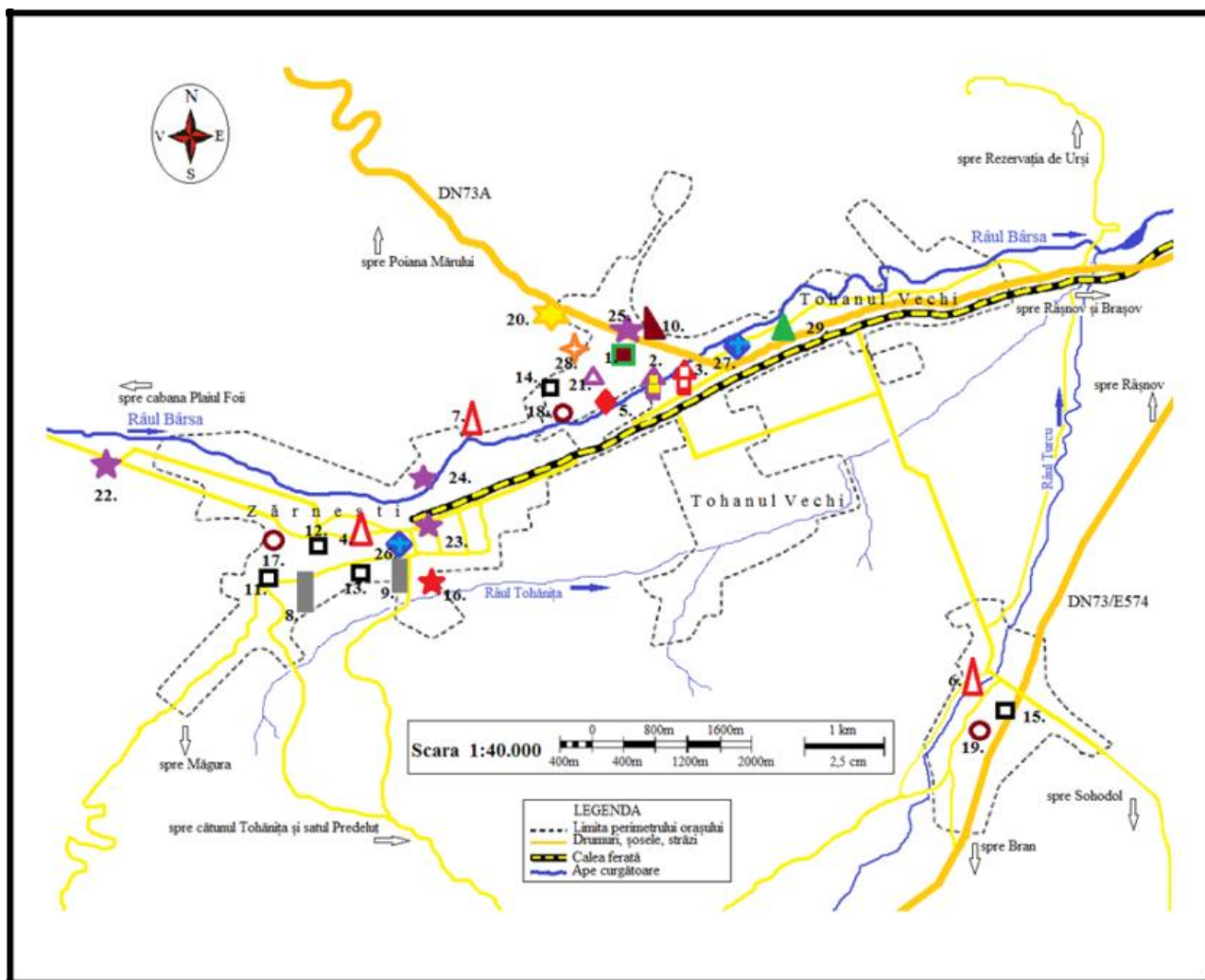


Fig.6. Units providing services for the population of Zărnești. Processed map.

Contour map source:

<https://www.google.ro/webhp?sourceid=chrome-instant&ion=1&espv=2&ie=UTF-8#q=harta%20zarnești%20jud%20brasov>

LEGEND No.	5.Le Fru	10.Hotel	15.Barul din Tohanul	20.PECQ	25.Spălătoria
2.	Marin-Market	Transilvania	Nou	Rompetrol-Partner	Auto Adciel
1.Piața de Legume-Fructe	6.Complex Comercial Tohanul Nou	11.Internet Cafe	16.SC D.Felice Sty-Sal.înfrumusețare	21.SC Tur Taxi SRL	26.RCS-RDS, DIGI, Net
2.Lidl Discount SRL	7.Complex Alim. Tohan Blocuri	12.Barul „Modern,,	17.Frizerie - str. Ion Meșianu 55	22.Spălătorie Auto	27.RCS-RDS ZarneștiTV.
3.Lidl 1 Recenzie	8.Pizzeria Caraiman 1, str. Florilor	13.Barul „Disco Olivia,,	18.Frizerie - Tohan Blocuri	23.Spălătorie Auto str. I.Meșianu 117	28.Arsis Trading-Vodafone
4.Complex Alimentar Sergiana ProdimeX	9.Pizzeria Caraiman 2, str. Zorilor	14.Barul „, Blocuri Tohan	19.Frizerie/Coafură - Tohanul Nou	24.Spălătorie Auto str. 13 Decembrie	29.Germanos-Dealer GSM

Table 1. The number of registered (existing) enterprises/economic agents in the administrative territory of the city of Zărnești, in the period 2010-2022.01.01

Numărul întreprinderilor / agenților economici înregistrați (existenți)	Anul 2010	Anul 2018, înainte de perioada COVID-19	Anul 2022.01.01, după perioada COVID-19
	625	857	921

Source: [15]

Comparing the figures of 2010 with those existing in 2018, (before the COVID-19 pandemic), we notice an increase in the number of existing economic agents by 232 units (in 9 years, before the pandemic, the number of economic agents, increasing on average by 25, 77 units/year). During the pandemic period and after it (2019-2022.01.01), there is an increase in the number of existing economic agents by only 64 units (thus, in 3 years, the number of existing economic agents, they registered an increase on average by only 21 .33 units/year during the pandemic).

Table 2. The number of registered (existing) enterprises/economic agents, in the administrative territory of the city of Zărnești, as well as the bankrupt ones

Years	Number of registered economic agents (existing)	Number of economic agents withdrawn from the register/(bankruptcy)
2010	625	25
2011	650	26
2012	684	29
2013	711	40
2014	745	47
2015	800	44
2016	829	46
2017	845	46
2018	857	53
2019	877	45
2020	895	52
2021	921	53

Source: [15].

If we compare the year 2010 with the year 2021, we will notice that the number of registered/existing economic agents has increased from 625 to 921 (by almost 300 units). In the same period, it can be seen that the percentage of bankrupt companies, reported for each individual year, remained somewhat constant, both before the COVID 19 pandemic and after this pandemic.

Table 3. List of newly registered economic agents in the city of Strășeni, in the period 1992-2015

Reference year	Number of registered companies per year	Number of liquidated companies per year
2015	30	0
2014	41	1
2013	47	4
2012	40	4
2011	58	10
2010	35	12
2009	38	8
2008	54	6
2007	62	11
2006	56	13
2005	46	4
2004	36	8
2003	35	3
2002	41	7
2001	21	7
2000	32	8
1999	42	15
1998	77	20
1997	85	18
1996	123	23
1995	132	25
1994	74	14
1993	81	14
1992	96	24
-	Total 1382 Companies	Of which 322 Liquidated

Source: [19]

If during the years 1992-1993, the number of liquidated companies represented a percentage of 20-25%, of the number of companies existing in those years, we notice that, after 2012, the percentage of bankrupt companies began to decrease, even reducing to the value zero in 2015. Below, several companies registered in the city of Strășeni are shown.

Table 4. Important companies, registered in the municipality of Strășeni

No.crt.	Companies from Strășeni
1	Cooperative Public Food Cooperative Enterprise URECOOP Strășeni
2	State Enterprise Silvio-Cinegetic Strășeni
3	Municipal Enterprise Directorate of Production for Communal Household and Housing Or. STRASENI
4	Strășeni District Dental Center Municipal Enterprise
5	Association of Foreign Exchange Houses PARALUTA
6	SRL Lukoil Straseni
7	Cooperative Purchase, Production and Trade Enterprise Coopcolprod of URECOOP from Strășeni
8	AGROSTOC entrepreneur cooperative
9	SEBOSERV agricultural service entrepreneur cooperative
10	The PANIFCOOP bakery cooperative of URECOOP from Strășeni
11	Consumer cooperative from Strășeni
12	The refrigeration cooperative enterprise "Frigocoop" from Strășeni a Moldcoop
13	"Pinguinul" Energy and Electrification Technical Production Cooperative
14	Union of Consumer Cooperatives URECOOP Straseni
15	Organization of car filling station tenants No. 131
16	SA Construction materials factory from Strășeni
17	SA Agrotehnica
18	SA Bicon
19	SA Tipografia from Strășeni
20	SA Agromontaj-Strășeni

Source: [14].

Currently, more than 2780 economic agents are active in the municipality of Strășeni. Among them, a number of 1590 are peasant households, and 305 are enterprises with legal personality.

Conclusions and recommendations:

Strategic city development plans do not fully reflect the requirements of sustainable development;

□ Both cities (Zărnești and Strășeni are part of the ranks of small and medium-sized cities) [2],[3], have a series of common but also distinct features in the geo-economic evolution in the current transition period that both Romanian states are going through;

□ From the above calculations, it appears that the economic situation of the city of Zărnești did not suffer much during the COVID-19 Pandemic or after that period, because the state policy in Romania granted companies certain financial facilities, through Programs European-P.N.R.R. (National Recovery and Resilience Plan), or other funds, from other Programs from the European Union, or money from the Romanian state.

□ Following the discussions held with the representatives of the Strășeni City Hall (who at the moment, for certain objective reasons, could not provide me with concrete data in writing), it appears that

there were a number of companies registered in the database of the City Hall, which suffered both during the pandemic and afterwards, because the state policy in the Republic of Moldova did not support the companies, due to lack of funds, leaving them at the will of fate, to manage on their own, each as they saw fit.

□ the transition to the market economy marked the economic evolution of both countries, in the sense of slow economic growth, or even stagnation;

□ several economic indicators in both countries have an involution, some even very pronounced, which will determine the economic insecurity of the cities studied;

□ serious problem is the lack of market, low productivity due to outdated technology, lack of labor force due to demographic aging, lack of well-paid jobs that accentuate the seriousness of the employment problem. [4].

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