

DYNAMICS OF THE FUNCTIONAL PROFILE OF THE URBAN-RURAL INTERFACE OF TÂRGOVIȘTE

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Abstract. Economic restructuring of central places is a complex process, which has to take into account the emerging rural surroundings as well, in the sense that these have to assume a part of the economic activities pertaining to the secondary sector. The government policy of supporting the entrepreneurial sector, which is in force since the year 2000, has rapidly entailed desirable effects: a boost of the national business environment and a better dynamics of the small and medium-sized enterprises. In this context, we have selected, processed and analyzed the following statistical information: number of companies, number of employees, turnover and profit. This was done on spheres of activity (according to the National Classification of Economic Activities), but also at the level of Târgoviște and its first ring of settlements. By processing these primary indicators for the mentioned administrative units, we were able to compute and establish the distribution of the functional diversity index. This expresses, on the one hand, the diversity of the fields of activity and the economic profile of an area, and on the other hand, analyzed from a temporal perspective, it shows to what extent the urban-rural interface has taken over the ultra-specialized labor force of Târgoviște.

Key words: functional diversity, central place, emerging territorial system, economic restructuring

1. Introduction

The spatial development of actual cities implies the integration in the strategies, policies, programs and action models of the adjacent rural space (Iaquinta and Drescher, 2000; Dahiya, 2003; Hammer *et al.*, 2004; Humeau *et al.*, 2010; Ravetz *et al.*, 2010; Bittner and Sofer, 2013). From this perspective, the strategic priorities of spatial development take into account the complex improvement of the territory

(Alpopi, 2007; Petrișor, 2010; Furdui *et al.*, 2011; Peptenatu *et al.*, 2012). The urban-rural interactions are defined as trans-spatial connections (like flows of people, commodities, money, information and waste) and as ties among the various economic sectors (Couch *et al.*, 2007; Leontidou *et al.*, 2007; Soini *et al.*, 2012). These relations have intensified throughout Europe in terms of commuter flows, leisure activities, the migration of

urban population to countryside, the location of the functions and activities pertaining to the urban sector to the rural environment etc. The urban influence on rural areas has grown (LaGro Jr., 1994; Allen, 2003; Nuissl and Rink, 2005; Pichler-Milanovič *et al.*, 2007; Makita *et al.*, 2010; Vânau, 2011). Urban-rural ties are important for reaching a balanced economic development and for reducing the vulnerability of rural regions. Their influence is highest in the urban-rural interface (Madaleno and Gurovich, 2004; Council of Europe, 2006; Azócar *et al.*, 2007; Council of Europe, 2012).

In this respect, we intended to see to what extent the economic restructuring of Târgoviște influences the dynamics of the functional profile of the rural settlements lying in its proximity. Starting from this premise, our intention was not to identify the functional and relational mechanisms operating between the two environments (urban and rural), but to establish the magnitude or the intensity of the relationships.

The study area corresponds to the urban-rural interface of Târgoviște. This is the space lying beyond its administrative borders, a component of the urban influence area, which records the highest dynamics of socio-economic activities (Kalantaridis, 2010; Pintilii *et al.*, 2012; Porta *et al.*, 2013). Urban-rural interface ensures unity of different areas (rural-urban) and contributes to the genesis of new flows imposed by fixing ability of increasingly diversified activities (Ianoș, 2004; Vânău, 2011). For Târgoviște, the urban-rural interface is made up of the first ring of rural settlements (Aninoasa, Răzvad, Ulmi, Dragomirești, Mănești, Șotânga). In this area, the connections and the flows of matter and information from and to the urban settlement are the

most intense. By comparison, the influence area of Târgoviște, as a complementary territorial-functional unit, represents a resultant of the cumulated manifestation, territorially speaking, of all types of influence (demographic, economic, and cultural). It is defined as *the territory surrounding a city, in which the city determines obvious alterations from the economic, demographic and cultural points of view, from where is recruited the labor force and which is supplied by the city* (Negoescu, 1998). From the territorial standpoint, the influence area of Târgoviște is larger than the urban-rural interface and has a lobate shape, because of the main transportation routes and especially because of the roads (DN71, DN72 and DN72A) (Fig. 1).

The social-economic situation of Târgoviște prior to the year 2000. Prior to 1950, even if oil exploitation was becoming more and more important for the industrial sector (UPET SA Company was established in 1872), trade continued to be the main function of the city.

After 1950, the share of industry in the economic profile of the city became increasingly important. This field of activity developed and diversified simultaneously with the general social-economic advancement of the settlement. As a consequence, new industrial branches came into existence (chemical industry, food industry), but the city's maximum development period was 1968-1980 and it corresponded to the emergence of industrial plants on the southwestern site of the city. The industrial boom, which exceeded the local resources potential and the labor force demand, cumulated with a specific demographic policy adopted during the communist regime, has determined an unprecedented population increase rate.

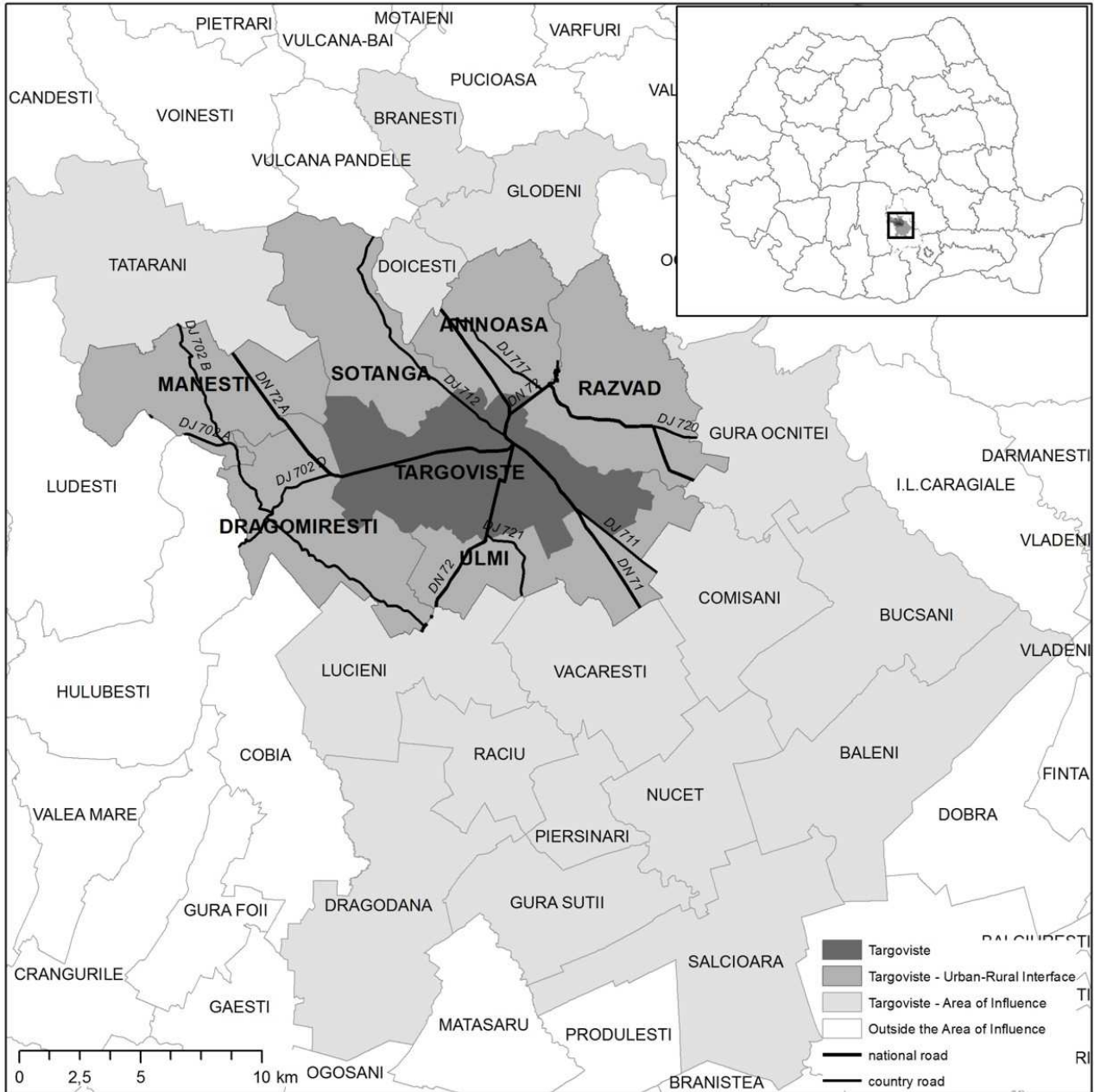


Fig. 1. The influence area of Târgoviște (according to Negoescu, 1998) and the urban-rural interface corresponding to the first settlement ring

In the late 1980s, the southwestern industrial site concentrated more than 75% of the industrial activities of Târgoviște, and it had a mixed character. Of the industries present here, we can mention the iron-and-steel industry - Oțelinox special steel combine; the machine-building industry - Saro Lathe Company; the electrotechnical industry - Romlux Company; and the chemical industry - Victoria Company.

In early 1990, the economy of Târgoviște was dominated by industry (which concentrated more than 75% of the total employees). This was characterized by a high share of large enterprises (with more than 1000 employees) and was dominated by ferrous metallurgy.

The transition from the planned and command economy, in which the marketplaces were established through

political agreements (the case of the countries led by totalitarian regimes), to the free market economy, *is a very complex and conflicting process. This is because of the novelty of the difficulties encountered in the absence of appropriate legislation, the unstable behavior of the economic and social actors, and the indecision of political factors* (Ianoș, 2004). The subsequent evolution of Târgoviște's economy meant a considerable reduction of industrial activities. The large enterprises split into numerous joint-stock companies, most of them using low technologies and having poor economic results.

Only after 1997, the slogan "we don't sell our country" was left behind, which opened the way for the privatization of the state-owned underperforming and unprofitable companies. This moment corresponded to the restructuring and, partly, to the refurbishment of the companies that could be saved, but also to the massive dismissals and the drastic reduction of the population working in the industrial sector.

After the year 2000, Romanian economy saw a revival period due to a greater financial support coming from domestic, but especially from foreign sources (Ianoș, 2004). The level of direct foreign investments in Romania for the period 2000-2007 averaged 20% per year, a much greater value in comparison with the period 1990-2000, when it ranged between 2 and 4% per year (Ivan, 2011). The economic growth started in 2000 and reached a maximum in 2007, when the GDP value (expressed by the exchange rate method) was 7856 dollars per capita. This value meant an increase by 79% in comparison with 1990.

The dynamics of the number of inhabitants mirrors accurately the economic development of Târgoviște. The restructuring of the large companies resulted in the shrinking of the number of jobs, which made a lot of people return to the rural settlements they came from during the economic boom (many of them reaching the age of retirement). At the same time, part of the population that adapted to the social-economic changes has migrated to the rural settlements bordering the city, in order to enjoy the comfort of individual dwellings.

The economic development consisting in the relocation of the central place's specific activities to its hinterland depends on how the indispensable information is passed on. This has to do with geographical proximity, which influences the propagation of innovation and good practices throughout the territory (Storper, 1995; Hallin and Malmberg, 1996; Pedersen and Pedersen, 2000; Azócar *et al.*, 2007; Peptenatu *et al.*, 2013).

An important prerequisite for entrepreneurial dynamics and economic development is the education level. The people living in the hinterland of a central place have the chance to receive a high quality education (Glaeser, 2007). In addition, after the year 2000, the urban-rural interface became extremely attractive for the Târgoviște dwellers with medium or high incomes, who could afford to take loans in very favorable conditions. The most intense residential dynamics of the urban-rural interface of Târgoviște was recorded in north and northeast (Valea Voievozilor și Răzvad).

2. Materials and methods

The most accelerated dynamics of the urban-rural interface of Târgoviște was determined by the economic growth recorded after the year 2000. In this respect, the time span we consider representative for the functional economic changes that occurred in the rural-urban interface is 2001-2010. This interval includes both the economic revival, which reached a peak in 2007, and the beginning of the economic recession, marked by 2008.

The employed indicators are grouped into two categories: primary indicators and secondary (or aggregate) indicators. The primary indicators we focused upon are the following: number of companies, number of employees, turnover and profit.

The information was collected from the existing databases for the settlements up to the rank of V, lying in the urban-rural interface of Târgoviște (villages belonging to communes and villages belonging to towns and cities) (Parlamentul României, 2001). It is important to mention that our analysis was undertaken at the level of NCEA Code (National Classification of Economic Activities) (Institutul Național de Statistică, 2007).

The dynamics of the primary indicators for the period 2001-2010 was also analyzed on large economic sectors: primary sector (agriculture and mining activities), secondary sector (producing manufactured and other processed goods) and tertiary sector (producing services). The analysis of the evolution on economic sectors allowed us to capture more detail about the functional changes at the scale of this area and to understand how the urban-rural

interface influenced the economic restructuring of Târgoviște.

The secondary indicator is the functional diversity index, computed for the same time span (2001-2010), according to the formula proposed by Peptenatu *et al.* (2013):

$$Cf = Nd \times (Nf/Ns)$$

Cf - functional diversity index, Nd - number of spheres of activity according to NCEA (National Classification of Economic Activities) (Institutul Național de Statistică, 2007), Nf - number of companies, Ns - number of employees

The functional diversity index (Cf) expresses the economic diversity of a geographical space. On the other hand, when analyzed at a temporal scale, it shows to what extent the urban-rural interface absorbed the ultra-specialized labor force existing prior to the year 2000 in Târgoviște. An economy characterized by low functional diversity indices has a few spheres of activity and a very high degree of specialization, which often implies large companies and a lot of employees. However, such a situation means a very high vulnerability, low opportunities for economic restructuring, and a low capacity for absorbing the labor force in the event that the large companies will shrink.

The values of the primary indicators and those of the functional diversity index were subsequently introduced in a GIS database and polygons were generated for every settlement of rank V. Under the circumstances, it became possible to run spatial-temporal analyses for the investigated phenomena. Thus, we were able to note the prevailing directions of trans-spatial flows from and to the central place (people, goods, money or information) and to assess their magnitude.

3. Results

The economic recovery recorded after the year 2000 at national level meant for this area a steady increase of the number of companies both in Târgoviște (approximately 400 companies per year) and in the surrounding territory (about 60 companies per year) (Fig. 2). By analyzing the two systems in terms of the ratio between the number of inhabitants and the number of companies, it became obvious that the most accelerated entrepreneurial dynamics was also specific for the central place. If in 2002, there were 62 inhabitants for a company (in comparison with 200 in the hinterland), by the year 2010 there were only 20 (70 in the hinterland). Although the share of the secondary sector in terms of the number of companies was greater in the urban-rural interface in comparison with Târgoviște (Fig. 3), the companies set up there were smaller, having therefore a low capacity to absorb the labor force. Until then, one could notice no relocation of the economic activities specific to the secondary sector from the city to its outskirts, as it happened with other county capitals (Peptenatu *et al.*, 2013).

The spheres of activity (according to NCEA) of the newly founded companies were not very diversified. The most attractive ones did not pertain to the secondary sector, which required production, but especially to the tertiary one. In all the settlements lying in Târgoviște hinterland, most companies dealt with retailing in general shops, where food, drinks, tobacco and non-food items were sold. Other spheres of activity specific for the urban-rural interface were the following: construction works of residential and non-residential buildings, motor vehicles maintenance and repair, recycling, and transportation.

From the spatial point of view (Fig. 2), large increases of the number of companies were recorded by the eastern, northeastern and northern parts of Târgoviște (Valea Voievozilor, Răzvad, Aninoasa, Viforâta, Ulmi, Săteni, Șotânga), due to the national road network (DN71 and DN72). Therefore, the accessibility along modern roads proved to be the best catalyst for entrepreneurial dynamics. An important part in this respect was also played by the main influence directions, namely to the north (Fieni-Pucioasa), east (Moreni, I.L.Caragiale) and southeast (Comișani-Băleni, Ilfoveni-Mircea Vodă). The rather low influence to the south, southwest and west can be explained by the low entrepreneurial dynamics, despite the modern roads that connect the city to Găești and Câmpulung.

Valea Voievozilor was the settlement with the highest economic dynamics, expressed by the largest number of companies. The nearness to the central place and the national roads 71 and 72, as well as the exclusively residential function it had prior to 1990, caught the attention of real estate agents immediately after the year 2000.

In Târgoviște hinterland, the number of employees grew continuously from 2001 (1771 people) to 2009 (when the number almost doubled, reaching 3424 people). By comparison, during the same interval the central place experienced a slight decrease, from 26433 to 25596 employees.

The economic crisis that broke in 2008 halved the number of people working in the urban-rural interface of Târgoviște. The reduction in the number of jobs was more serious than the reduction of the number of companies; practically, there was a return to the situation of 2001 (Fig. 4).

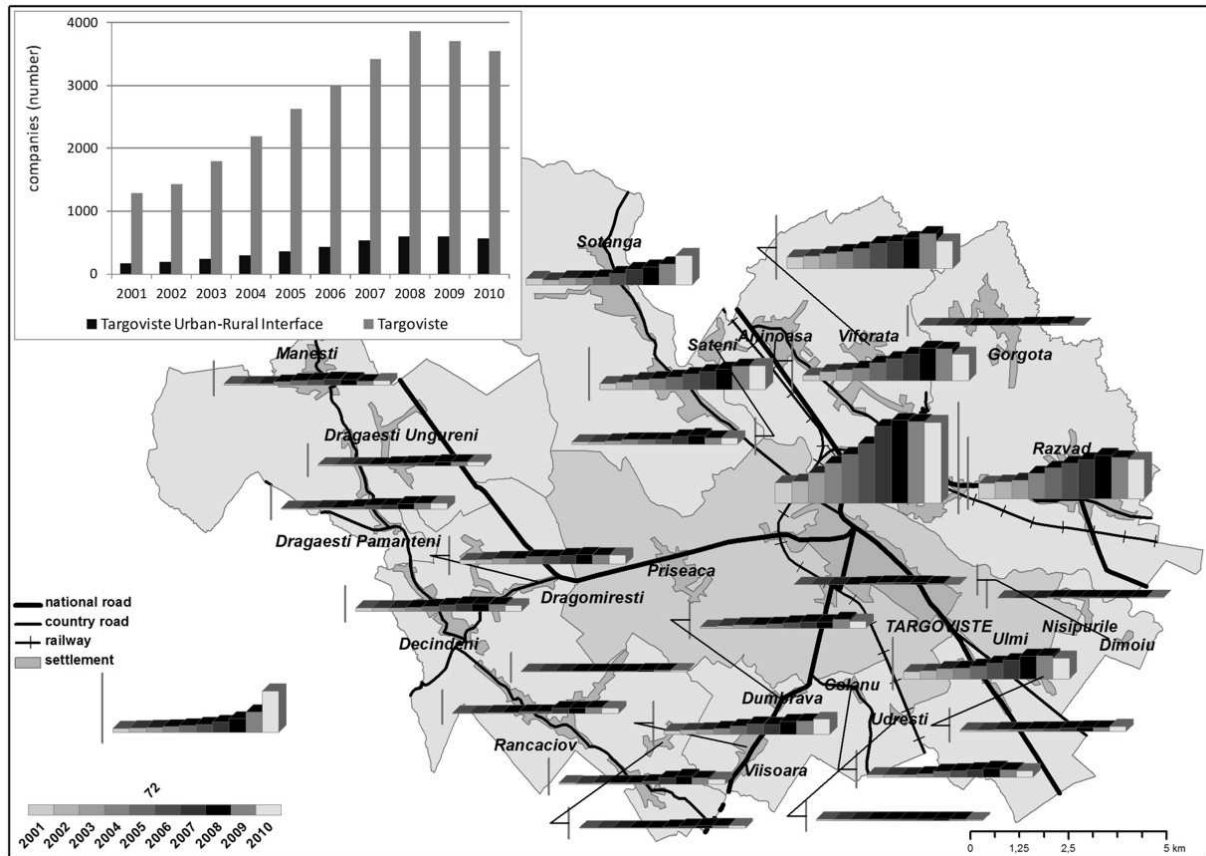


Fig. 2. Dynamics of the number of companies in the urban-rural interface of Târgoviște (2001-2010)

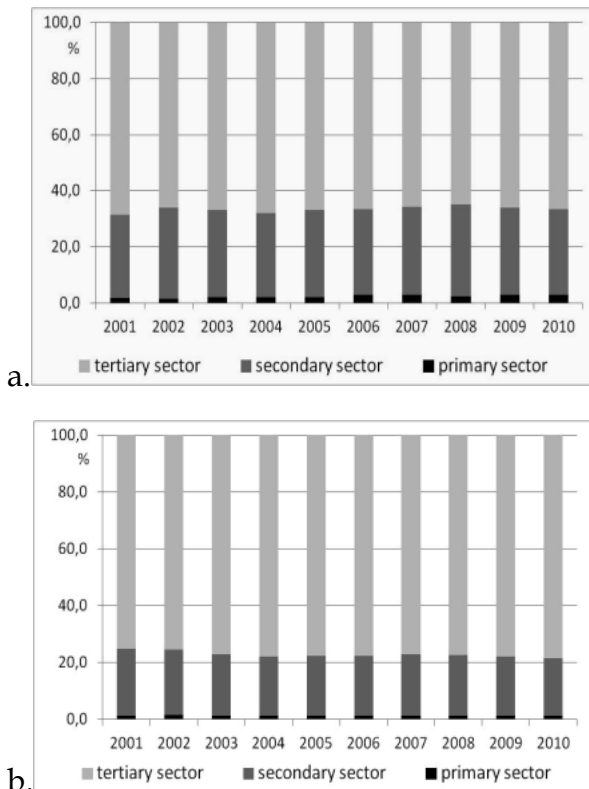


Fig. 3. The share of the number of companies by spheres of activity in the urban-rural interface of Târgoviște (a) and in Târgoviște (b)

However, by analyzing the differences between the two systems in terms of the share of working people in the total number of inhabitants, we have seen that by 2001 the percentage was 29.7% for Târgoviște and 4.9% for its hinterland, while in 2010 the share of working people dropped slightly to 28.1% and 4.5%, respectively.

As in the case of the number of companies, the analysis of the number of employees did not suggest a transfer of the secondary economic activities of the central place to its first ring of rural settlements.

Moreover, the share of people working in the tertiary sector of the urban-rural interface grew to almost 55% of the total working population (Fig. 5). In Târgoviște, however, the economic activities pertaining to the secondary sector were still prevailing (approximately 56%).

The increasing number of companies in settlements like Aninoasa, Ulmi or Valea Voievozilor required more employees (Fig. 4). In Aninoasa and Ulmi, for instance, were established and developed companies specialized in a certain field of activity (construction of residential and non-residential buildings, construction of roads and motorways, special construction works, wood harvesting and planing). These companies grew continuously and significantly until 2008, when they began to decline. This led to a dramatic drop of the number of employees at local level.

However, the Valea Voievozilor case was different, because the settlement recorded a spectacular growth of the number of employees, but on various spheres of activity. There, the economic crisis brought about labor force losses

only in construction field. After 2008, the number of employees grew, especially in those companies that specialized in architecture, retail (general shops selling non-food items) and motor vehicles maintenance or repair.

A particular situation of the urban-rural interface was encountered at Viforâta, which was in fact the secondary (northern) industrial site of Târgoviște.

The large industrial enterprises existing there were operating in the field of machine building (construction and mining equipment) and food industry (bread and meat products). After the year 2000, they underwent a restructuring process that forced them to split into small and medium-sized companies.

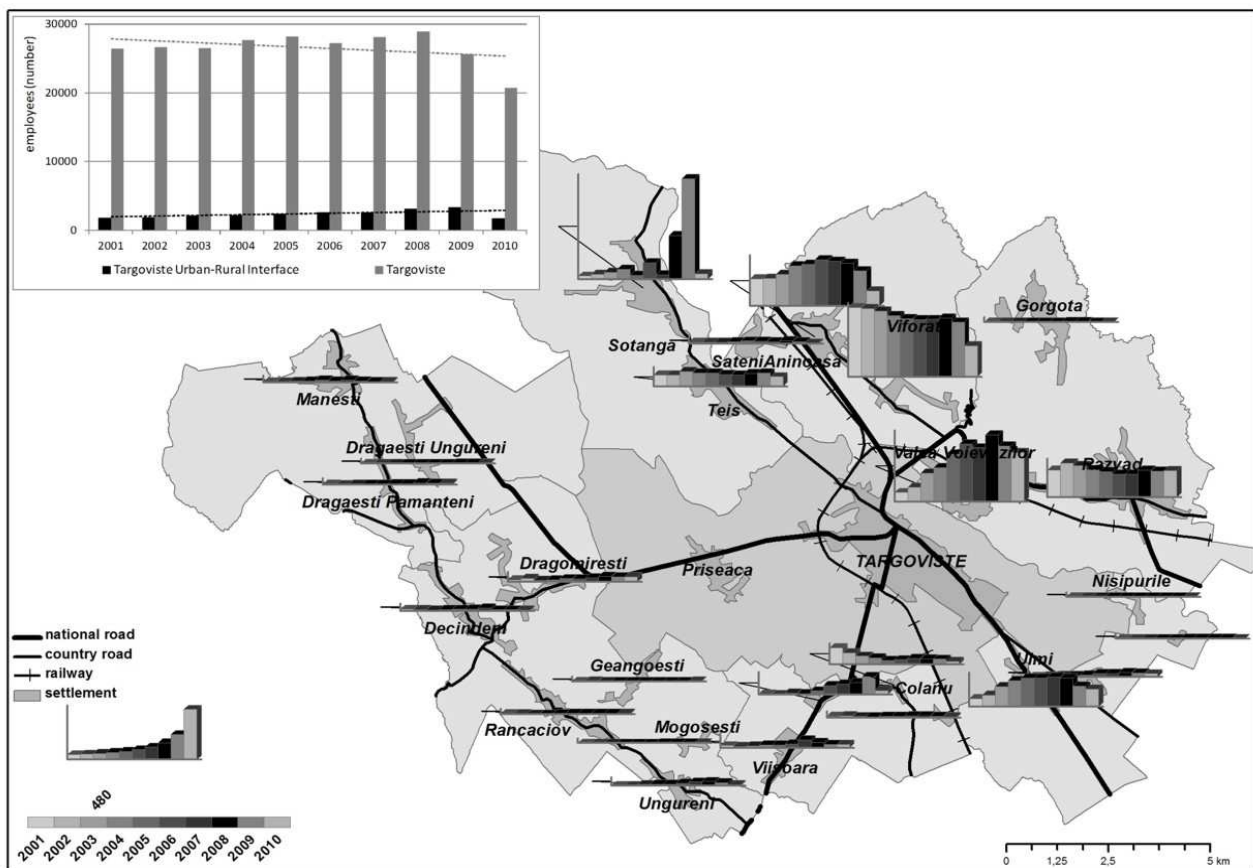


Fig. 4. The dynamics of the number of employees in the urban-rural interface of Târgoviște (2001-2010)

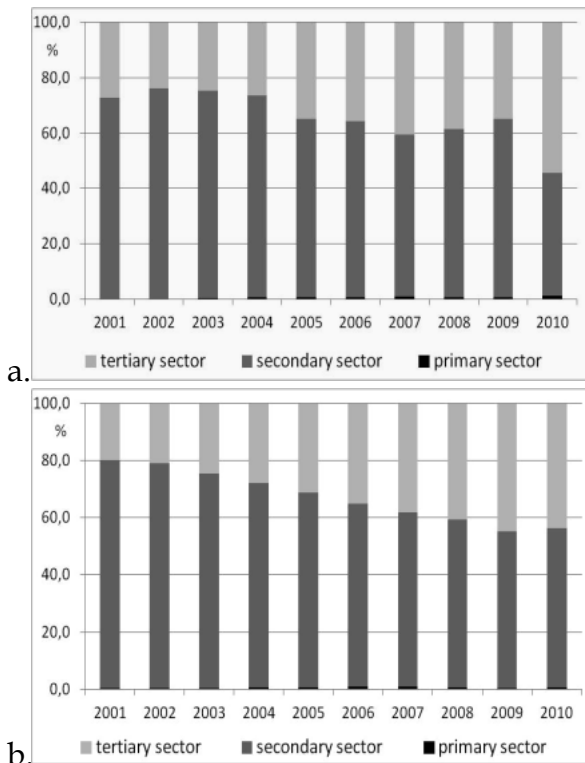


Fig. 5. The share of the number of employees by spheres of activity in the urban-rural interface of Târgoviște (a) and in Târgoviște (b)

The restructuring involved the constant reduction of the number of employees over the period 2001-2009. In 2010, however, the number of employees almost halved in comparison with 2009, because food industry disappeared almost completely.

Atypical for Târgoviște hinterland was also the case of Șotânga village (Fig. 4). The meat processing company set up there in 2008 reached a peak in 2009, but in 2010 ended its short-lived activity.

The settlements lying to the south, southwest and west proved to have a low economic activity, consisting in retail shops, selling mainly food products, drinks and tobacco.

The government policy of supporting the entrepreneurial sector enforced in 2000 boosted rapidly the business

environment. From 2001 to 2008, when Romania began to feel the effects of global economic recession, turnover and profit grew continuously both in Târgoviște and in the settlements that make up its first belt. After 2008, the decrease of turnover and profit became serious both in the central place and in its hinterland. The situation was somehow different from the larger county capitals, where the economic recession after 2008 did not affect so harshly their surrounding territories. At Craiova, for instance, the hinterland recorded a spectacular development followed by a slight recession after 2008, unlike the central place, which developed slowly between 2001 and 2008 and had a major decline afterwards (Peptenatu et al., 2013).

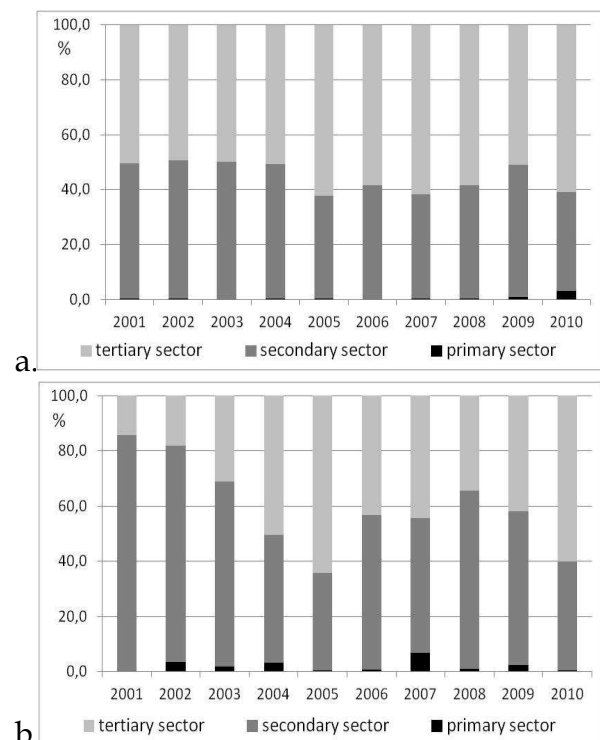


Fig. 6. The share of turnover (a) and profit (b) by spheres of activity in the urban-rural interface of Târgoviște

In the urban-rural interface of Târgoviște, the companies with the largest turnovers are engaged in activities pertaining to the tertiary

sector (Fig. 6a). Starting with 2010, the profit of these companies has become prevailing (60%) in the total profit of this area (Fig. 6b). In Târgoviște, the highest profits made prior to 2008 were coming from the secondary sector, but after 2008, the highest profits came especially from the tertiary sector (60%), although the majority of companies still activated in the manufacturing field, which proves that industry relocation still lingered (Fig. 7).

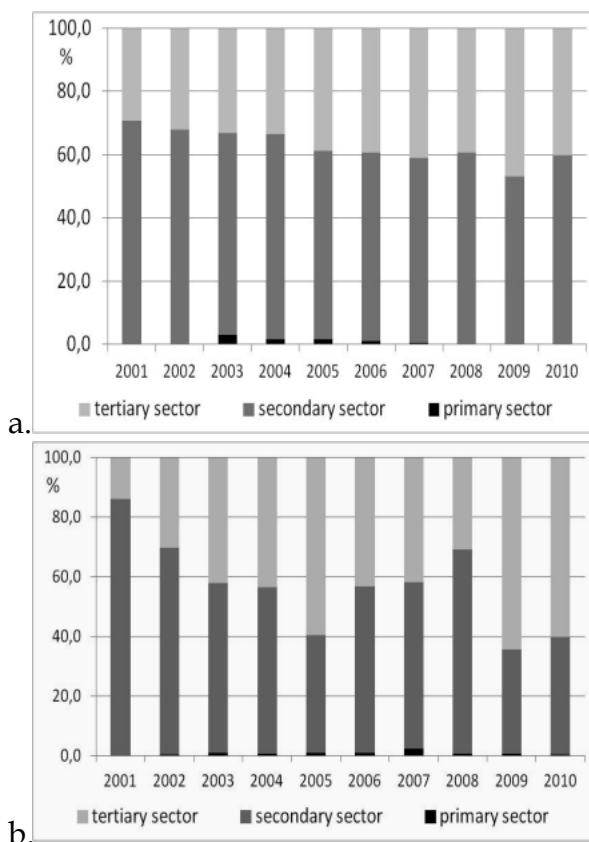


Fig. 7. The share of turnover (a) and profit (b) by spheres of activity in Târgoviște

Looking at turnover distribution (Fig. 8), one may observe that this indicator recorded significant increases to the northeast, north and east of Târgoviște hinterland (Valea Voievozilor, Răzvad, Ulmi, Viforâta, Aninoasa). Of the mentioned settlements, only Valea Voievozilor made profits from companies engaged in various fields of activity. The highest turnovers and profits were made

by the companies dealing with motor vehicles maintenance and repair, mediation in the sales of fuel, ore, metal and chemical products for industry, retail sales in general shops specialized mostly in non-food items, or the companies involved in architecture design.

The other settlements recorded significant increases of turnover or profit from a narrow range of activities. Each of them sheltered companies engaged in rather similar fields.

Such was the case of Aninoasa, where the highest turnovers and profits came from the construction field, Viforâta, with motor vehicles maintenance and repair companies and retail shops for auto parts and accessories, Teiș, with woodcutting and planing companies, and Răzvad, with general retail shops selling mainly food items, drinks and tobacco.

The “specialization” of the economies of the settlements lying in the urban-rural interface, expressed in setting up companies engaged in similar or rather close fields, is mirrored by the values of the functional diversity index. For this reason, settlements like Ulmi, Teiș, Aninoasa, Viforâta or Șotânga, having large numbers of companies and employees, have recorded low values of functional diversity index (Fig. 9).

An economy characterized by low indices of functional diversity is one with a few spheres of activity, with a high degree of specialization, and in which are involved a lot of employers (large enterprises). This situation means, however, a very high vulnerability, low possibilities for economic restructuring, and the reduction of labor force absorption in the event that the large company will restrict its activity.

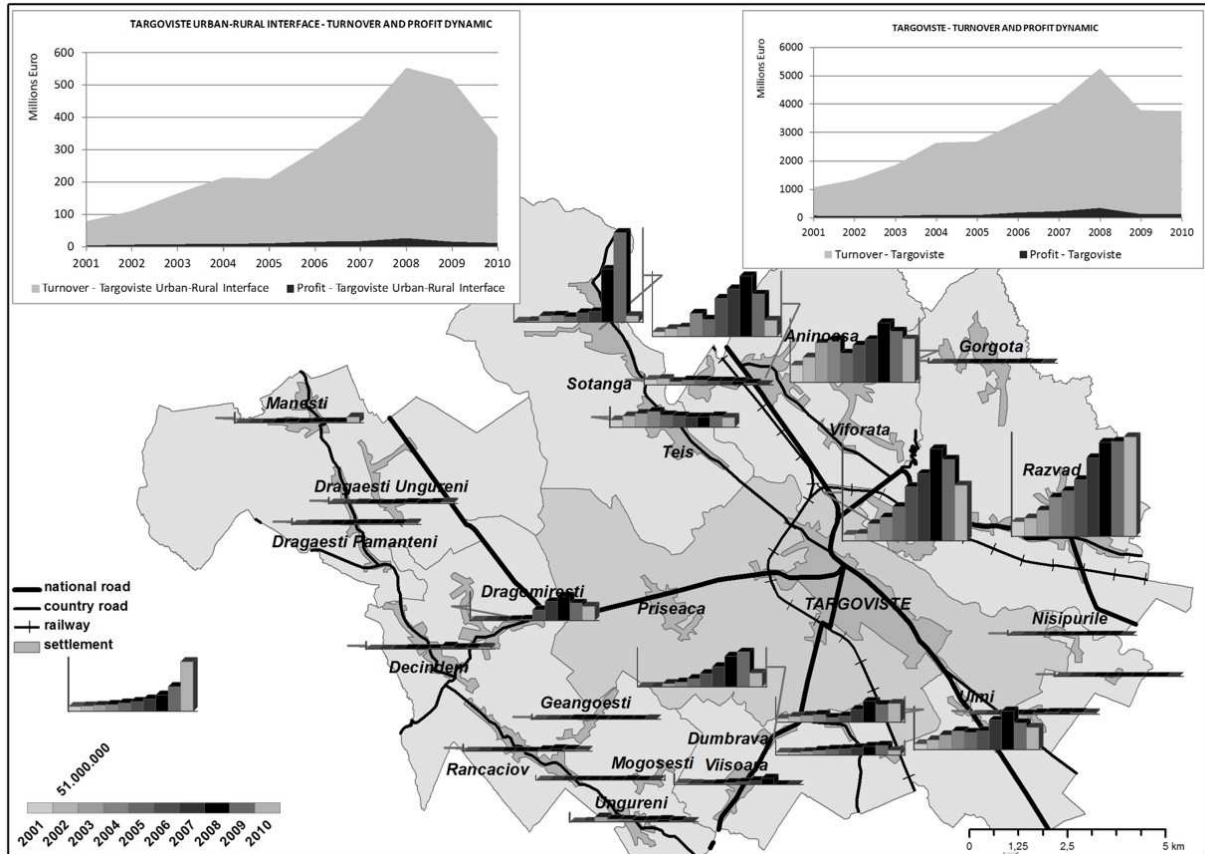


Fig. 8. The dynamics of turnover in the urban-rural interface of Târgoviște (2001-2010)

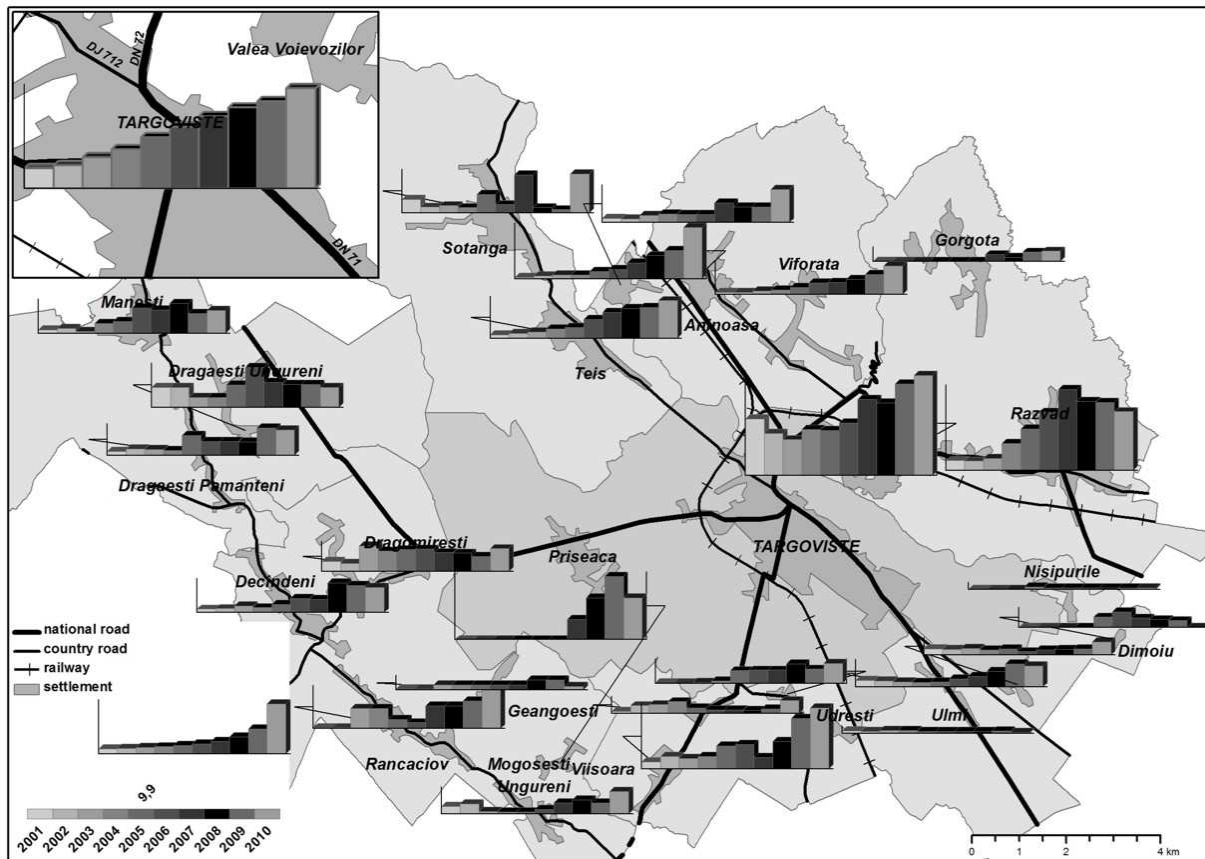


Fig. 9. Dynamics of functional diversity in the urban-rural interface of Târgoviște (2001-2010)

4. Conclusions

The government policy of supporting the entrepreneurial sector enforced in 2000 boosted the national business environment and encouraged especially the small and medium-sized companies (SAR, 2012). The big cities tried to restructure their large enterprises either by closing them down (because of their unprofitability) or by splitting them into several medium-sized companies. At the same time, efforts were made to relocate the economic activities pertaining to the secondary sector especially to the first ring of settlements. From 2001 to 2008, when economic recession became a reality in Romania as well, the number of companies, the number of employees, turnover and profit increased at a steady rate.

The relocation of the economic activities from Târgoviște to its hinterland was not possible, as it happened in the big cities (Peptenatu *et al.*, 2013). The share of the urban population working in the tertiary sector grew between 2001 and 2010 reaching about 55% of the total working population. At present, the economic activities pertaining to the secondary sector are still prevailing. Târgoviște shelters large companies, with many employees, such as the Special Steel Combine and Oțelinox, the latter being taken over by SC Mechel East Europe Metallurgical Division SRL.

Most of the settlements that make up the urban-rural interface of Târgoviște are characterized by a low entrepreneurial dynamics, while the number of companies and employees continues to be small.

The situation of Valea Voievozilor is different, because the settlement has recorded a spectacular increase of the number of employees working in various

fields of activity. Consequently, it is the most stable from the economic point of view. The recession that broke in 2008 has proved that diversification makes the economy less vulnerable. Therefore, Valea Voievozilor is the only settlement of Târgoviște hinterland, which attracted some of the specific activities of the central place.

The good accessibility provided by modern roads is the best catalyst for economic development. An important part in this respect is also played by the main influence directions of Târgoviște, which point to the north (Fieni-Pucioasa), east (Moreni, I.L.Caragiale) and southeast (Comișani-Băleni, Ilfoveni-Mircea Vodă). The tendency of the cities that are also county capitals is to develop prevalently the tertiary sector activities. At present, although most of the companies in Târgoviște belong to the tertiary sector, the largest number of employees is found in the secondary sector. In 2010, only in the field of "production of ferrous ores and ferroalloys" (NCEA code 2410) worked about 20% of the total number of employees of Târgoviște. According to SAR, this sphere of activity will continue to be the most affected by economic crisis. The urban-rural interface is not prepared to assume the secondary sector activities, which are still dominant in the central place. Under the circumstances, the economic boost of Târgoviște hinterland through national, regional or community-based policies, aimed at supporting the entrepreneurial sector, must become a priority.

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