

# THE DYNAMICS OF THE INDUSTRIAL UNITS WITHIN THE BUCHAREST METROPOLITAN AREA

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**La dynamique des unités industrielles dans l'Espace Métropolitain de Bucarest.** L'article présent fait référence aux principales activités industrielles métropolitaines bucarestoises avec leurs spécialisations et dynamique, ainsi qu'au poids des unités de production dans l'ensemble des unités économiques de cet espace.

Le développement de nouvelles activités industrielles et la compétitivité en croissance des unités de production ont déterminé un progrès important pour les secteurs de l'industrie orientée vers la fabrication des équipements électriques et électroniques, pièces détachées pour automobiles, confections et textiles, matériaux de constructions, meubles en bois, enveloppes ainsi que produits chimiques. De plus, la croissance de la productivité et les nouveaux emplois ont contribué à l'amélioration du climat économique et social des zones où ces activités se sont développées.

Du point de vue de la répartition dans l'espace, un processus de croissance des poids détenus par les activités industrielles dans l'ensemble des activités économiques a lieu dans les villes et les communes situées autour de la capitale, ainsi qu'une réduction de ce même type d'activités dans les zones périphériques de Bucarest. En même temps, le nombre des unités industrielles situées au nord et au nord-ouest de l'Espace Métropolitain de Bucarest est en croissance, phénomène qui démontre une localisation préférentielle sur ces axes.

**Mots-clés :** Espace Métropolitain de Bucarest, dynamique industrielle, spécialisation industrielle

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## **Dynamic of the economic units between the 1990 – 2005 – premises for encouraging the metropolitan industrial activities after 2005**

The economic dynamic from the last fifteen years has determined a series of changes in the structure of the economic units, both from a numeric point of view but also in the types of activity. The Metropolitan Area of Bucharest is among the areas that were affected by the economic mutations that took place in the last years and its analysis has an important role due to the place it holds in the national hierarchy. The metropolis Bucharest main converging centre for the mass, energy, information and investments fluxes, acts like an impulse emitter for the territory around it, namely the Bucharest metropolitan area. In order to

receive these impulses a series of conditions must be met depending on the data being transmitted: supply, manufacturing, industrialization, leisure time, demographic potential etc.

The progressive numerical analysis of the economic units from the Bucharest Metropolitan Area was realised between the 1990 and 2005 at the level of the 103 administrative units that make up the analyzed area (90 villages and 13 cities). The biggest wave for setting up economic units took place at the end of the 1990 (table no. 1). Their growth rate varied from one year to another for each of the two areas – urban and rural. In the urban Ilfov area the growth rate of the developed economic units has had significant values. Between 1992 and 2002 it varied from 89.39% (1999-2000), 54.28% (2000-2001) and 67.98% (2001-2002).

Table 1 Number of economic units in the administrative territorial units from the Bucharest metropolitan area between 2000 and 2005

Administrative territorial units	Economic units	
	2000	2005
Bufta	25	571
Chitila	14	299
Otopeni	40	627
Popești-Leordeni	24	499
Voluntari	84	1409
Bragadiru	17	262
Măgurele	10	172
Pantelimon	18	407
1 Decembrie	11	143
Afumați	19	339
Balotești	10	169
Berceni	4	33
Brănești	8	136
Cernica	2	34
Chiajna	10	190
Ciolpani	7	46
Ciorogârla	1	56
Clinceni	3	74
Corbeanca	3	58
Cornetu	5	91
Dărăști-Ilfov	2	38
Dascălu	2	26
Dobroești	4	156
Domnești	4	90
Dragomirești-Vale	2	38
Găneasa	1	20
Glina	3	72
Grădișteea	0	16
Gruiu	1	32
Jilava	20	234
Moara Vlăsiei	1	54
Mogoșoaia	9	183
Nuci	0	10
Periș	1	76
Petrăchioaia	2	23

Florești-Stoenești	9	9
Găiseni	11	15
Ghimpați	17	24
Gostinari	4	5
Grădinari	5	17
Greaca	11	18
Hotarele	26	37
Iepurești	6	9
Joița	24	41
Letca Noua	4	6
Mihai Bravu	11	19
Ogrezeni	14	30
Schitu	3	3
Singureni	8	11
Stoenești	11	18
Ulmi	6	10
Valea Dragului	13	20
Vânătorii Mici	9	12
Vărăști	11	16
Budești	41	77
Fundulea	42	86
Belciugatele	6	11
Căscioarele	6	11
Frumușani	6	19
Fundeni	12	16
Nana	5	12
Plătărești	8	11
Radovanu	18	30
Sohatu	2	8
Șoldanu	7	15
Tămădau Mare	9	11
Vasilați	4	13
Fierbinți-Târg	25	37
Brazii	2	4
Drăgoești	1	3
Dridu	17	33
Movilița	1	15

Snagov	4	79
Ștefăneștii de Jos	5	72
Tunari	2	86
Vidra	7	81
Bolintin-Vale	121	190
Mihăilești	42	107
Adunații-Copăceni	29	48
Bolintin-Deal	28	50
Bucșani	7	11
Bulbucata	2	3
Buturugeni	12	19
Călugăreni	16	22
Clejani	8	11
Colibași	6	11
Comana	17	29
Crevedia Mare	10	13

Sinești	10	11
Balta Doamnei	9	17
Gorgota	38	57
Poienarii Burchii	20	32
Bilciurești	5	12
Brezoarele	1	7
Butimanu	4	6
Ciocănești	4	5
Cojasca	4	5
Crevedia	12	24
Niculești	7	10
Poiana	6	12
Răcari	19	33
Slobozia Moară	7	9
Tărtășești	11	18
<b>TOTAL</b>	<b>1255</b>	<b>8505</b>

Source: The Romanian Chamber of Commerce and Industry

At the level of the villages from Ilfov the numeric increase between 1999 and 2000 was of almost 80% with values close to 40% in the next timeframe (2000-2001) and of 70.86% in 2001 – 2002. In Giurgiu County the cities Bolintin-Vale and Mihăilești knew important growth rates in the interval 2000 – 2001 (63.19%), with lower values in the following timeframe 11,74% (2001-2002), 29,44 % (2002-2003), 8,04% (2003-2004). The highest growth rate of the number of economic units in the rural areas of Giurgiu County was registered in 2000 – 2001: 51.72%.

In the same period of 2000-2001, the cities Budești and Fundulea registered a growth rate of the economic units of 87.5% followed by negative values between 2001 and 2002 and values close to 50% in 2002 – 2003.

In the villages from Călărași County the growth rate had high values, which oscillated around 30% in the period 1999 – 2003. A similar situation

appears in the case of the villages from Ialomița County respectively an average of 25% for the years 1999-2004.

The presence of economic units in three villages from Prahova County that constitute the delimitation of the Bucharest Metropolitan Area (Balta Doamnei, Gorgota and Poienarii Burchii) is scarce, situation similar to all localities from Dâmbovița County.

In 2005 within the Bucharest Metropolitan Area the most important number of economic units concentrated in the settlements from Ilfov County because of its proximity to the Bucharest metropolis offered multiple and various conditions for a large number of economic units locating here. These counted 4 246 economic units in the urban area and 2 755 units in the 31 villages from Ilfov.

At an urban level only Voluntari holds more than 1 000 economic units (1 409 economic units). In general, one can observe that important economic

percentages hold the newly appointed cities: Popești-Leordeni (499 economic units), Pantelimon (407 economic units), Chitila (299 economic units) or Bragadiru (262 economic units). The important local economic functions have constituted one of the initial premise on which the change of their organization form was based.

Out of the 64.88% of all economic units present in the rural area the main administrative territorial units with most then 150 economic units are: Afumați (339 economic units), Jilava (234 economic units), Chiajna (190 economic units), Mogoșoaia (183 economic units), Balotești (169 economic units) and Dobroești (156 economic units).

In the administrative territorial units from the Giurgiu County the cities Bolintin-Vale and Mihăilești are on the 14<sup>th</sup> and 21<sup>st</sup> position in the chart of the 103 administrative territorial units having 190 and respectively 107 economic units. In the rural area the following villages stand out: Bolintin-Deal (50 economic units), Adunații-Copăceni (48 economic units), Hotarele (37 economic units) and Ogrezeni (30 economic units). Values between 30 and 50 economic units are due to their vicinity to cities: Bolintin-Deal and Ogrezeni close to Bolintin-Vale, Adunații-Copăceni close to Mihăilești, Hotarele close to Budești (from Călărași County).

In the other villages from Giurgiu County this number has values between 3 and 20 economic units, lower in Comana (29 economic units), Valea Dragului (20 economic units), Buturugeni and Mihai Bravu (19 economic units each), Greaca and Stoenesti (economic units each), reaching also 3 economic units in Bulbucata and Schitu (the lasts

but ones two places in the chart of the 103 administrative territorial units).

If in the case of the urban centres of Călărași County, Fundulea and Budești the number of economic units reaches values over 80 (Fundulea - 86 economic units and Budești - 77 economic units), in the rural area only Fundeni, Șoldanu, Vasilați and Nana have more than 10 economic units (Fundeni - 16 economic units, Nana - 12 economic units).

In Dâmbovița County only Răcari (33 economic units) and Crevedia (24 economic units) stand out with a more important presence of the economic units, phenomena that can also be explained: the first case represents an urban centre and the second one due to its proximity to an attraction pole namely the city of Buftea (Ilfov County).

The administrative territorial units from Ialomița County` forming Bucharest` Metropolitan Area have on their territory a small number of economic units. Thus, the city Fierbinți-Târg has only 37 economic units, similar value as other villages from other counties: for example Hotarele (Giurgiu County). In the case of the 5 villages that make out the structure of the Bucharest metropolitan Area the same phenomena can be observed: Dridu (33 economic units) is included in the area of influence of two cities: Fierbinți – Târg and Urziceni. Other two villages have higher values then 10 economic units: Movilița (15 economic units) and Sinești (11 economic units); the other villages have on average 3 or 4 economic units.

By analyzing the average number of the economic units from each County the following results were obtained (table 2):

Table 2 The average number of the economic units for each County

Counties	Ratio economic units / administrative territorial unit	
	Cities	Villages
Ilfov	530,75	88,77
Giurgiu	148,5	18,52
Călărași	81,5	14,27
Ialomița	37	13,2
Prahova	-	35,33
Dâmbovița	-	12,82

### The percentage of industrial units from the number of economic units in 2005

The industrial units from the Bucharest Metropolitan Area represent more than 1 500 units out of a total of 9 000 economic units that activate in this area. The overall average of the percentage of the industrial units from the total number of economic units is 15.51% with slight differences in the two areas and in each County. In Ilfov County the percentage in the urban areas is of 17.90% and in the rural one is of 22.00%. Within the entire analyzed area the values fluctuated between 10%-15%-20% industrial units but didn't exceed ¼ out of the total number of economic units from Bucharest Metropolitan Area. In Giurgiu County the average percentage was of 19.02% industrial units in the urban area with lower values in the villages (15.05%). In the eastern part of the Bucharest Metropolitan Area the industrial activity within the overall economy has values lower than 15%: in Călărași County 14.39% industrial units in the urban area and 14.68% industrial units in the rural area and in Ialomița County up to 7.27% industrial units in the rural area (in Fierbinți-Târg – the only city from Ialomița County that is situated within the Bucharest Metropolitan Area – the industrial units represent 18.92%). The 3 administrative territorial units from Prahova County

contribute with 15.36% of industrial units and the ones from Dâmbovița with 10.59%.

At a more detailed analysis one can observe some administrative territorial units that register high percentage of industrial units. Thus, Nuci (Ilfov County) and Sohatu (Călărași County) had in 2005 a percentage of industrial units equal to 50%. Out of the total number of administrative territorial units with percentages higher than 25% more than half pertain to Ilfov County (table 3).

The industrial units located in the Ilfov County` administrative territorial units have different branches of activity: office and shops furniture (Nuci, Dobroești, Vidra, Domnești); plastic based products (Gruiu, Găneasa); paper and cardboard production (Gruiu, Domnești); agriculture and forestry machines and tools (Gruiu); car industry (Gruiu); distilled alcoholic beverages industry (Cernica, Petrăchioaia); miller's trade products (Petrăchioaia); footwear (Dobroești); artificial and synthetic threads and fibres (Dobroești); clothing (Dobroești); dyes, varnishes and printing ink (Vidra); fruits and vegetables preserving (Vidra); oils and refined fats (Găneasa); meat products (Găneasa).

Beside the fact that they present various branches these industrial units have a large number of employees and most of them have foreign

financial capital: for example INTERELEKTRONIC SRL (Gruiu) specialized in electronics, GEROVITAL COSMETICS SRL (Cernica), EURO

MGA PRODUCT SRL (Domnești) specialized in producing plaster based products for constructions etc.

Table 3 Administrative territorial units with more than 50% industrial units from the total economic units

Counties	Administrative territorial units	Share of industrial units (%)
Ilfov	Nuci	50
Călărași	Sohatu	50
Ilfov	Gruiu	46,88
Giurgiu	Grădinari	41,18
Ilfov	Cernica	38,24
Giurgiu	Comana	34,48
Giurgiu	Bulbucata	33,33
Giurgiu	Schitu	33,33
Călărași	Frumușani	31,58
Ilfov	Corbeanca	31,03
Ilfov	Petrăchioaia	30,43
Dâmbovița	Brezoale	28,57
Ilfov	Dobroești	27,56
Giurgiu	Mihai Bravu	26,32
Ilfov	Vidra	25,93
Ilfov	Domnești	25,56
Ilfov	Găneasa	25

In Călărași County the industrial units from Sohatu present the following activity domains: bakery and distilled alcoholic beverages, producing oils and raw fats, glass made fibres and plastic products, and in Frumușani – meat products and footwear.

In Giurgiu County as well as Dâmbovița the range of industrial domains is more limited as the general activity domains are miller's trade and distilled alcoholic beverages production: Grădinari, Comana, Bulbucata, Schitu and Mihai Bravu. Apart for these within the administrative territorial units from Giurgiu there are also other industrial branches: paper and cardboards products, furniture (Grădinari

and Comana), oils and raw fats, cocoa and chocolate products (Comana), gravel and sands extraction (Comana).

The reality is that although these administrative territorial units are among the first 20 as concerning the number of industrial units out of the total economic units in some cases the situation can be questionable when the industrial units – economic units ration is lower than 1/10:

- For example in the cases of Bulbucata and Schitu:

$$\frac{\text{Industrial units}}{\text{Economic units}} = \frac{1}{3}$$

Or

- The case of Brezoale:

$$\frac{\text{Industrial units}}{\text{Economic units}} = \frac{2}{7}.$$

In these cases we can't firmly sustain that in the named administrative territorial units the industrial function is prevailing.

### **Dynamic of the industrial units between 2005 and 2007**

Unlike the dynamic of the economic units from the Bucharest Metropolitan Area in the transition period, the industrial units haven't had such an ample evolution due to the constant affirmation of the service sector. Until 1990 commercial planning was responsible for the scarce equipment available at that time which was non-competitive and unevenly distributed within the territory, situation similar to all the Eastern European countries. The tertiary sector included public owned markets with a low ratio commerce and service per inhabitant. The quality of the available products was according to the population purchasing power constituting unique product intended for the entire population.

But, after 1990 as a result of the growing industrial restructuring process from the capital city, most industrial units that didn't follow the delocalization pattern towards the area adjacent to the city and were closed down as they were considered to be unfeasible. On the other hand the new requirements imposed by the metropolis planning facilitated the development of another type of activities, those related to services as opposed to industrial ones.

Before one can make an analysis of the industrial units dynamic between 2005 and 2007, there were individualized 5 important periods in registering the industrial units from the Bucharest

Metropolitan Area respectively: 1992-1995, 1996-2000, 2001-2002, 2003-2005 and 2006-2007 (fig. 1). This analysis shows a high number of registrations having place in the south and west of the Bucharest Metropolitan Area in 1992 – 1995 unlike the north and central part of this area where a constant dynamic took place after 2000 as well. This means that a series of industrial units that registered immediately after 1990 in the north and central part of the Bucharest Metropolitan Area were replaced with bigger more important at regional and even national level production units while the south and west of the metropolitan areas remained in economic isolation. The phenomena of differentiated investments depending on area is also present in the territorial distribution for the years 2005 and 2007 (fig. 2).

The numerical distribution of the industrial units in each administrative territorial unit for 2005 and 2007 is presented in table number 4. Calculating the industrial units' growth rate in the last two years we identified growths of more than 50% in the case of 15 administrative territorial units none of them being a spectacular one. As a general overview one can observe a growth from 0 to 1 or from 1 to 2 industrial units which doesn't reflect an image truly relevant of the recorded values (fig. 3).

15 administrative territorial units have growth rates values between 0 and 50%. They are situated in the close vicinity of the capital city and in most cases they are urban centres or register an increase of the number of industrial units starting with a minimum of 5 industrial units (for example Jilava 7,27%, Pantelimon 10,98%, Dobroești 16,28% or Crevedia 20%).

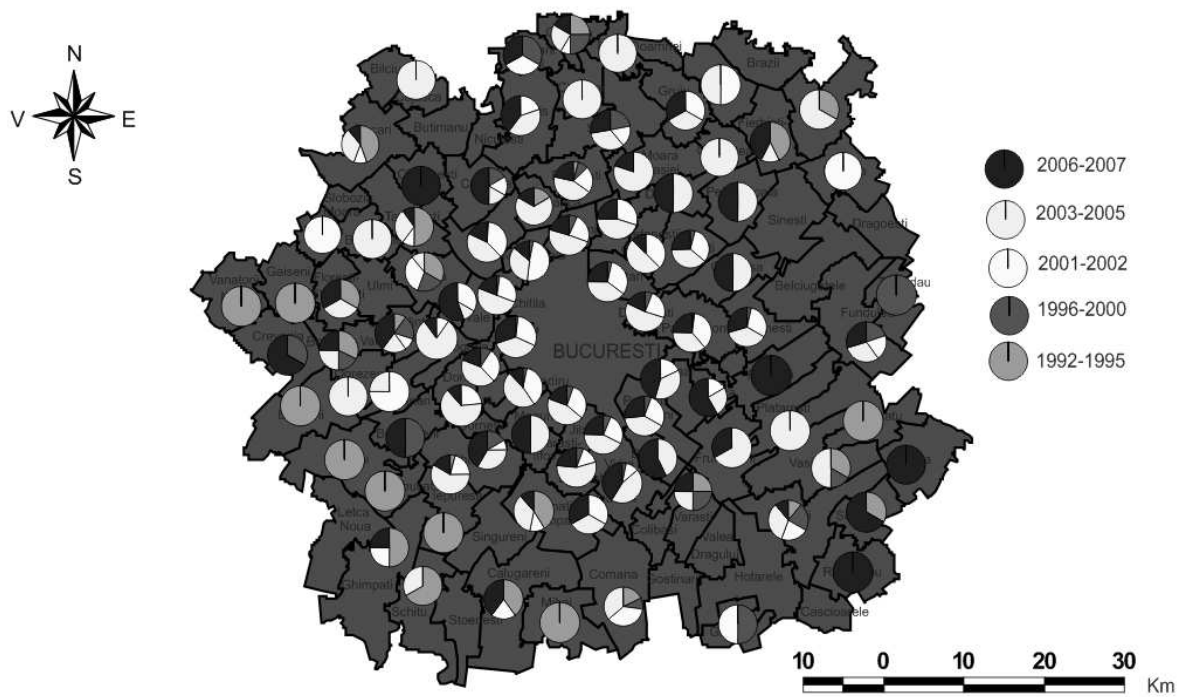


Fig. 1 Dynamics of the registration within the Bucharest Metropolitan Area (1992-2007)

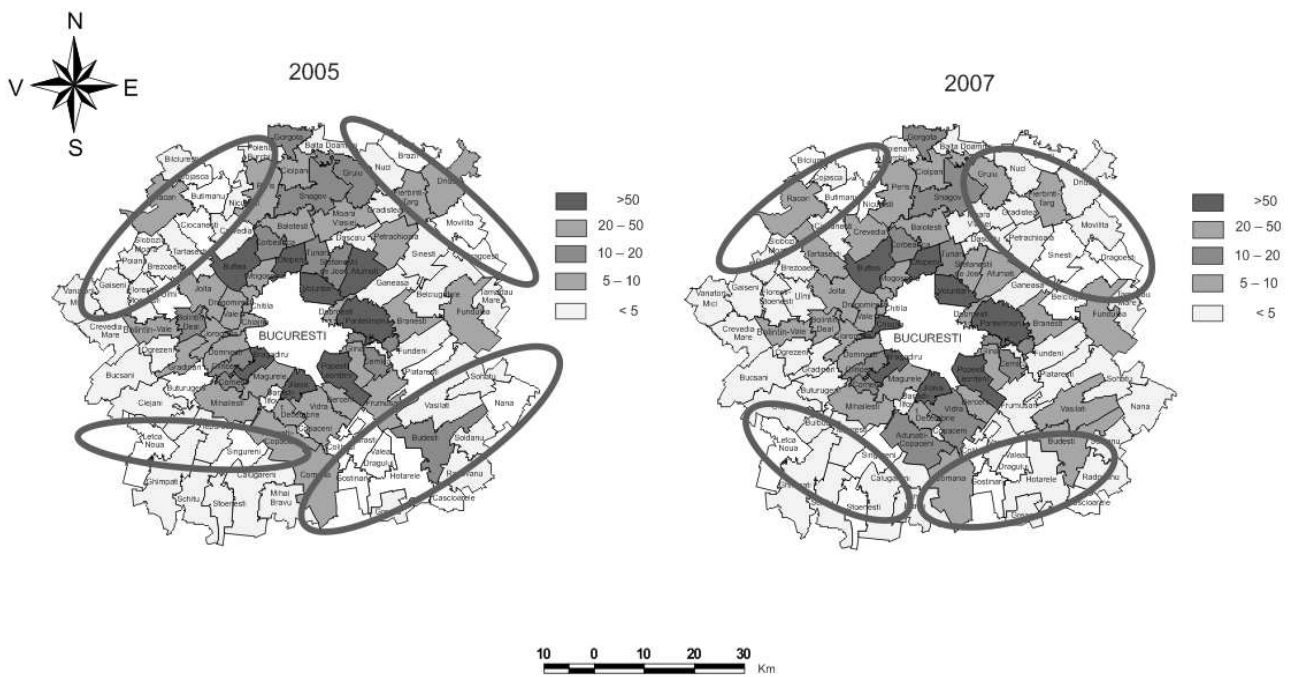


Fig. 2 Number of industrial units in the Bucharest Metropolitan Area (2005 and 2007)



Table 4 The distribution of the industrial units from the administrative territorial units from the Bucharest Metropolitan Area (2005 and 2007)

Administrative territorial units	Industrial units	
	2005	2007
1 Decembrie	27	33
Adunații-Copăceni	9	13
Afumați	52	46
Balotești	30	22
Balta Doamnei	1	1
Bilciurești	1	0
Belciugatele	1	0
Berceni	7	7
Bolintin-Deal	11	9
Bolintin-Vale	35	26
Bragadiru	62	57
Brazii	0	0
Brănești	28	27
Brezoarele	2	2
Bucșani	1	1
Budești	15	7
Bufta	107	63
Bulbucata	1	1
Butimanu	0	0
Buturugeni	0	2
Călugăreni	5	5
Căscioarele	0	0
Cernica	13	12
Chiajna	46	51
Chitila	44	40
Ciocănești	0	1
Ciolpani	11	6
Ciorogârla	7	10
Clejani	2	2
Clinceni	16	16
Cojasca	0	1
Colibași	0	0
Comana	10	8
Corbeanca	18	11
Cornetu	14	12
Glina	13	10
Gorgota	14	12
Gostinari	0	0
Grădinari	7	4
Grădiștea	2	1
Greaca	2	2
Gruiu	15	9
Hotarele	0	4
Iepurești	2	1
Jilava	55	59
Joița	8	9
Letca Nouă	0	0
Măgurele	33	35
Mihai Bravu	5	2
Mihăilești	21	23
Moara Vlăsiei	7	5
Mogoșoaia	33	29
Movilița	0	1
Nana	0	1
Niculești	1	0
Nuci	5	2
Ogrezeni	1	1
Otopeni	89	86
Pantelimon	82	91
Periș	9	10
Petrăchioaia	7	4
Plătărești	0	1
Poiana	1	1
Poienarii Burchii	5	3
Popești-Leordeni	101	100
Radovanu	1	1
Răcari	6	9
Schitu	1	3
Sinești	2	0
Singureni	0	2
Slobozia Moară	0	0
Snagov	16	16

Crevedia	5	6
Crevedia Mare	1	2
Dascălu	2	2
Dărăști-Ilfov	2	2
Dobroești	43	50
Domnești	23	21
Dragomirești-Vale	7	9
Drăgoești	0	0
Dridu	6	3
Fierbinți-Târg	7	7
Florești-Stoenești	1	2
Frumușani	6	3
Fundeni	1	1
Fundulea	8	9
Găiseni	1	1
Găneasa	5	4
Ghimpați	3	4
Sohatu	4	1
Stoenești	4	0
Șoldanu	3	3
Ștefăneștii de Jos	13	8
Tămădău Mare	2	1
Tărtășești	4	10
Tunari	20	20
Ulmi	0	0
Valea Dragului	0	0
Vasilați	3	6
Vânătorii Mici	1	1
Vărăști	0	2
Vidra	21	14
Voluntari	174	134
<b>TOTAL</b>	<b>1490</b>	<b>1355</b>

Source: The Romanian Chamber of Commerce and Industry

On the other hand a number of 31 administrative territorial units don't register any change concerning the number of the industrial production units and are in general villages situated

at the border of Ialomița County with Ilfov County and a few villages from Giurgiu and Ialomița Counties.

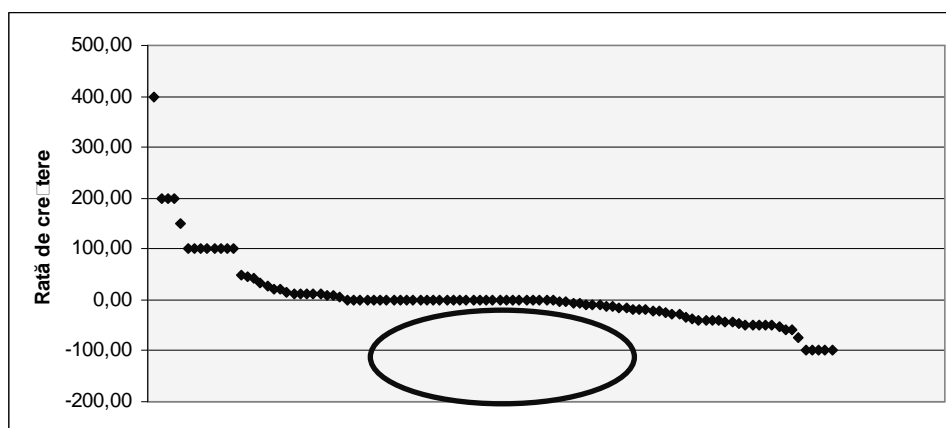


Fig. 3 The growth rate of industrial units between 2005 and 2007 in each administrative territorial units form the Bucharest metropolis

Decreases rates between 0% and 50% in the number of industrial units registered in a number of 34 administrative territorial units. Values close to

0% registered at the level rim of cities and villages around the city; this first area for sustaining the capital city is where the tertiary sector takes

considerable proportions competing with the industrial activities: (Popești-Leordeni (-0,99%), Otopeni (-3,37%), Brănești (-3,57%), Cernica (-7,69%), Bragadiru (-8,06%), Domnești (-8,70%), Voluntari (-9,06%) or Chitila (-9,09%). These are highly urbanized spaces, attractive ones, but that are starting to be influenced in the development of their economic existence by the newly received town status that naturally translates in a positive services/industry ratio. Drops close to 50% are present in Poienarii-Burchii and Gruiu (-40%) or Tămădău-Mare, Iepurești sor Grădiștea (-50%), villages still looking for their identity.

5 administrative territorial units register significant decreases that go up to 100%: Bîlcuiești, Belciugatele, Niculești, Sinești and Sohatu.

There cannot be numerous pressure factors acting upon the metropolitan industrial activity that can jeopardize their remaining on the economic market: the external competition, inflation, lack of responsibility of that managerial act due to

maintaining too long a state property or excessive trade unionism. In many cases in order to avoid the local social problems getting worse, a series of compromises are made: compensating the losses with a series of budget state subventions, tolerating some debts of these units to the state budget and social insurance, to state banks etc.

### Conclusions

The economic mutations that occurred in the last years have made radical changes in the industrial organization: methods of setting up the industrial units, public authorities' intervention policies and production methods, with direct influences on its dynamic at the level of the Bucharest Metropolitan Area.

Going from the stature of a large enterprise to a medium sized economic unit implies new locating conditions, namely modern and adapted locations situated at the crossroads of communication axis and where the administrative borders play an important role in locating the industrial activities.

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