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SERVICES RENDERED WITHIN THE FUNCTIONAL  
MACROREGION OF WARSAW

The present paper is based upon the results of a five-year study on the availability of various kinds of services within the functional macroregion of Warsaw. Results of some partial studies have already been published<sup>1/</sup>. The final report is presently in press. The studies mentioned include theoretical questions of the geography of service activities, problems of incomes and expenses of residents living in the study area, structures of employment in the service sector, as well as analyses of the degree of development of the particular spheres of service activities. A conclusion of these studies takes the form of a service-based functional typology of towns and communes of the area considered. The present paper indicates such findings of the studies performed that, in the author's opinion, are the most important.

The concept

On the basis of widely accepted conclusions of scholars studying service activities in different countries, it may be assumed that the service sector includes /works and manipulations/ performed for economic agents or private persons that do not create new material goods directly, but that serve in some way the production processes of these agents or satisfy various consumption and orderly needs of the population. The service sector there-

fore encompasses the following branches of the national economy:

1. transportation and communication;
2. distribution;
3. handicraft service;
4. housing and municipal economy;
5. finance and insurance;
6. education, science, and culture;
7. health and social care;
8. administration and the judicial system;
9. political and social organisation; and
10. other activities not mentioned before.

From the point of view of their role in the national economy, especially of their role in the creation of national income, these service branches can be classified into four spheres: A. productive services; B. market services, encompassing previously listed branches 1 to 5; C. socio-cultural services encompassing branches 6 and 7; and D. non-economic services /public services/ - branches 8 to 10. Spheres B, C, and D, constituting together the complex of consumption and order services, were subject to analysis done within the macroregion of Warsaw. The sphere of productive services was omitted in the study on the ground of an assumption that these activities do in fact constitute an integral part of production activities and that they do not have a direct influence on the quality and quantity of services rendered to the population.

### Messures

Quantitative determination of the service supply development level requires application of a variety of numerical measures. The most important

ones, especially with respect to market services, is employment. Fortunately, Polish statistical offices conduct a computerised registration of employment in the socialised sector, i.e., state - and cooperative - owned enterprises, with such a degree of branch and territorial detail that allows use of these data in the studies on the service activity system since, apart from a portion of handicraft services and numerous private retail trade, almost all of the service sector is contained within the socialised part of the economy. In respect of the value of services actually provided, only data concerning sale volumes in retail trade are fully accessible. Data concerning values of services performed by handicraft are partial /covering only socialized crafts/ or too rough in their territorial disaggregation. For other service branches there are no data available on values of services supplied. The third measure used, the number of existing service units, appeared to be significant especially with regard to sociocultural services and was used fully in the studies on the functional macroregion of Warsaw.

Absolute data used to determine the servicing potential of particular units considered /towns and communes/ do not provide any answer as to the level of service development compared to population numbers or to the level demanded or actual in various parts of the area analysed. In view of the lack of satisfactory standards to determine the levels of service availability, some relative indices must be used. To illustrate existing differences, values calculated per capita within a given territorial unit or percentage shares in various branches of

services had been used. Similar indicators were calculated also for the whole of the macroregion and for towns and communes respectively. In further work they were used for the determination of threshold values for levels of service development /and specialisation/ within particular territorial units in various kinds of services. These values /shown in Table 1/ were used for subsequent functional classification of towns and communes analysed.

#### Service equipment of the functional macroregion of Warsaw

There were 5434 thousand people employed in the service sector in Poland in 1978. Out of that number, 18.4 % worked within the functional macroregion of Warsaw, whose population accounted for 16.6 % of the country total. If, however, one disregards Warsaw from this comparison, then in the rest of the macroregion there were working 9.2 % of the persons of the country's service employment as compared to 12.2 % of its total population. This points to the fact that beyond Warsaw, the rest of the macroregion belonged to areas with less developed service activities: a mere 117 persons employed there in the service sector per 1000 inhabitants, while the country mean stood at 152 persons. In a way, such a situation can be explained by the proximity of Warsaw. More detailed analysis, however, proves this to be true for only a minor part of the macroregion.

Differences between the country and the macroregional means can also be seen in the structure of service employment. Out of the total service employ-

ment, in the whole country, 58 % worked in market services and 37 % in the socio-cultural ones. The remaining 5 % worked in public services. For the functional macroregion /without Warsaw/, the respective numbers for the first two categories were 60 % and 35 %, and, together with Warsaw, 55 % and 39 %. However, the higher employment value for market services outside Warsaw by no means indicated a higher level of development of this type of services, but only their relative dominance, resulting from sometimes glaring shortages of socio-cultural services /Table 2/.

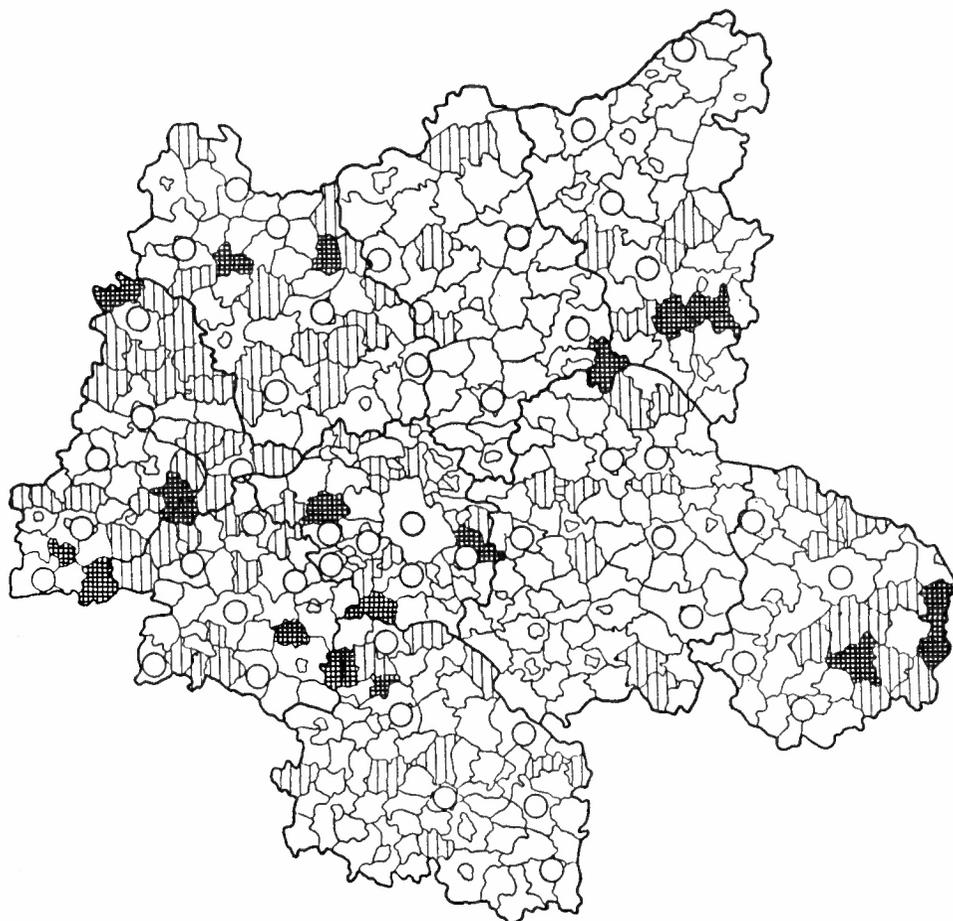
From the initial attempt to determine differences in the levels of service availability within the basic territorial units of the macroregion, based solely upon the employment structure /general employment and service employment structures/, a picture was obtained that is quite difficult to interpret. Here, differentiation did not form a coherent image, so that only a rather evident correlation between better service-equipped territorial unit classes with higher agricultural economic development areas could be traced. It is only when a broader documentary basis and a number of other data /sales volume and number, size and rank of service units/ are referred to that spatial differentiation in service equipment of towns and communes, according to service types, can be established. The procedure to determine the service-based functions of towns and communes applied was based upon the assumption that at least two index values must exceed the chosen critical threshold to qualify a territorial unit as functionally specialized.

In the case of market services, the most differentiating element, both within the set of towns and communes, was retail trade density. Towns could be classified with that respect into three categories depending on the rank of retail trade concentration in them. Thus, out of 107 towns, there were 28 classified as main retail trade concentrations /i.e., above the macro-regional average/; 23 as second rank /approximately at the macroregional average/; and as many as 56 as third rank retail trade concentrations /i.e., below the macroregional average/. A more detailed analysis of economic functions of towns allows one to conclude that the degree of retail trade concentration was significantly positively correlated with the share of industry in total employment. Besides that, the higher was the administrative rank of a town /now and in the previous administrative division/, the better was the level of retail trade development. With regard to the so called "existential services"<sup>2/</sup> and their correlation with retail trade equipment, it should be noted that only in the 11 main urban concentrations of retail trade there also occurred the main concentrations of existential services. On the other hand, the second rank concentrations of existential services correlate with 16 main, 19 second rank, and 32 third rank concentrations of retail trade, thus cutting through all the retail trade ranks of centres. Finally, third rank existential service concentrations had a significant share only among third rank retail trade concentrations /20 centers/.

As to the 311 communes, there were 101 with retail trade availability higher than the macroregional average for communes, and 56 out of that number had approximately average concentrations of existential services. There were 164 communes with about the macroregional average retail trade availability, having, in that number, 93 average and 47 poor concentrations of existential services. Finally, there were 45 communes with poor /i.e., significantly below macroregional average/ availability of retail trade, with as many as 26, out of that number, also poorly equipped with the existential services.

Main retail trade concentrations, as well as communes with better developed retail trade networks, occurred much more frequently in the Western part of the macroregion /Ciechanów, Plock, and Skierniewice voivodships/ and in the Biala Podlaska voivodship /Fig. 1/. Second rank urban concentrations of retail trade were also quite frequent in Lomza, Siedlce, Radom, and Warsaw /capital/ voivodships. Distribution of communes well equipped with retail trade was similar; therefore, a conclusion could be drawn that concentration of retail trade and existential services is positively correlated with the level of agricultural economy.

The third component of market services, i.e., transportation and communication, very rarely attains significant sizes in communes. Altogether, merely 19 communes can be treated as well or very well equipped with transportation and communication services. To the contrary, the transportation function is developed at least to an average macroregional level in almost every main and second rank



- 1 towns very good and good equipped with retail trade
- ▤ 2 communes well equipped with retail trade
- ▩ 3 communes very well equipped with retail trade

FIGURE 1 Areas of a relative surplus in the retail trade

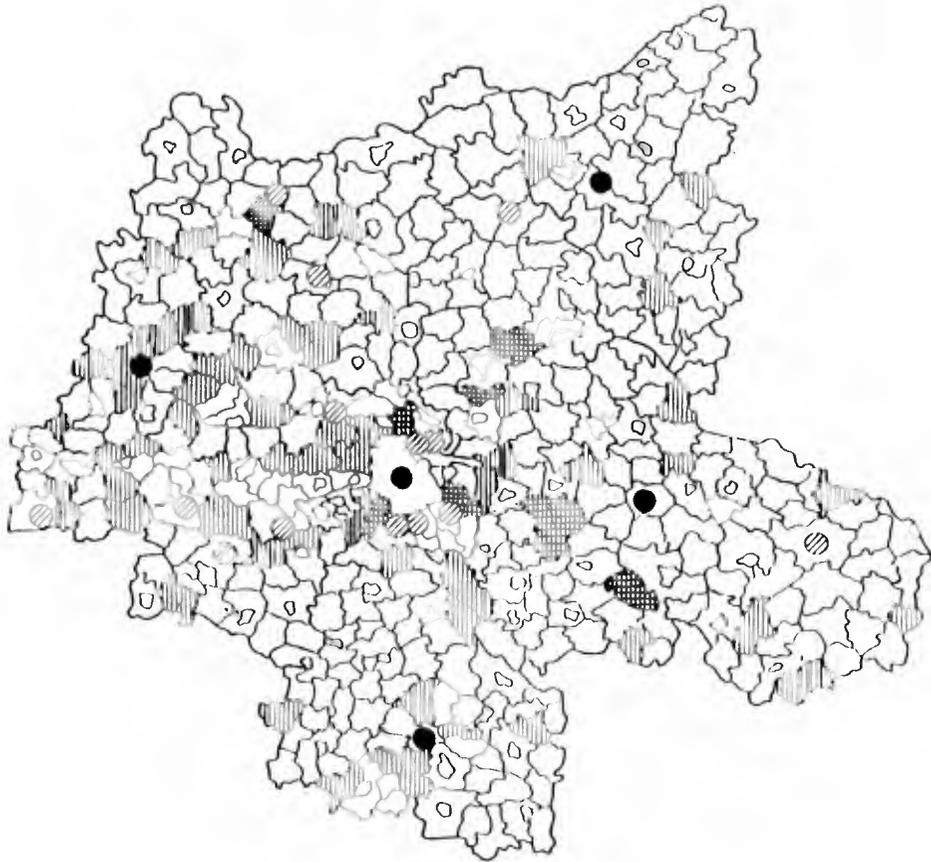
urban retail trade concentration.

Within the sphere of socio-cultural services, the most differentiating elements were science and health care. Out of 107 towns, only 75 had taken into account units of this sphere. There were 24 science centres in that number out of which 9 were first rank health care concentrations and 12 were health care concentrations with some shortages in the general practitioners' staff. Altogether in the macroregion there were 24 first rank health care concentrations and 37 with shortages of the afore mentioned type of staff. Only 14 towns were devoid of a more important health care centre. Main concentrations of socio-cultural services were located in voivodship capitals and in previous powiat capitals, so that these services were quite dispersed throughout the macroregion. A certain amount of spatial concentration of these services may be noticed only in the central part of the study area, around Warsaw.

Education was generally the main component of the sociocultural service sphere in the communes, accounting for over 70 % of employment in that sphere. Communes with domination of this service activity formed compact areas within Lomza and Ostrołęka voivodships, being almost the only type of commune represented; while in Radom and Siedlce voivodships, they constituted their majority. The second important type of commune was characterised by concentrations of health and social care services, in which specialised hospitals and social care houses were located, as well as bigger health care centres. There were altogether 62 communes of this sort in the macroregion. Cultural services appeared

on an essential scale only in 17 communes. A further 6 of them had a developed specialisation in the sports and recreation services, and another 5 in the domain of science /seats of research institutes/. The majority of communes in which people employed in education constituted less than half of the total of those employed in the socio-cultural services were located in Ciechanów, Plock, Skiernicewice, and Warsaw voivodships. In other voivodships such communes appeared only sporadically /Fig. 2/.

When formulating research assumptions for the study of the development of service activities in the macroregion of Warsaw, a hypothesis was formulated that assumed concentric zone-like differentiation of the study area. According to it, around the centre of the macroregion - that is, around Warsaw - there should exist a zone of service shortage caused by the proximity of the centre. The subsequent zone, surrounding the previous one, should display stronger development of service activities, because it should be free already from the negative influence of the proximity of the centre, but still remaining within the reach of the activating influence of the centre. This hypothesis found, however, only partial confirmation. Certainly, existence of the ~~grate~~ centre of this macroregion is beyond doubt. Warsaw, indeed, constituted not only against the background of its macroregion, but also against the background of the whole country, an enormous concentration of all kinds of services. The zone of service shortage /inner zone/ appears around the centre mainly as a zone of market services deficit, with a simul-



- 1 main regional centres of socio-cultural services
- ⊘ 2 towns - locations of various research institutions, numerous vocational schools and important health care centres
- ▨ 3 communes with differentiated profile of socio-cultural services
- ▩ 4 communes specialised in one /apart from education/ type of socio-cultural services

FIGURE 2 Spatial distribution of towns and communes with well developed socio-cultural services

taneous relatively intensive development of the sphere of socio-cultural services. A similar situation, albeit on a much smaller scale, can be observed in most of the communes adjacent to towns, especially those that are governed jointly with the neighbouring communes. In the analytic procedure applied, the presence of the outer zone, with a better development of services, was not settled down at all. Areas located outside of the inner zone, characterised by some service shortages, are differentiated only by the levels of economic development, reflected in the levels of personal incomes of residents. Because of that, within the functional macroregion of Warsaw outside the inner zone, three areas with different levels of development of service activities may be distinguished /Fig. 3/:

1. North-Western area, encompassing Ciechanów, Plock, Skierniewice, and Warsaw voivodships, together with the Northern part of Radom voivodship;

2. Eastern area, overlapping almost entirely with the Biala Podlaska voivodship; and

3. Central belt, including Lomza, Ostroleka, Siedlce, as well as parts of Radom and Warsaw voivodships.

Within the inner zone, only 5 out of 18 towns were well equipped with service units - 27.7 % - while among communes this share was at 52.9 %. In the North-Western area, the one that is best equipped, the share of towns with sufficiently developed services was 62.5 %, while the share of communes with satisfactorily developed service activities was at 49.1 %. Similar values of these

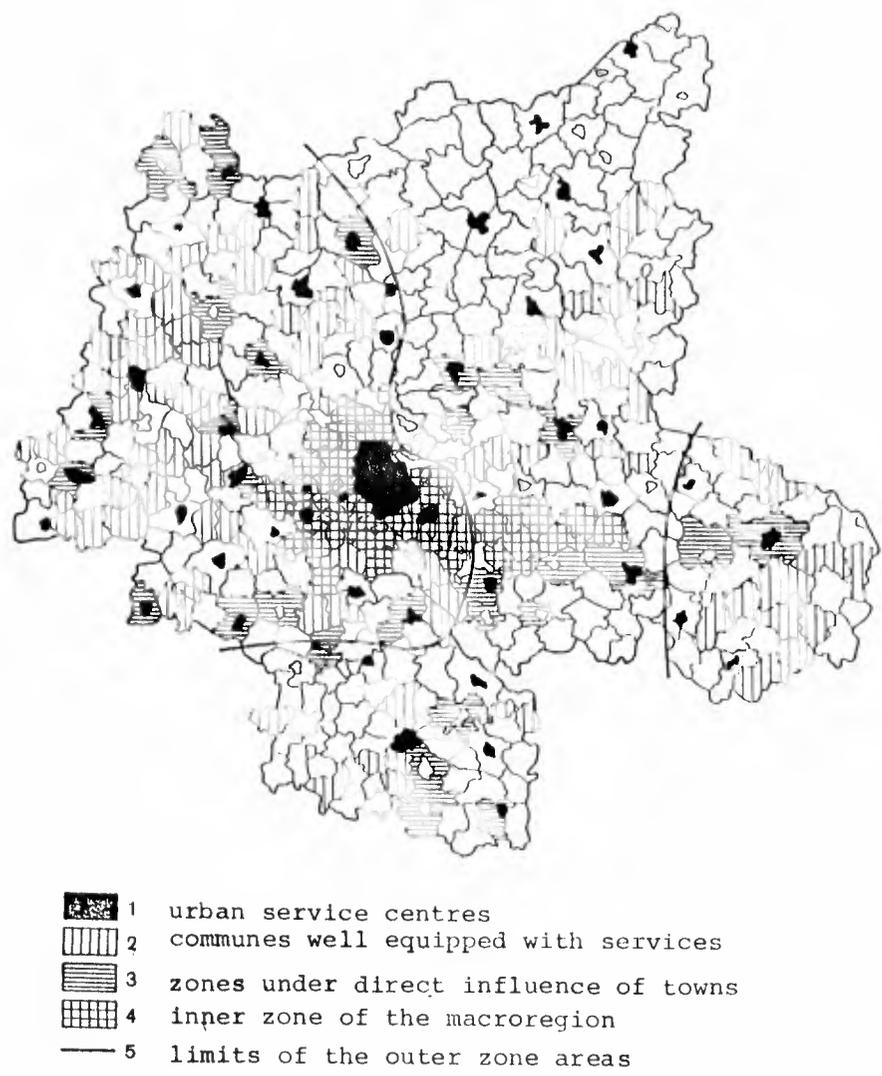


FIGURE 3 Zones of different equipment in service activities

indicators have been characteristic for the Eastern area: 66 % for towns and 44.8 % for communes. On the other hand, within the central belt only 40 % of towns and 20 % of communes were well equipped with services. On average, there were 48.5 % of towns in the macroregion with sufficiently developed services. Against this background the central belt must be considered especially handicapped mainly with regard to market service activities. As far as communes are considered, within the macroregion there were 36 % with well developed services, primarily market services. As compared with this number, the whole of the central belt was worse equipped by a factor of two. Thus, it may be concluded that the main problem areas with respect to service availability are towns of the inner zone and communes of the central belt. This, however, does not mean that within the other areas of the macroregion all towns and communes were satisfactorily equipped with services. Besides that, it is now difficult to answer univocally the basic question of what level of service development and what spatial distribution would be optimal or satisfactory. Maybe the comparative studies conducted now on the international scale, and also the detailed analyses of population incomes and expenses carried out on the basis of earlier gathered data, as well as analyses of attraction exerted by service centres of various ranks, shall make it possible to answer some of the fundamental questions.

### Conclusions

A "servicescape" of any given area undergoes continuous change that may lead in different direc-

tions. Since the time frame presented in this paper, the Polish economy underwent tremendous transformations - a decline and then economic reforms - that have significantly influenced the number and operations of service units of various types. That is why the image presented here should be treated as a sort of document, showing the degree of development of services at the end of the period of economic prosperity in Poland and of promotion of individual consumption increase. It should also be pointed out here that such a document may have a wider application than it could seem at first glance. By indicating regional differentiation in the spatial concentration of essential elements considered, such a document makes it possible to determine areas with insufficient availability of this or any other component of the service sphere, and thereby establishes the list of areas requiring further interest from the side of organisers of economic life and planners. It is therefore the first step towards improvement of the existing situation. Besides that, having registered the equipment level, one may treat it as a reference in further studies, which could make dynamic the until now static picture and could help in determining the relations of service system changes to changes occurring in the economic and demographic spheres.

In view of an oft-repeated regret referring to shortage of economic-geographical analyses of service activities, it is also not without significance that certain theoretical suggestions have been put forward in this report. First of all, there is an attempt made at a definition of the domain of interest of the geography of services,

ultimately narrowing it to the complex of consumption-and-order services, which really determines the standard of living enjoyed by the population. An essential meaning is contained also in the proposal of determining the service-based functional types of towns and communes, only lightly touched upon in this paper, but representing an approach that is different from those usually applied in functional typologies of towns.

### Footnotes

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A. Werwicki, Warszawski makroregion funkcjonalny na tle krajowych zróżnicowań dochodów i wydatków ludności w 1978 r. /Functional macroregion of Warsaw against the background of national indices of personal incomes and expenses in 1978/. Biul. Inform. IGiPZ PAN, 43, 1983

A. Wewicki, Zatrudnienie usługowe jako miernik zróżnicowania przestrzennego makroregionu funkcjonalnego Warszawy /Employment in the service sector as the indicator of spatial differentiation of the functional macroregion of Warsaw/. Biul. Inform. IGiPZ PAN, 48, 1985

A. Wewicki, Zróżnicowanie funkcjonalnego makroregionu Warszawy w zakresie handlowej obsługi ludności /The differentiation of the functional macroregion of Warsaw in respect of the retail service availability/. Biul. Inform. IGiPZ PAN, 53, 1986

2. handicraft concerned with rendering services satisfying the basic existential needs of population.



Table 2. General structure of employment

Territorial unit	Professionally active, totals	Outside agriculture															
		Totals		Totals				Market				Socio-cultural				Public	
		Number	%	Number	%	Per 1000 inhabitants	Number	%	Per 1000 inhabitants	Number	%	Per 1000 inhabitants	Number	%	Per 1000 inhabitants	Number	%
Poland, totals	11 333368	5 434041	100	152	3 190372	58	90	2 005408	37	56	238262	5	6				
urban	10 565684	4 610408	100	230	2 688499	58	134	1 719995	37	86	201914	5	10				
rural	6 067290	1 296010	823633	100	55	501873	61	34	285413	35	19	36347	4	2			
Functional macroregion																	
totals	2 865376	1 777303	998983	100	171	553621	55	95	384979	39	66	59583	6	10			
urban	1 647159	1 574704	862728	100	273	476781	55	150	333410	39	105	52237	6	17			
rural	1 218217	202599	135755	100	51	76840	57	29	51569	38	19	7346	5	3			
Macroregion, without Warsaw, totals	2 016552	939606	501186	100	117	299190	60	70	177651	35	42	24345	5	6			
urban	798335	737027	365431	100	227	222350	61	138	126082	34	78	16999	5	10			
rural	1 218217	202579	136755	100	51	76840	57	30	51569	38	19	7346	5	3			
Voivodships:																	
Białą Podlaska	154360	57529	36029	100	134	24920	65	87	10961	29	38	2148	6	9			
Ciechanów	195049	76496	47474	100	118	29852	63	74	15050	32	37	2572	5	7			
Łomża	171218	55398	34412	100	106	21006	61	64	11237	33	34	2169	6	8			
Ostrołęka	178271	68811	38510	100	105	23405	61	64	12858	33	35	2247	6	6			
Płock	244463	128610	63826	100	131	40291	62	82	20682	33	42	2853	5	7			
Radom	348567	194483	79521	100	115	48783	61	70	27058	34	39	3680	5	6			
Siedlce	210489	114483	65696	100	107	42086	64	68	20179	31	33	3431	5	6			
Skiermiewice	184681	93386	47535	100	121	28961	61	73	16082	34	41	2492	5	7			
Capital (without Warsaw)	229254	165410	86183	100	122	39886	46	57	43544	51	61	2753	3	4			