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## THE STRUCTURE OF THE SOCIO-ECONIMIC SPACE OF SELECTID TOWNS OF THE WARSAW AGGLOMERATION /A STUDY IN FACTOR ECOLOGY/

To study the suburban zone of a city as big as Warsaw we can take the concept of urbanization as the leading motif. The phenomenon of urbanization can be viewed both as the prevalence of the urban lifestyle and of the urban living conditions and as a process of integration of the settlement networks of big agglomerations or into urban regions.

The rapid expansion of Warsaw dates back to the year 1864. It is connected with the first phase of industrialization. The population of Warsaw city, then still enclosed by a ring of defensive forts and buildings around it, soars at that time. Parallel to this, there is a steady rise in population of the suburban settlements. Toward the end of the 19th century the population development displays the first sings of polarization, with the higher rates of development of settlements situated along railway lines. At that time, too, some settlements cease to be recretion-dominated spots to enter the phase of housing and industrial developments. This is especially true of settlements along the Vienna--Warsaw railway line. The early years of the 20th century saw an acceleration of population developments as well as a rapid expansion of narrow-gauge suburban rail transports with a concomitant speculation in land plots.

New impulses to the growth of Warsaw came with the regained national independence following the first World War, with pulling down the forts and military facilities, and with Warsaw's getting back its function of capital city. The general outline the Warsaw agglomeration has at present began to emerge in the years between the two world wars. It was also then that a socio-spatial polarization of the agglomeration began to establish itself. Towns and settlements with developing industries and inhabited predominantly by working class and worst-off population unable to find a place in Warsaw for themselves display the highest growth rates. Recreation settlements, too, flourish, with the well-to-do from Warsaw moving ot settle permanently there.

During the tragic years of the Second World War, the suburban settlements became the first refuge for hundreds of thousands of Warsaw citizens running away from the capital submitted to a methodical destruction by the Nazis. Also in the first years following the war the suburban settlements became the natural hinterland for Warsaw which facilitated its reconstruction.

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The suburban zone developed in the new political and social conditions mainly under the impact of two kinds of factors: first, there were the well-known transformations brought about by the new political system, and secondly, there was the powerful pressure of the need to rebuild and, later on, to develop Warsaw city. Not with standing the enormous socio-economic advance of the Warsaw agglomeration as a whole strong spatial differentiation in living conditions between Warsaw itself and the neglected outer fringes of the agglomeration still persists.

The high integration, both social and economic, of the settlement system into a big agglomeration begins to exercise an inhabiting effect on the development of the agglomeration as a whole because of the existing disproportions, that is, the under-development of the outer areas. This problem calls for intensive studies, the first step in which should be to establish the spatial structure of the processes taking place in it. The outer zone of the agglomeration displays of course a high internal differentiation. Hence attention was focused on areas where there had been the most intensive superposition of historical processes and where they had been most representative for the entire zone. In the case of the Warsaw agglomeration this apllied primarily to the areas of contemporary towns situated along the oldest railway lines.

The studies were carried out for four groups of towns in the vicinity of Warsaw: Pruszków, Piastów, Ursus - Grodzisk Mazowiecki, Milanówek, Brwinów, Podkowa Leśna - Otwock, Józefów, Karczew - Wołomin, Kobyłka, Ząbki, Zielonka, Marki /see fig. 1 in article by W. Stola/

The method of investigation was the factor-analytical technique known as the "principal component analysis". We attempt to construct a conventional factorial ecology of the typical suburban towns.

Calculations were made for the same seet of variables taken from the National Census of 1970, independently for each of the four groups of towns /Table 1/. As the number of spatial units differed from case to case, the information matrix had different dimensions in the four town groups. For the Pruszków-Pias-tów-Ursus group there were 40 variables per 126 spatial units, for the Grodzi-sk Mazowiecki-Milanówek, Brwinów-Podkowa Leśna group the matrix was 40 x 56, for the Otwock, Jźefów-Karczew group 40 x 78, for the Wołomin-Kobyłka-Zabki-Zielonka-Marki gropu of towns 40 x 80.

The analyses carried out enabled us to distinguish seven components, submitted then to the Varimex orthogonal rotation, and next the first five component were interpreted. The interpretation of the rotated components was based on the structure of the loadings /Table 2, 3, 4, 5/.

The basic dimension of differentiation of the socio-economic space of the studied towns in given by the first components explaining between 29.3 % and 34.6 % of the total variation. Those components have been interpreted as the

"socio-occupational position" dimension. One exception here is the component structure of the Pruszków group where socio-occupational position ranks second among the components and explains 14.4 % of the variation. Each of the "socio-occupational position" components with the highest factor loadings contains an unchanging set to variables /Tables 2, 3, 4, 5/. Leading interpretation are variables concerning the social and occupational positions of the population which occur in bipolar systems. One characteristic regularity is that the group of variables concerning better housing conditions occurs with the same sings with the variables that define the better educated population representing higher social and occupational groups. Opposite sings pertain to variables concerning lower occupational and social groups and people with elementary education.

Each group of towns displays its own specific spatial distribution of the sociooccupational component. Each of the towns of the Pruszków group has a central area which is occupied by people with the highest socio-occupational position.

The towns in the Grodzisk Mazowiecki group display clearly different features. For instance, the fact that the Podkowa Leśna display the highest component scores of socio-occupational position confirms the predominance of the "intelligentsia" component in the population of that small town.

The highest component scores in Milanówek occur in the area of a new housing estate and in the residence-type area. The lowest factor scores of socio-occupational position are recorded in the town's peripheries.

Of all towns of its group Grodzisk Mazowiecki represents the lowest scores of socio-occupational position.

The Wolomin group, too, has its own spatial pattern strongly depends on the traffic lines. Generally, areas with the highest scores of socio-occupational position stretch along the railway line and close to the railway stops Kobyłka, Wołomin, Ząbki. The settlement Zielonka is an exception here, for all of its area belongs to one of the two highest classes of component scores of socio-occupational position. Thus Zielonka takes a position in the Wołomin group of towns closely analogous to that of Podkowa Leśna in the Grodzisk group. Marki is a town which almost entirely belongs to the classes of lowest component scores.

The Otwock group has its axis along the railway line with the relatively highest component scores of socio-occupational position.

The next dimension, after socio-occupational position, distinguishing the space of the towns around Warsaw comprises factors called the "dwelling conditions of households". This dimension is the first component in the case of the Pruszków group where it explains 30.9~% of the total variation /Table2/. In the Grodzisk and Wołomin groups it occurs as the second component explaining, respectively, 19.6~% and 15.3~% of total variation. This dimension does not

occur in the Otwock group; however, there is a certain similarity to the composition of the components of dwelling conditions of households in the composition of the fourth component called "housing".

Most variables making up the component of dwelling conditions of households concern the variables defining the equipment, the age, and the forms of ownership of dwellings. But these variables are divided by loadings signs into two sets. Variables concerning construction in 1961 to 1970 and co-operative housing together with the indicators of equipment of dwellings constitute one group of plus-sign variables. Negative variables concern pre-war buildings and privately owned dwellings. The suburban towns around Warsaw furnish relatively good opportunities for private family-house builders. Multi-storey co-operative construction is, in contrast to this, encumbered by insufficient municipal facilities, and this results in highly spacecompact housing estates but with fully equipped standard dwellings. The specific co-occurrence of variables concerning household size and demographic structure imparts - together with the variables concerning construction - the character of family status to these factors too. Thus these factors show, to some extent, how different family and demographic structure accompany definite types of construction developments.

In the Pruszków-Piastów-Ursus spatial pattern, the factor of dwelling conditions of households concentrates its highest scores in the area occupied by housing estates created after the war. Generally in the spatial pattern the each town has its own housing-estate islet dating back to the 1961-1970 decade, or a residencedominated spot surounded by sites of older buildings with lower component scores.

The spatial distribution of component scores and the fact that the component of dwelling conditions of households takes the first place in the component structure shows that in towns with housing resources dating back mostly to the post--war period the dimension of socio-occupational differentiation is suppressed to a secondary position. The predominance of the dimension of socio-occupational position over the dimensions of dwelling conditions of households in the factor structure is probably a remnant of the pre-war social relations which partly resulted from the neglected development of some areas around Warsaw.

Another dimension differentiating the socio-economic space of the towns around Warsaw comprises factors termed "origin of the population". In the Otwock group this dimension occurs as the second component explaining 12.2 % of the variation and in the Wolomin group 12.7 % although it ranks there third only. In the Grodzisk group "origin of the population" ranks third in the order of components and explains 9.5 % of the variation /Table 3/. This component is only fourth in the Pruszków group where it explains but 7.4 % of the variation. The set of component "origin of the population" envisages a bipolar composition of variables: those with a plus signs comprise population of rural origin whereas those with a minus signs concern "people born at their present residences". The variables defining the population of rural origin in the Pruszków group coincide with those concerning higher dwelling densities /Table 2/. In the case of the Grodzisk group, the rural-population variables coincide with the variable "dwelling built in 1945-60" which points to the time of the highest settlement activity in that group of towns. The variable "people born at their present residences" is accompanied by the variable "dwelling built before 1945" /Table 3/, which confirms the above-given interpretation. A similar situation occurs in the Wołomin group except that the whole process was shifted 10 years onwards and hencethe variable "dwelling built 1971-70". Another characteristic feature of the Otwock group is that the variable "population aged 65 or more" coincides with the rural population. Population in this group is not strongly disposed to migration. But this can perhaps be explained by the fact that the Otwock group of towns comprise largely recreational and sanatory areas.

As regards the spatial distribution of the component scores, units with the highest scores for the origin of population are most frequent in the direct vicinity of the administrative boundaries of Warsaw. This signifies a relatively high proportion of people of rural origin in those areas, the only exception is part of the new housing estates of Ursus.

A next dimension of the structure of socio-economic space interpreted in our study is a set of component termed "family situation". In the component structure of the Wołomin group "family situation" occurs as the fourth component explaining 5.8 % of the variation /Table 5/. In the Otwock and Pruszków groups "family situation" is the fifth component explaining, respectively, 6.0 and 5.6 % of the variation. There is no distinct "family situation" component in the Grodzisk group, though some elements of the family, situation dimension occur in components two and five. The family situation components comprise bipolar systems of variables: variables concerning small households on the one hand, and variables concerning bigger households on the other. Due to their low explanatory value, those components include mixed systems which tend to blur their interpretation.

The remaining components are not universal in their scope and their diversified composition is largely due to the specific character of the given group of towns. Analysis of the component matrices and interpretations of the distinguished components vindicate the view that the differentiation of socio-economic space of the towns of the Warsaw agglomeration derives from several composite dimensions. Those dimensions have been termed:

- 1. Socio-occupational position
- 2. Dwelling conditions of households
- 3. Origin of population
- 4. Family situation

These dimensions explain most of the variation in the internal structure of the towns has its own differences expressed in the form of specific components which however contribute relatively little to the explanation of the variation.

Despite of the well known problems and limitation of the method employed this analysis may contribute to our understeanding and providing a basic for important insights into the socio-economic structure of the suburban zone. These analysis allowed us on statistical basis confirm or refute our intuitive knowledge about the significance individual variables and the forces patterning of the zone.

Even though the studied towns constitute but a small section of the suburban zone of Warsaw, they display a mosaic spatial structure. The towns of that zone are divided into homogeneous areas which constitute spatial units with a similar social and demographic composition. The social and demographic structure of such areas is strictly linked with the forms and intensity of building developments and with a different access to public transport facilities and to the natural values of environment. The circumstance that uncontrolled processes are more frequent and planning covers but small areas in the zone as well as the poorer equipment with dwelling facilities explain why it has been much more difficult to materialize a policy of equalizing the living standards for different social and occupational groups there than in Warsaw. The situation in the future is likely to bring about much change.

The reform of Poland's administrative division in 1975 furnished the proper organizational setting for the integration of Warsaw with its suburban zone. The reform made it possible to reduce the historically reinforced spatial differentiation in living conditions, both between the centre and its suburs and between various sites within the suburban zone. Tabel 1 Index of varialbes

No. 1. People aged under 14 years old in % of total population People aged 15 - 24 years in % of total population 2. People aged 25 - 64 years in % of total population 3. People aged 65 years or more in % total population 4. Female population in % of total population 5. Working women in % of total female population 6. Occupation - manageral and highly professional staff in % of total employee 7. Occupation - specialist and middle professional staff in % ot total employee 8. 9. Occupation - clorks in % of total employee Occupation - worers in % of total employee 10. 11. Occupation - service sector workers in % of total employee 12. Social position - manual workers in % of total employee 13. Social position - white-collar workers in % of total employee Social position - contract of commision agents in % of total employee 14. 15. Social position - self-employed in % of total employee 16. People with university or equivalent education in % of total population aged 15 vears or more People with secondary education in % of total population aged 15 years or more 17. People with standard education in % of total population aged 15 years or more 18. 19. Native population - people born in the present place of residence in % of total population Country born population in % of total population 20. Country born population living 0 - 4 years in the town in % of total population 21. Country born population living 5 - 9 years in the town in % of total population 22. 23. One-person households in % of total households Two-person households in % of total households 24. Three and four-person households in % of total households 25. Five and more person households in % of total households 26. 27. Female one-person households in % of total households 28. Two or more households in one dwelling in % of total households Privately owned dwelling in % of total dwelling 29. State or local authorities owned dwellings in % of total dwellings 30. 31. Co-operative housing organization owned dwellings in % of total dwellings 32. Dwellings built before 1944 in % of total dwellings 33. Dwellings built in 1945 - 1960 in % of total dwellings 34. Dwellings built in 1961 - 1970 in % of total dwellings 35. Number of persons per room Living space of dwellings in m<sup>2</sup> per person 36. Dwellings with central heating facility in % of total dwellings 37. 38. Dwellings with water closet facility in % of total dwellings Dwellings with running water facility in % of total dwellings 39. Dwellings with gas facility in % of total dwellings 40.

	Ursus				
	Component I	Component II	Component III	Component IV	Component V
No.	Dwelling	Socio-occu-		Origin of	Family
	conditions	pational		population	situation
	of house-	position	-		
	holds	*			
1.	0,67630	_	-0,21406	_	0,29652
2.	-	-0.21269	_	0.20591	-0.82387
3.	-	0,41816	-	-0.21601	0,65505
4.	-0.83544	_	-	_	0,27450
5.	-0,31425	0,42484	-	-0,50186	-
6.	-	_	-0.55892	-	-
7.	0,47249	0,67388	-	-	-
8.	-	0,81625	0.31484	-	-
9.	_	0,63384	_	-	-
10.	-	- 0.78064	_	-	-
11.	-0.47232	=	-	-	-
12.	-	0.84551	-	_	-
13.	-	0.87950	-	_	-
14.	-	-	-0.31010	-	-
15.	-0.40637	-	-0.29863	-	-
16.	-	0.83177	=	_	-
17.	-	0.86264	-0.20096	-	-
18.	-0.41058	-0.59223	-	-	-0.20453
19.	-	-0.45596	-0.37968	-0.55481	0.20738
20.	-	-0.34495	0.25869	0.65732	-
21.	-	-	0.34969	0.74137	-
22.	-	_	_	_	-
23.	-0.63272	-	-	0.53125	0.36247
24.	-0.57215	-	-	-0.23818	_
25.	0.83470	-	-	=	-
26.	-	-0.26543	_	-0.23794	-0.57505
27.	-0.65333	0.24826	-0.28805	0.30298	0.35920
28.	-0.30386	-	-	0.71043	_
29.	-0.66097	-0.46920	-0.22504	=	-
30.	=	0.24451	0.32979	-	-0.29849
31	0.66588	0.42299	-	-	0.42437
32.	-0.79815	-0.32508	-	-	0.26564
33.	-	-	-	-	-0.73222
34	0.77813	0.28582	_	_	0.33435
35.	-	-	0,93035	-	_
36	-	-	0.91991	-	-
37.	0.73316	0.54061	=	-	-
38	0.67666	0.64807	_	-	_
39	0.61011	0.70573	_	_	-
40	0.64404	0.29287	-	-	-
	0,01101	The percentag	e of explained	variation	
	30.9	14.4	9.9	7.4	5.6
	0010	1 - , -		. , -	- , -

Table 2 The component structure the groups of towns Pruszków, Piastów,

	Component I	Component II	Component III	Component IV	Component V
No.	Socio-occupa-	Dwelling con-	Origin of		Occupational
	position	households	population	-	position
1.	-0,40993	0,67298	-0,21381	0,21813	-0,20150
2.	-	0,20394	-	-0,76129	-
3.	0,32058	-	-	0,83470	-
4.	-	-0,70143	0,24915	-	-
5.	0,52698	-0,50241	-	0,23522	-0,20114
6.	-	0,28705	-	0,69105	-
7.	0,77470	0,25707	-	-	-
8.	0,87044	-	-0,23979	-	-
9.	0,67531	-	-	-	-0,41166
10.	-0,92401	-	-	-	-
11.	-	-0,36100	-	-0,23342	0,47694
12.	-0,93480	-	-	-	-
13.	0,94040	-	-	-	-
14.	-	-	0,25701	0,20287	0,50748
15.	0.52226	-0,43451	0,23396	-	-
16.	0.85386	-0.20857	-	-	0,32202
17.	0,90682	-0.28764	-	-	-
18.	-0.79057	-	0.24433	-0.20468	-0,26082
19.	-0.76434	-	-0,40550	-	-0,25179
20.	-	0.40626	0.67928	-0.22224	-
21.	-	0.73794	0.22833	-0.24452	-0.23545
22.	-	-	0.77125	-	-
23	0.40092	-0.60716	-0.25601	-	0.44206
24	-	-0.45103	-	0.31051	-
25	-	0.76816	-	-	-0.38667
26	-0.50522	-	_	-0.24948	-
27	0.45394	-0.60917	-0.28232	-	0.40622
28	-	-0.20584	-	-0.21755	0.75853
29	-	-0.66092	0.54109	-	0.20153
30	-0.34974	0 28771	-0.56670	-0 25323	-
31	0.37103	0.71992	-0.21304	0 23654	-0.28782
22	0,01100	-0.80696	-0,22730	-	
32.		-0,00000	0 77159	_	0 29234
24	-	0 99651	0,77155	_	0,20201
25	-0 60194	0,00001	-	-0 42970	-0.26792
30.	-0,03184	0 20022	_	-0,41994	-0.30805
30.	-0,00004	0,20000	-	-0,41004	-0,33035
31.	0,62868	0,03030	-	-	-
38.	0,83456	0,39550	-	-	-
39.	0,86510	0,30867	-	-	-
40.	-	-	-	-	-
	04.0	The percenta	ge of explained	variation	4.0
	34,6	19,6	9,5	6,7	4,0

Table 3	The compos	nent struct	ure the	groups	of	towns	Grodzisk	Maz.	,
	Milanowek,	Brwinów,	Podkow	va Lesna	9.				

	Component I	Component II	Component III	Component IV	Component V
No.	Socio-occu-	Origin of		Housing	Family
	pational	population	-		situation
	position				
1.	-	-0,44301	-0,61084	0,25057	-
2.	-	-	-	-	-
3.	-	-	0,86848	-	-
4.	-	0,62807	-0,22427	-	-
5.	-	0,36916	-	0,22906	0,39238
6.	-	-0,50644	0,37929	-	0,41461
7.	0,75204	-	-	-	-
8.	0,82047	-	-	-	0,40991
9.	0,76452	-	-	-	-
10.	-0,76866	-	-	-	-
11.	-0,30304	0,36273	-	-0,27269	-
12.	-0,82912	0,29018	-	-	-
13.	0,95100	-	-	-	-
14.	_	0.30663	0.33360	-	_
15.	-	-	0.20285	-	_
16.	0.97497	0.23990	0.24817	-	-
17.	0.81179	0.28537	0.31488	-	_
18	-0.54695	0 21084	0.38644	-0.33809	_
19	-0.40203	-0.77522	-	-	-0.28789
20	-	0 79125	_	-	0 35459
21	-	0.56339	-	0.34073	0.27102
22	-	0 52484	_	-	0 21108
22	_	0 20253	_	-	0 92432
24		0,61366	_		0,02102
25		0,01000		0 25969	-0.58305
26	-0.38032	-0 40399	-0.31823	0,20000	-0.37749
27	-0,38032	-0,40355	-0,51625	-	0 02022
	- 0 22667	-	-	-	0,00002
0.	-0,33007	-	-	-	-
	-0,74790	-	-	-	-
	0,00403	-	-	0 71010	-
1.	0,57380	-	-	0,71818	-
2.	0,37380	-	-	-0,81425	-
3.	-	-0,25469	-	-	-
4.	-	-	-	0,85948	-
5.	-	-	-0,92518	-	-
6.	-	-	-0,91527	-	-
7.	0,72675	-	-	0,59643	-
8.	0,71705	-	0,22180	0,53537	-
9.	0,73620	0,31703	-	0,42318	-
0.	-	-	-	-	-
		The percentage	e of explained v	variation	
	29,3	12,2	10,1	8,0	6,0

Table 4 The component structure the groups of towns Otwock, Józefów, Karczew

	Componet I	Component II	Component III	Component	IV Component V
No.	Socio-occu-	Dwelling con-	Origin of	Family	Housing and
	position	households	population	situation	situation
1		0 68915	_	-0 22521	0 22257
2		0,00010	_	-0,55551	-0.89978
3.	_	_	_	0.20079	0.75542
4.	_	-0.86163	-	-	0,20039
5.		-0.27179	-	_	0,41620
6.	_	-	-	0,36862	=
7.	0,85296	-	-	_	-
8.	0,84765	-	-	-	-
9.	0,74800	-	0,25377	-	-
10.	-0,88770	-	-	-	-
11.	-0,58796	-	-	0,34911	0,21631
12.	-0,90715	-	-	-	-
13.	0,94869	-	-	-	-
14.	-	-	-	-	-
15.	-	-	-	-	-
16,	0,89409	-	-	-	-
17.	0,88063	0,20570	-	-	-
18.	-0,58489	-0,25593	0,23396	-	-0,30575
19.	-0,53256	-	-0,76608	-	-
20.	-	-	0,94429	-	-
21.	0,30864	-	0,71764	-	-
22.	-	-	0,72953	-	-
23.	-	-	0,27196	0,94043	-
24.	-	-0,77743	-	-	-
25.	-	0,46527	-	-0,67213	-
26,	-	-	-0,59652	-0,30657	-0,24216
27.	-		-	0,84755	-
28,	-	0,20023	0,47669	0,65499	0 90500
29.	-0,75566	-0,32900	0,24857	_	-0,26562
30.	0,07700	- 47190	-0,42138	- 0.99414	- 54420
31. 20	-	0,47120	0 49700	-0,22414	0,04420
02.	-	-0,73577	-0,43700	0,30355	-0 42870
24	-	0,55727	0 52259	_	0,92789
95	-0.31783	0,00121	0,52555	-	0,01100
36	-0,31703	-	_	_	
30.	0.35004	0 67029	0 25111	-0 21210	0 22184
38	0.76411	0.52746	0,00111	-0,21210	
39	0.77680	0.48779	-	-	_
40	-	-	-	_	_
		The percentag	e of explained	variation	
	31.0	15.3	12.7	5.8	5.0
		10,0		0,0	010

Table 5 The component structure the groups of towns Wołomin, Marki, Kobyłka, Ząbki, Zielonka

## Grzegorz Weclawowicz

## STRUKTURA SOCIALNO-EKONOMSKEGA PROSTORA V IZBRANIH MESTIH WARŠAVSKE AGLOMERACIJE

Na urbanizacijo lahko gledamo kot na prevlado mestnega načina življenja in življenskih pogojev v mestih ter kot na proces integracije naselbinske mreže velikih aglomeracij v mestne regije. Splošne poteze sedanje varšavske aglomeracije so se začele pojavljati med zadnjima vojnama. Takrat je tudi začelo prihajati do socialno-prostorske polarizacije znotraj aglomeracije. Močna integracija, tako socialna kot ekonomska, naselbinskega sistema v veliko aglomeracijo je privedla do močne gradbene dejavnosti v smeri oblikovanja enotne aglomeracije.

Na razvoj povojne obmestne cone sta vplivali predvsem dve vrsti dejavnikov: dobro znane spremembe, ki jih je prinesel novi politični sistem in velik pritisk po ponovni izgradnji in kasneje razvoju Varšave.

V proučevanje so bile vključene štiri skupine mest v bližini Varšave. Metoda raziskovanja je slonela na tehniki faktorske analize, znane kot "analiza glavnih komponent". Analizirana je bila vrsta podatkov iz splošnega štetja l. 1970, in to za vsako mesto posebej. Ker je bilo število prostorskih enot v okviru posameznih skupin mest različno, je imela matrika informacij različen obseg. Za prvo skupino mest je bilo analiziranih 40 znakov za 126 prostorskih enot, za drugo skupino je imela matrika obseg 40 x 56, za tretjo 40 x 78, za četrto skupino mest pa je imela 80 prostorskih enot. S pomočjo analize je bilo izločenih sedem komponent, po postopku z Varimex ortogonalno rotacijo pa je bilo interpretiranih prvih pet komponent. Razlaga najbolj izratitih komponent je pokazala, da socialno – ekonomsko diferenciacijo varšavske aglomeracije lahko razložimo z naslednjimi sestavljenimi kazalci:

- 1. socialno-zaposlitvenim položaje,
- 2. stanovanjskimi pogoji gospodinjstev,
- 3. poreklom prebivalstva,
- 4. položajem družine.

Kljub dobro znanim problemom in omejitvam uporabljene metode analize prinašajo nova spoznanja in dajejo osnoven vpogled v socialno ekonomsko strukturo predmestne cone. Take analize statističnega gradiva omogočajo potrditev ali zavrnitev intuitivnega poznavanja pomena posameznih dejavnikov.

Četudi obravnavana mesta predstavljajo le majhen del predmestne cone Varšave, pomenijo pravi mozaik prostorske strukture. Mesta v tej coni so deljena v homogena območja, ki oblikujejo prostorske enote s podobno socialno in demografsko sestavo. Demografska in socialna sestava takih območij je ozko povezana z oblikami in intenzivnostjo stanovanjske izgradnje in z različnimi možnostmi dostopa do sredstev javnega prevoza. Okoliščine, da je območje z nenadzorovanim razvojem gradbeništva mnogo večja od tistega, ki se razvija na osnovi prostorskih načrtov ter revnejša opremljenost s stanovanjskim fondom pojasnjujejo, zakaj je bilo veliko teže uresničiti politiko izenačevanja življenskega standarda različnim socialnim in zaposlitvenim skupinam v predmestnem območju in v Varšavi.

Reforma administrativne razdelitve Poljske l. 1975 je sledila tudi težnjam po integraciji Varšave z njenim obestnim območjem in s tem tudi zmanjševanju zgodovinsko pogojenih prostorskih razlik v življenskih pogojih med mestom in njegovim obmestjem kot tudi znotraj obmestja samega.