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Bulletin of Geography. Socio-Economic Series nr 3, 51-59

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2004

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## THE PROCESS OF URBANIZATION IN THE SUBURBAN ZONE OF THE TRI-CITY

**ABSTRACT.** The process of suburbanization is typical of all big cities and agglomerations, thus many researches, being aware of its significance, focus their interests on this process. Since 1990 the suburbanization in Poland not only has become more intensive than any time before but also has changed. There are also intensive processes of suburbanization in the suburban zone of the Tri-City. Although the processes are intensive, there is still a great gap between town and village communes which together form the above mentioned suburban zone. The suburbanization processes are intensive only in small parts of village communes, especially in those that are very close to the core of the agglomeration which, however do not affect the whole communes.

**KEY WORDS:** suburban zone, Tri-City, suburbanization

### PREFACE

The dynamic processes that take place in each big agglomeration or city influence their suburban zone (Maik, 1997). This influence results in such changes as the increase in population and its structure changes, etc. We can observe such processes in several suburban zones of Polish cities like Warszawa, Kraków, Łódź (Jakóbczyk-Gryszkiewicz, 1998) as well as in the Tri-City and many others. The Tri-City, i.e. Gdansk, Sopot, Gdynia in the north of Poland, due to its location at the sea side, has a very specific suburban zone located in the north, west and south from the core of the agglomeration (Fig. 1).

There are several delimitations of the suburban zone of the Tri-City. This article uses the delimitation put forward by Dutkowski (1999). According to the

above mentioned source the suburban zone of the Tri-City consists of eleven communes. Five of them have a town status i.e. Wejherowo, Rumia, Reda, Pruszcz Gdański and Żukowo, whereas the six remaining have a village status i.e. Kosakowo, Wejherowo, Żukowo, Kolbudy Górne, Pruszcz Gdański, Cedry Wielkie. The whole area of the communes is 858 km<sup>2</sup>, 87.3% of which are village communes area.

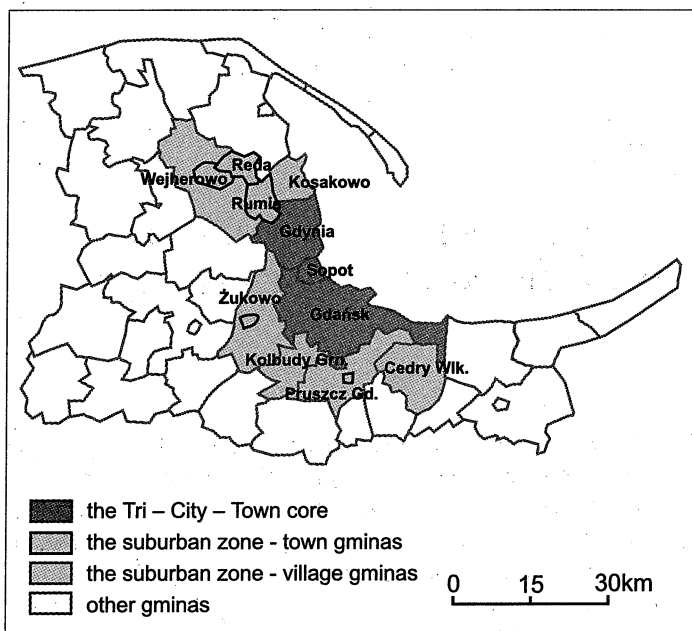


Fig 1. The Tri-City and its suburban zone  
 Source: Dutkowski M., 1999, Uwarunkowania i kierunki rozwoju...

The aim of this paper is to show the temporary demographic situation of the Tri-City suburban zone, and to attempt to classify all communes of the Tri-City suburban zone. The paper is divided into three parts. The first one deals with the number of population, vital statistics and migrations; the second describes the contemporary population structure; whereas the third is the attempt to classify the communes studied.

### POPULATION NUMBER AND DENSITY

The population of research area is two hundred three thousands, 67.6% of which are inhabitants of small towns that are located in the suburban zone of the Tri-City. The town with the biggest population is Wejherowo of 47.1 thousands

of inhabitants, whereas the smallest is Żukowo, hardly 5.8 thousands. The biggest commune among village communes is Żukowo 15.7 thousands inhabitants, whereas the smallest one is the Kosakowo commune, just 4.8 thousands inhabitants.

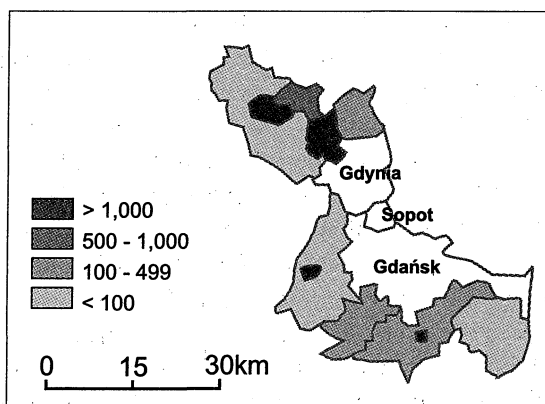


Fig. 2. Population density (population per square kilometer)  
 Source: Statistical Yearbook of the Pomorskie Voivodeship, 2002

The average population density depends on the unit area and its population. The average population density over the whole research area is 626 people per km<sup>2</sup>, and is very diverse taking into consideration individual communes (Fig. 2). The high level of population density can be seen in town communes, where the average rate is 1,276 people per square km, and varies from 608 in Reda, a town that has the biggest area among town communes, to 1,836 in Wejherowo, which is the biggest town of the suburban zone. It is hardly surprising that much lower density is characteristic of village communes, where on average amounts to 90 people per square km and varies from 49 in Cedry Wielkie to 112 in Kolbudy Górne. On the map (Fig. 2) we can see very clearly two territories of high population density: the first in the north that consists of such communes as: Wejherowo, Rumia, Reda and Kosakowo; and the second one on the south that is comprised of the following communes: Pruszcz Gdański and Kolbudy Górne. The western part of the suburban zone has lower level of population density.

The vital statistics are not less diverse than those mentioned above (Fig. 3). The numbers of live births in most of the analysed population groups are comparable and they range from about 9‰ to almost 12‰. However there are two village, where the live birth indicators are even higher and amount to 16.2‰ in the Żukowo town commune and 15‰ in the Wejherowo village commune. The average rate of live birth per 1,000 people amounts to 11.7‰, but in village communes it is lower (11.1‰) than in town communes (12‰). Although it seems that the difference between the average numbers of live births per

1,000 inhabitants in town and village communes are quite similar, we still can see that in most of the village communes the level of the analysed indicator is much lower than in town communes. Such correspondence between the average numbers of live births is caused by the unusually high level of live birth in the town Żukowo.

Taking into account the death-rate in the communes of the Tri-City suburban zone, we will not see great differences. The death-rate varies from 5‰ to 8.4‰. We can not find a big difference between town and village communes either, although in the latter group the rate is a little higher and reaches 6.7‰.

The difference between the number of live births and the number of deaths determines the natural growth of population. We can observe that there is a positive population increase in all units of the analysed area. The average level of this factor is 5.4‰. Although in each commune the population increase is noticeable, there are great differences in the levels of this indicator. In comparison with town communes, the average population increase in village communes is much higher and amounts to 6.1‰. The really unexpected situation is in the town commune Żukowo, where the population increase is very high and reaches 10.5‰ (Fig. 3)

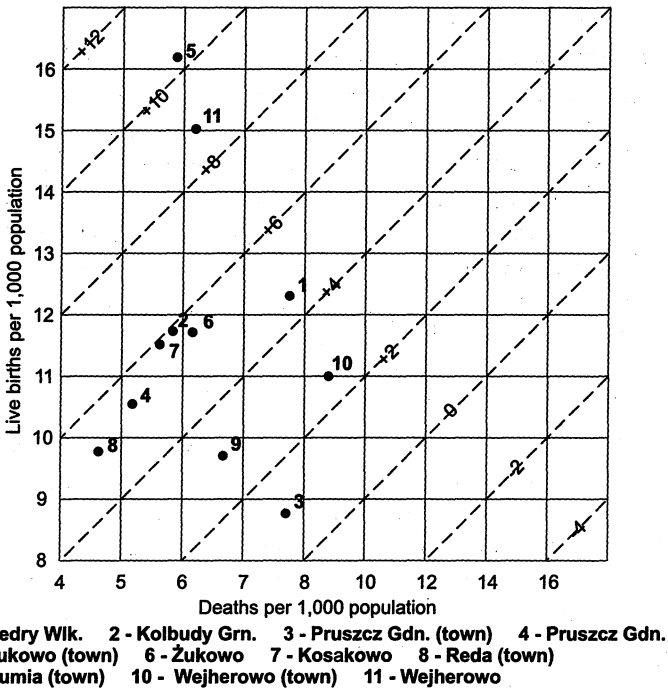


Fig. 3. Natural increase of population

Source: Statistical Yearbook of the Pomorskie Voivodeship, 2002

There is a positive tendency not only in the population increase, but also in migration. More and more people comes to the suburban zone. Accordingly, in 2001 the net migration was positive in the suburban zone of the Tri-City as a whole. In the mentioned year 4,410 immigrants settled in the zone; whereas only 2,384 people left it, which resulted in the increase by 2,026 people. The emigration in all communes studied was similar and varied from 5.9‰ in Żukowo to 14.3‰ in Reda. It is worth noticing that more people emigrated from town communes than from village ones. More noticeable differences occurred in immigration rates. There was a very low immigration rate to the Kosakowo commune, just 1‰; whereas in the Kolbudy Górne commune the immigration rate reached 48.8‰, which seems to be very surprising. (Fig. 4)

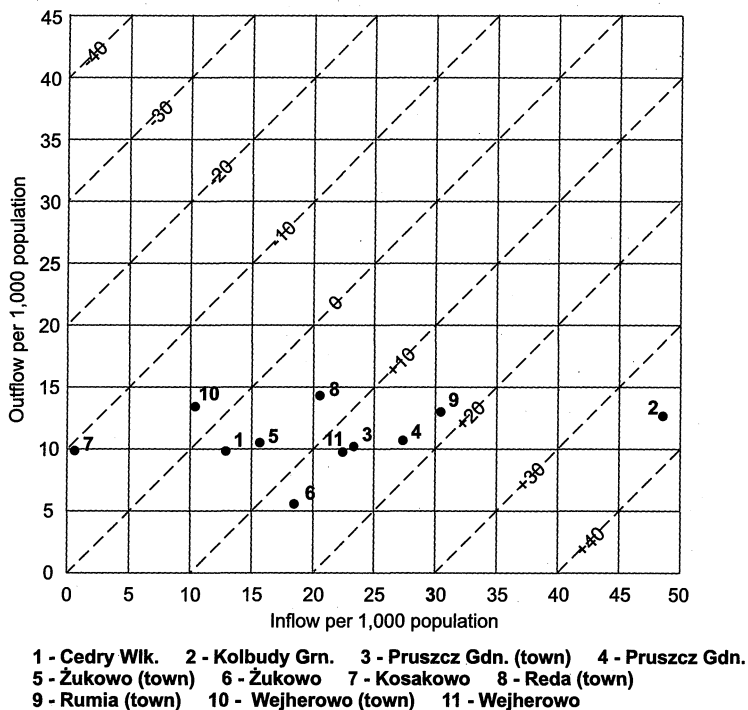


Fig. 4. Migrations

Source: Statistical Yearbook of the Pomorskie Voivodeship 2002

However the net migration in suburban zone was positive as a whole, yet there were two communes where the situation was opposite, i.e. Kosakowo commune and Wejherowo town commune. In the latter it was -2.8‰ and in previous one -8.7‰. It is worth noticing that the highest level of immigration can be found in the Kolbudy Górne commune (37.4‰).

The above mentioned analyses help us to assume that the population number in the given area as a whole has increased, but it was not the same growth in every commune. We can find a factual decrease in population in the Kosakowo commune and the Wejherowo town commune, which is caused by the high level of emigration. In the remaining units the number of population has increased, and the highest increase took place in the Kolbudy Górne commune (43.5%). Usually, the average increase of population was higher in village communes than in the town ones and equalled 12.4% and 8.1%, respectively. As we can see on the map, there is a territory in the south that is characterized by higher level of population increase, and which consists of the Kolbudy Górne commune and the Pruszcz Gdański village commune. We can find a similar region in the north that consists of the Rumia commune and the Wejherowo village commune. Also in the north there are two units where the number of population has decreased. (Fig. 5)

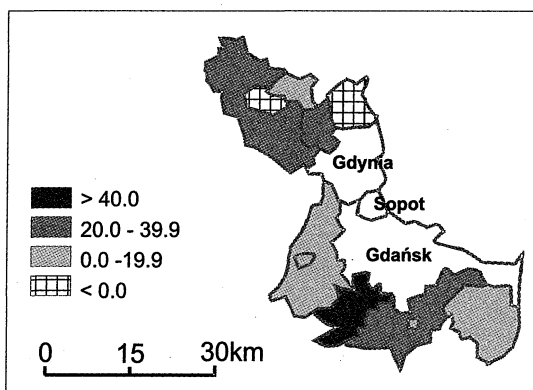


Fig. 5. Actual increase of the population in 2001 per 1,000 of population  
*Source:* Statistical Yearbook of the Pomorskie Voivodeship 2002

## THE POPULATION STRUCTURE

The proportion of woman to man in the analysed area is 102: 100, but is highly different when analysing individual communes. There is an opposite proportion in two village communes i.e. Żukowo and Kosakowo, where the proportion is 97:100 and 98:100. The highest level of feminisation occur in the Pruszcz Gdański town commune (107 women to 100 men). Usually the average disproportion of women to men is higher in town communes than in village ones, and exceeds 103. It is worth to mention that among this town communes there are two communes (Kolbudy Górne and Cedry Wielkie) where the proportion of women to man is 104:100. Both of these communes and the rest of communes (town and village) Pruszcz Gdański make up together the region of higher feminisation in the south of the suburban zone of the Tri-City (Fig. 6).

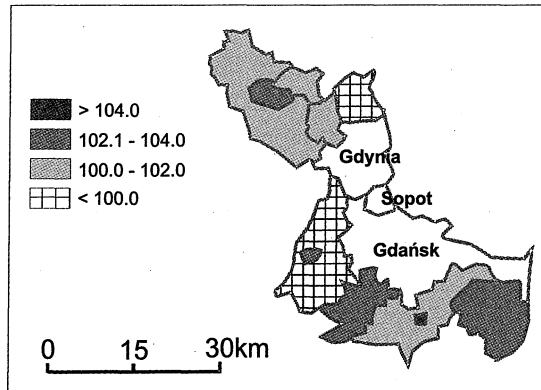


Fig. 6. Females per 100 males in 2001

Source: Statistical Yearbook of the Pomorskie Voivodeship 2002

The average number of people employed in the agriculture is about 4% but it is worth mentioning that this rate is much higher in the village communes than in town ones and reaches 6.4%. The highest employment level in the agriculture is in the Cedry Wielkie (22.9%) and Kosakowo (8.9%) communes, which are typical village communes. It seems to be very surprising that in the Żukowo town commune the employment level in the agriculture is higher than in the Żukowo village commune. In this way the town Żukowo has the highest level of agriculture workers among the town communes. (Fig. 7)

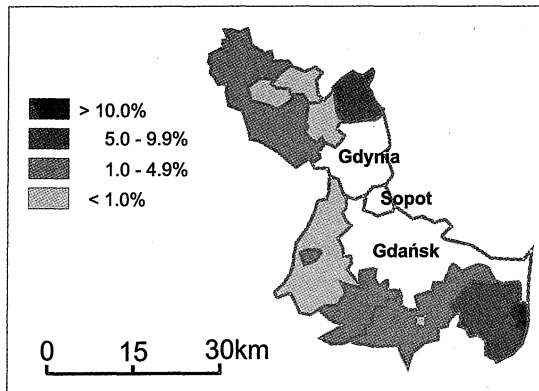


Fig. 7. Employed persons in agriculture in 2001

Source: Statistical Yearbook of the Pomorskie Voivodeship 2002



## CONCLUSIONS

On the basis of the Ward's method of cluster analysis the given communes can be divided into four groups (Fig. 8). During the analyses five indicators were taken into consideration, i.e. the population density, the natural increase, the net migration, the proportion women to man, and finally the employment in agriculture. The first group consists only of the Wejherowo town commune that is characterized by high population density, low natural increase, negative net migration and low employment in agriculture. The second group consists of three town communes i.e. Żukowo, Rumia and Pruszcz Gdański, which are characterized by high population density, high level of feminisation and net migration. The third group is again comprised only of one commune i.e. the Reda town commune. The most characteristic features here except the average population density and average net migration are also the low percentage of employment in the agriculture. The remaining communes make up the last, fourth group that includes all the village communes that are characterised by low population density, mainly high population increase as well as high employment in agriculture and finally low feminisation.

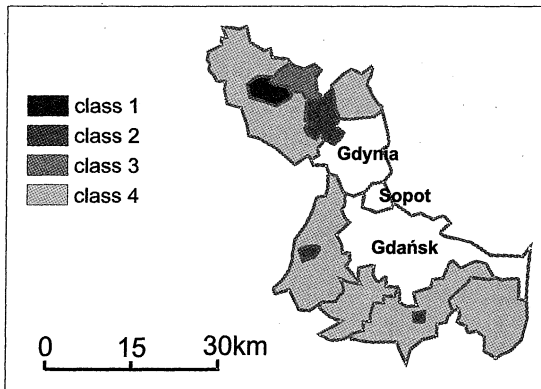


Fig. 8. The separation of commune to the 4 classes

Source: author's own calculations

We can assess that there is still a great gap between town and village communes in the suburban zone of the Tri-City. The village communes are significantly less diverse than town ones regarding population density and employment in the agriculture as well as other indicators. Such a big gap is probably caused by the still not very intensive process of suburbanization in village communes. This process is intensive only in small parts of village communes, espe-

cially in those that are very close to the core of the agglomeration. That is why it is difficult to show that the suburbanization process is advanced using communes as a basic spatial unit.

## REFERENCES

- Dutkowski, M.** 1999: *Uwarunkowania i kierunki rozwoju województwa gdańskiego* In: Dutkowski, M. editor *Uwarunkowania i czynniki rozwoju regionów Polski północnej*, Gdańsk: Wydawnictwo UG.
- Dziadowska, H., Kusiński, W.** 1992: *Procesy ludnościowe w strefie podmiejskiej Warszawy*, *Prace i Studia Geograficzne* tom 13, Warszawa: UW.
- Jakubczyk-Gryszkiewicz, J.** 1998: *Przeobrażenia stref podmiejskich dużych miast. Studium porównawcze strefy podmiejskiej Warszawy, Łodzi i Krakowa*, Łódź: Wydawnictwo UŁ.
- Maik, W.** 1997: *Podstawy geografii miast*, Toruń: Wydawnictwo UMK.
- Rocznik Statystyczny Województwa Pomorskiego 2002**, Gdańsk: Urząd Statystyczny w Gdańsku, tom II.

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