Ethnic heterogeneity and standard-of-living in Slovenia

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Abstract
Spatial correlation of the living conditions with ethnic heterogeneity of the population on the local level in Slovenia is presented. The findings show that many of the stereotypes that relate ethnically heterogeneous populations to unfavorable living conditions, are far from being true.

Keywords: political geography, ethnicity, demography standard of living, local level, Slovenia.
Introduction

The recent ethnic structure of the population in Slovenia has been already discussed in geographical literature (e.g. Gosar, 1993), as well as the Standard of living (e.g. Krevs, 1998a). In this article the emphasis is on neither, but rather on their interaction, measured on local level for the whole of Slovenia. The main question we try to answer is: are there any characteristic, measurable relations between ethnic heterogeneity and the standard-of-living of the population in Slovenia? Although the question seems provocative and interesting enough, only rare researchers (e.g. Špes, 1977, 1994) have touched the subject until now. Ethnic heterogeneity can be viewed as constitutive element of the standard of living ("living conditions"), our aim is to relate it to other aspects of living.

Ethnic Heterogeneity

Ethnic heterogeneity is a result of the cohabitation of two or more ethnicities in an area at the same time. In the present research it is measured on the basis of a comparison of national minorities with the national majority, as expressed by the share of "non-Slovenians" in the total local population. The term ethnic minority should not be confused with juridically defined national minorities in Slovenia, i.e. Italian and Hungarian. All nationalities, e.g. Croatian, Serbian, Bosnian (Slavic Moslem), Albanian, except Slovenian, are fused into the artificial term "non-Slovenians", which has already been used by geographers (e.g. Gosar, 1993) in simplified descriptions of national heterogeneity in Slovenia. It is not our intention to trivialize the understanding of ethnic diversity in Slovenia. The main reason for the simplification is strictly methodological, to focus on the relations between the level of ethnic heterogeneity and the standard of living of the population. The ethnic majority can locally be different from ethnic majority in the country. In other words, a national ethnic minority can be a local ethnic majority. From this point of view, three basic "types" of ethnic heterogeneity in Slovenia can be defined:

- absolutely ethnically homogeneous areas (100 % Slovenian population),
- ethnically heterogeneous areas with a Slovenian majority (more than 50 % of Slovenians), and
- ethnically heterogeneous areas with a "non-Slovenian" majority (less than 50 % of Slovenians).
For a simplified presentation of the gradual increase of the level of ethnic heterogeneity, the second of the "types" is subdivided into three classes as shown in Table 1.

**Table 1. Number of "non-Slovenians" in 1991 by classes of the level of ethnic heterogeneity subdivided by urban, suburban and rural areas*.**

<table>
<thead>
<tr>
<th>Level of ethnic heterogeneity (% &quot;Non-Slovenians&quot;)</th>
<th>Areas</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Urban</td>
<td>Suburban</td>
<td>Rural</td>
<td>All</td>
<td></td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>&gt;0 - 10</td>
<td>11337</td>
<td>16162</td>
<td>24429</td>
<td>51928</td>
<td></td>
</tr>
<tr>
<td>&gt;10 - 20</td>
<td>52860</td>
<td>12355</td>
<td>7101</td>
<td>72316</td>
<td></td>
</tr>
<tr>
<td>&gt;20 - 50</td>
<td>78699</td>
<td>15984</td>
<td>10669</td>
<td>105352</td>
<td></td>
</tr>
<tr>
<td>&gt;50 - 83</td>
<td>2020</td>
<td>5783</td>
<td>3406</td>
<td>11209</td>
<td></td>
</tr>
<tr>
<td>TOTAL</td>
<td>144916</td>
<td>50284</td>
<td>45605</td>
<td>240805</td>
<td></td>
</tr>
<tr>
<td>percent</td>
<td>18.2</td>
<td>10.1</td>
<td>6.5</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Approximation of urban, suburban, rural areas defined by local communities, Krevs (1998a, 1999).

Only in 14 of the 1204 Slovenian local communities, mostly in Slovenian-Hungarian border areas and in the outskirts of Ljubljana, are Slovenians in the minority. And only 18 local communities are exclusively Slovenian. Figure 1 presents a general outline of the spatial distribution of ethnic heterogeneity in Slovenia in 1991. Although in some areas an emigration of "non-Slovenians" occurred in 1990s, after Slovenia attained independence, and especially in areas where there was a considerable presence of the Yugoslav National Army, we consider the general spatial pattern of ethnic heterogeneity not to have changed substantially.

**Standard of living**

Standard of living reflects the "circumstances of living", or "living conditions" of the population of a certain area at a certain period of time. It is a very broad concept, and is always subject to more or less arbitrary measurement. In our case, the "circumstances of life" are presented from twelve different aspects: property and income of population, housing conditions, population characteristics, employment, education, supply, services, possibilities of leisure activities, accessibility of central settlements, natural threats to residential areas, physical-geographical characteristics of residential areas, and pollution...
of residential areas. These aspects of standard of living are measured with 36 indicators (Table 2). Data are extracted from a wider database used in geographical research examining the standard of living in Slovenia (Krevs, 1998a).

Figure 1. Ethnic heterogeneity in Slovenia in 1991.

Are residents of ethnic heterogeneous areas worse off?

This question might seem provocative, but can help to bring the problem studied in its true perspective. The origin of the question lies in general stereotypes about the relations of "non-Slovenians" to living in unfavorable (or less favorable) living conditions. Although some geographical studies (e.g. Špes, 1994, Rebernik, 1999) indicate some examples of this kind of relationship in towns, we hypothesize that this is not generalization applicable in Slovenia. A detailed presentation of the relation between individual indicators of standard of living and the level of ethnic heterogeneity is not the purpose of this article. Rather, we would use two statistical techniques, the correlation analysis and the analysis of variance, to test the hypothesis and to find out if certain aspects of the standard of living are related to the level of ethnic heterogeneity.
Table 2. Aspects (contents) and individual indicators of standard of living.

<table>
<thead>
<tr>
<th>CONTENTS OF STANDARD OF LIVING</th>
<th>SELECTED INDICATORS</th>
</tr>
</thead>
</table>
| Property and income of population | Income per inhabitant 1993  
Proportion of employed in the lowest income taxation class 1993 |
| Residences | Proportion of private housing 1991  
Residents per room 1991  
Proportion of residences built after 1980  
Proportion of infrastructurally equipped housing 1991 |
| Population | Index of population change 1981-1991  
Population density in residential areas 1991  
Proportion of population with high education 1991 |
| Employment | Proportion of unemployed 1991  
Proportion of employed in III. and IV. sector of economy 1991  
Proportion of employed that daily migrate to work 1991 |
| Education | Proportion of population in schooling at any level 1991  
Distance to the closest secondary school  
Distance to the closest faculty |
| Supply | Number of retail shops 1993  
Distance to the nearest retail shop 1993  
Distance to the nearest center (town) 1995 |
| Services | Number of service firms 1993  
Distance to the nearest bank office 1993  
Distance to the nearest post office 1993 |
| Possibilities of leisure activities | Number of societies, clubs possibly related to leisure activities of population 1993  
Number of restaurants, buffets, bars 1993  
Distance to the nearest cinema 1993  
Distance to the nearest areas for activities in natural environment (forest, clear surface water) |
| Personal transport accessibility | Inhabitants per personal car 1994  
Time to the nearest highway 1995  
Distance to the nearest town 1995 |
| Natural threats to residential areas | Expected highest earthquake level (MCS) on the residential areas  
Proportion of potentially flooded residential areas 1991  
Proportion of residential areas on areas of frequent temperature inversion 1991 |
| Physical-geographical characteristics of residential areas | Average air temperature on the residential areas  
Average duration of snow blanket  
Altitude difference between the highest and lowest residential location 1991 |
| Pollution of residential areas | Proportion of residential areas on the areas of excessive or critical air pollution  
Estimation of underground water and soil pollution (fertilizers per hectare of farming land) 1991 |
The second method is used to reveal any relationships that might not be linear, and therefore might not be properly recognized by correlation analysis. The relatively large number of local communities analyzed (1204) results in a very high statistical significance of the results, but in the following section we only focus on the most prominent relationships.

The indicators of standard of living that most intensively correlate with the level of ethnic heterogeneity are the following (in descending order of correlation coefficients, with absolute values higher than 0.3):

- proportion of private housing (negative correlation, \( r=-0.526 \)),
- population density in residential areas (positive correlation),
- proportion of residential areas in zones of excessive or critical air pollution (positive correlation),
- number of restaurants, buffets, bars (positive correlation),
- number of retail shops (positive correlation),
- proportion employed in III. and IV. sector of economy (positive correlation),
- proportion unemployed (positive correlation),
- number of service firms (positive correlation),
- proportion employed that daily migrate to work (positive correlation), and
- proportion employed in the lowest income taxation class (negative correlation, \( r=-0.324 \)) (see Figure 2)

Figure 2. Proportion of income tax payers in the lowest taxation class related to different levels of ethnic heterogeneity in Slovenia.
On the basis of these results we find that none of the indicators of standard of living correlates highly with the level of ethnic heterogeneity. All of the correlation coefficients are medium or low, although most of them are statistically significant. Therefore we cannot talk about any general "rule of interdetermination" of the two studied phenomena. Rather, the findings allow us only to discuss stronger or weaker general interrelationships between them. Although the use of value statements is avoided in research on standard of living, we can say, at least for some aspects, that the level of ethnic heterogeneity "improves" standard of living while for others it does not. With this comment we are pointing out that the relationship between the level of ethnic heterogeneity and the standard of living are many-sided, and far from being simple and general.

Using analysis of variance we try to find out the aspects of standard of living that discriminate the most between areas with different levels of ethnic heterogeneity. Only the areas with more than 0 percent, and less than 50 percent, of "non-Slovenians" are analyzed. The two remaining classes from table 1 have too few local communities. The differences between the areas from the following classes are studied: 0-10 percent ("low level of ethnic heterogeneity"), 10-20 percent ("medium level of ethnic heterogeneity") and 20-50 percent of "non-Slovenians" ("high level of ethnic heterogeneity"). The results tell us basically the same information as those achieved using correlation analysis. Only some small differences in the order of the listed indicators of standard of living are revealed.

Both analyses also point out some indicators of standard of living that do not correlate with (or discriminate between the classes of) the level of ethnic heterogeneity, e.g. number of residents per room, index of population change, proportion of population in schooling at any level, distance to the nearest faculty, and estimation of underground water and soil pollution. This does not mean that these aspects of standard of living are not important from the point of view of the level of ethnic heterogeneity. They can be interpreted as local modifiers of standard of living at a certain level of ethnic heterogeneity of the population.

Many of the aspects studied in relation to standard of living relate to changes in the level of ethnic heterogeneity in a similar way to income indicators (box-plot on figure 2). Therefore we will use the example for a more general description of the relation between these phenomena. Areas with exclusively Slovenian population, and areas with the highest proportion of "non-Slovenians" are very similar, which seems surprising, but it is a consequence
of their, socio-economically mostly unfavorable, rural or suburban character. On the areas with a certain mixture of Slovenian and "non-Slovenian" population (but with Slovenians as the majority) the income indicators in general improve as the proportion of "non-Slovenians" increases. This may seem surprising, especially with regard to the mentioned stereotypes. But the simultaneous study of the changes of diverse aspects of standard of living in relation to the level of ethnic heterogeneity leads us to some findings which are very similar to those resulting from comparing the standard of living between urban, suburban and rural areas (Krevs, 1999). On average a much higher proportion of "non-Slovenians" live in urban areas, than in suburban or rural areas (see Table 1). With an increase of the proportion of "non-Slovenians", the urban character of their living environment is becoming more and more evident, which is reflected also in the changes in standard of living, e.g. decreasing proportion of private housing, increasing population density, better possibilities for supply, services, leisure activities, increasing air pollution.

Conclusion

This discussion should not point to an oversimplified conclusion that "non-Slovenians" live in better living conditions than Slovenians, or that "non-Slovenians" are the direct cause of a certain standard of living of the population. The results of our analysis demonstrate that many who live in ethnically distinctively heterogeneous areas live in relatively favorable living conditions from the point of view of supply, services, incomes, some aspects of schooling, and possibilities for leisure activities. But they breathe relatively polluted air, and despite the prevalent urban character of these areas, a relatively large proportion of the population daily migrates to work in other settlements or communes.

In other words, the stereotypes that associate ethnic heterogeneity with poor living conditions are both essentially wrong and oversimplified. It does not mean, that in Slovenia there are no areas with high proportion of "non-Slovenians" who live in very unfavorable living conditions. But these areas are exceptions, and only a very small proportion of the "non-Slovenians" live there. When all areas in Slovenia are considered together, the general findings show that the stereotypes are far from being true.
Etnična pestrost in življenjski standard v Sloveniji

Povzetek

Prostorske zakonitosti oziroma korelacije med življenjskimi razmerami in etnično podobo posameznih območij v Sloveniji so postavljene v osredje pričujoče razprave. Avtor dokazuje, da je malo resnice v pogosto pričujočem stereotipu, da so neugodne življenjske razmere tesno povezane s pestro etnično strukturo prebivalstva. Glede na naravo slovenske prebivalstvene in poselitvene podobe ter nekatere predhodne raziskave so bila taka pričakovanja
eventualna upravičena. Na podlagi številnih primerjav, ki so zajele različne zvrsti življenjskega standarda (dohodek, oskrba, izobraževanje, rekreacija) in območja poselitve (urbano, podeželjsko, suburbano) spoznamo, da so v območjih narodnostno heterogene poselitve mnogi prebivalci deležni višjega standarda kot pa tam, kjer je narodnostna sestava enoznačna. Izjemo predstavljajo okoljske komponente, predvsem onesnažen zrak in pretežno urbani značaj narodnostno heterogene poselitve in pa dejstvo, da dnevne migracije (k delovnemu mestu) pogosto karakterizirajo tamkajšnje življenjske razmere. Predsodek, da bi naj pretežno »ne-Slovenci« poseljevali območja v katerih bi naj prevladoval nižji življenjski standard in na splošno neugodne življenjske razmere, ne drži. Le v redkih območjih je korelacija »ne-Slovenec« v navedavi na »neugodne življenjske razmere« relativna visoka, a še tam je absolutno število in tamkajšnji delež ne-Slovenskega prebivalstva v primerjavi s celotno »ne-Slovensko« narodnostno populacijo, živečo na drugih območjih Slovenije, neznanten.