GEOGRAPHICAL MARGINALITY IN SLOVENIA FROM THE POINT OF DEMOGRAPHICAL INDICATORS

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UDK: 911.3:314.18
COBISS: 1.01

Abstract
Geographical Marginality in Slovenia from the Point of Demographical Indicators

We start the paper with a terminological discussion about globalization and geographical marginality. Then we present an analysis that intends to find out whether the demographic data at municipal level can reveal us marginal regions (municipalities). We divided all municipalities according to their centrality into the group of predominantly central and predominantly peripheral. We calculated 5 demographic indicators and according to the average value defined municipalities that were essentially different (potentially marginal). The analysis shows that demographic indicators are not reliable and not an appropriate tool for the definition of marginal regions.

Key words
geographical marginality, globalization, demographic indicators, Slovenia
1. Introduction

International Geographical Union has 34 commissions and one of them is Commission ‘C04.27. Marginalization, Globalization, and Regional and Local Responses’. As it is suggested by its name, the commission deals with the problem of geographical marginality. That was also the core topic of its predecessor commissions and study groups. At present the commission focuses on geographical marginality from the viewpoint of globalization. The author of this paper as an active member of the commission tries to find the answer to the question whether it is legitimate to define some parts of Slovenia as marginal, whether there are processes of marginalization and how does the process of globalization affects all that. In this paper some of the possible demographic indicators of geographical marginality in Slovenia are discussed. To put this discussion into a proper context we start the paper with a short terminological discussion.

2. Globalization and geographical marginality

2.1. Globalization

According to the glossary in Giddens’ (2001, 690) Sociology, globalization is a growing interdependence between different peoples, regions and countries in the world as social and economic relationships come to stretch worldwide. Usually the economic component of globalization prevails in the use of the term although we should not separate it from social, political and cultural one. International flows of capital, multinational corporations and an international division of labour are just one part of the process that makes our modern world becoming a »global village«. Modern technology is one of the main factors contributing to globalization. Modern means of transportation enabled us to travel further and further in ever shorter time. Telecommunication systems connect us almost instantly to any place on Earth that is a part of the system. World Wide Web dominates the present time interactions between individuals and institutions. All these technology facilitates the compression of time and space (Giddens 2001, 53). The diffusion of innovations as well as all kind of ideas is nowadays more efficient and faster than ever.

To measure globalization Dreher (2006) developed an index that is covering its most important aspects: economic integration, social integration and political integration. He combined 23 variables to three sub-indices using an objective statistical method. The sub-indices are in turn aggregated into one single index of globalization. Sub-indices are referring to actual economic flows, economic restrictions, data on personal contact, data on information flows and data on cultural proximity. Data is available on a yearly basis for 123 countries over the period of 1970-2003. According to 2006 Index of globalization Slovenia took 40th place among 123 nations (http://www.kof.ch/globalization/). Dreher used the index to establish whether the globalization affects the economic growth and according to his findings globalization is good for growth. On average, countries that are more globalized experienced higher growth rates.

Leimgruber in his book about marginality “Between Global and Local” stated that globalization has been for quite some time a fashion word that is used indiscriminately by everyone to describe almost anything that looks negative or seems to have negative effect on our life. In his opinion the term is vague and leaves a number of issues open, but it certainly isn’t simply negative (2004, 18-19). Globalization is undoubtedly a fact and is affecting almost every single part of the world. The main threats coming from it are economic and connected with neo-liberalism and neo-colonialism. The logic of maximizing profit directs the flows of capital into areas with the cheapest labour and redistributes the worlds wealth in favour of the developed North.
2.2. Geographical marginality

How does that affect the geographical marginality and what in the first place geographical marginality is? There is no simple and certainly no unique answer to that. Every annual meeting of the commission reveals that there are many different views and no consensus. It almost seems that marginality is something you can feel, but you cannot define. Marginality, as Leimgruber (2004) considers it, cannot be defined without putting it into a certain perspective. He discusses three concepts: economic, political and social (including cultural). In his opinion marginality has to be clearly distinguished from peripherality. Within Centre-Periphery model as was upgraded by Reynaud, Leimgruber (2004, 38-45) considers the “isolat” (isolated region) and the “angle mort” (the lost corner) as marginal. They may be a territorial part of periphery or even the centre, but “cannot really be attributed to them”. The definition of marginality largely depends on the perspective. What is marginal from an economic point of view is not necessary marginal from a social or a cultural point of view. Therefore there cannot be one and ultimately correct definition. From an economic point of view the researchers first pointed out regions that were lagging behind the average and were in a sense not normal. However they did not call them marginal. They used terms such as disadvantaged or difficult to describe them. A more precise identification of marginal areas takes into account the following four criteria (ibid. 48):

a) significantly lower per capita incomes,
b) low infrastructure equipment,
c) cultural isolation,
d) difficult natural conditions.

The difficulty lies in setting the critical values of the above criteria. What is significantly lower, how low must the infrastructure equipment be etc. The same problem may be observed in the model that builds the definition on the combination of market integration and production forces showed in Figure 1. It indicates that marginal regions are at the edge of the system (they may even be outside of it). The notion of mainstream may also be used to illustrate the position of marginal individuals (regions? – Figure 2). They are out of the mainstream, but as the mainstream is changing trough time, certain individual may become a part of it without changing its own position.

If we take into account that the word margin also means a blank space around printed or written matter on the page we can claim that the difference between margin and its antonym (the written matter) is essential. Marginal is therefore something that is on the margin, which is meant for something else than the rest of the page. The role of the margin is esthetical while the role of the rest of the page is to bring the information (which can also be esthetical but in a different way). What we write on the margin is never a part of the text even though it may correct or comment it. Marginal regions according to that should be those that are essentially different from the »normal« regions of the nation (continent). However, they do not need to be without any ties with these so called normal regions. A certain extent of interactions and interdependence may be present. From this point of view marginal regions are not necessary completely isolated from the central ones. The possibility of existence of an »isolat« (peripheral region that is completely out of economic, social and cultural system of its central neighbourhood) in a modern globalized world is in our opinion completely insignificant. Marginal regions according to our thinking are:

- in most cases a part of the periphery,
- essentially different than »normal« (central and peripheral) regions,
- economically underdeveloped,
- socially and culturally excluded,
- politically unimportant and uninfluential.
Marginality that is caused by political reasons influences all the spheres of human existence in the marginalized area. Economy as material basis of this existence is usually less effective and profitable in marginal border areas than in other parts of the country. However, the problem remains how to measure that. Different indicators for the same area usually show a different degree of lag behind the national average. Sometimes the appropriate indicators are not available at the desirable scale. It is even more difficult to measure different aspects of marginality from social perspective.
Let us conclude this introductional section with some observations on the relation between globalization and marginality. Globalization is a process that has many different effects. Some may be regarded as positive, other as negative. Some are beneficial for certain people and societies and at the same time harmful for others. If the owner closes down a textile or shoe factory in Slovenia and moves the production to China this may be regarded as positive in China and as negative in Slovenia. However, the only one that really benefits from such change is the owner that enlarged his profit while workers on both sides can be regarded as marginalized: in Slovenia because they became unemployed and in China because they became cheap labour, probably working in unenviable conditions. This is an example of socio-economic marginalization on a global scale. On a national scale the effect of marginalization depends on the location of the factory. When the factory that has been closed is the only one in a remote peripheral micro-region then this may be the reason for the marginalization of the region in general. The potential consequences of the loss of working places are underdevelopment, different kind of social problems such as poverty, crime etc. Push factors prevail over the pull factors and the depopulation brings even more social problems, deteriorates the already unfavourable economic situation and finally pushes the region over the margin into geographical marginality.

According to the above consideration of geographical marginality the demographic characteristics of marginal regions should be essentially different (worse) than in the rest of the territory. Such region should have negative natural growth, negative migration balance, high aging index, low level of education etc. This may be the set of characteristics that we have to measure to find out if a certain region is marginal from demographic point of view.

3. Peripheral municipalities as potential marginal regions

The answer to the question, if there are any marginal regions within Slovenia at all, largely depends from the definition of marginality and marginalization. As we did not decide to use a narrow definition such as in the case of a »isolat«, we may claim that in the case that some regions in Slovenia do show essentially different characteristics than the rest of the country then these regions may be considered as marginal from at least some point(s) of view. Therefore we may use different kind of indicators that can reveal us the region with a certain degree of marginalization? In this paper we will only deal with the demographic ones.

In the preceding section we presented how the marginality and the marginalization may look in theory. The problem is, as in general in geography, the delimitation of these kind of regions or areas. The demographic indicators are those that may reveal us the extent of consequences of marginality on population of the region. Here we present the Slovenian example. Our intention was to constate how the available demographic data may be used as an indicator of marginality at the municipal level.

Municipalities are the only suitable territorial units for the delimitation of marginal regions in Slovenia. They are the primary local administrative units and may be considered as nodal micro-regions. The problem which we face when we use Slovenian municipalities as the units for analysis is their heterogeneity in terms of size and population. We may also claim that Slovenia is a nation of disintegrating municipalities. In 1991 when Slovenia declared independence it inherited the communal system with 60 municipalities (communes) from former Yugoslavia. With the first »reform of the local selfgovernment« the number of municipalities grew up to 147, then with the next one up to 192 and at

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1 Marginalization in this case means a process leading into marginality and being marginalized means to be put into marginal position from economic, social or cultural point of view.
present the number is already well over 200. With the growing number of municipalities the differences in scale as well as in other characteristics grew enormously. At present some of municipalities are so small considering the population that some basic statistical data is not available due to a somewhat queer law on personal data security. Municipalities are therefore not very suitable units for any kind of analysis. However, they are the only units with enough publicly accessible data for the potential recognition of marginal regions.

The starting point for the study of geographical marginality in Slovenia was the implementation of the Centre-Periphery model. This provided us with a frame within which we could search for marginality and marginal regions. Firstly we had to define which settlements and which municipalities may be considered as central. The lack of resources and time forced us to certain presumptions that may be disputable. The first one is that all the settlements statistically considered as cities are a part of the Centre as well as the areas of their municipalities. We called these municipalities predominantly central. According to the Statistical office of the Republic of Slovenia the cities and urban settlements are defined according to 4 criteria. We used the list of cities according to only the first two (1.: 3000 inhabitants or more and between 2,000; 2.: 2,999 inhabitants if there is a surplus of workplaces over the number of persons in employment). According to these 73 out of 192 municipalities had urban centres. The problem here is not only with the definition of the city but also with the fact that we consider the whole territory of the municipality as predominantly central if its seat is defined as the city. And furthermore cities may also be peripheral. However, our main intention was to find out if the municipalities that will be defined as predominantly peripheral according to our presumptions indicate some characteristics that can be considered as marginal.

The second presumption was that municipality with the seat that is within 30 minutes isochrone from the seat of one of 12 statistical regions is a part of the Centre and is therefore predominantly central. Another 71 municipalities meet this criterion. The problem is that the centrality of some of the seats of statistical regions is questionable. For example Postojna is a seat of a statistical region while Jesenice and Ptuj are not. Vrišer (1998) put all these central settlements on level 4 out of 7 but he only defined Postojna as not adequately equipped with central functions for this rank. The detailed analysis of centrality was not an option for us so we used the official NUTS 3 regions seats.

The third presumption was that attractive tourist areas have a certain degree of centrality and we considered municipalities with 10 or more per capita tourist arrivals as a predominantly central. According to all three of the above presumptions 40 municipalities were defined as predominantly peripheral and 152 as predominantly central.

4. Demographic indicators and marginality

Statistical office of the Republic of Slovenia offers the following set of demographic data at municipal level on the yearly basis (Statistical yearbook):

- population by sex,
- natural changes of population by sex,
- marriages and divorces,
- migration by sex,
- education, beginning of the school year

and the following set of Census data (for 2002):

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2 This was the number of municipalities in 2002, the year with the last Census Data available.
Not all of the above data can be used for indicators of marginality. We underlined those that are relevant to at least some extent. In our opinion demographic characteristics that can be obtained from the available data and that may reveal us marginality of certain municipalities are:
- natural decrease of population,
- negative migration balance,
- high aging index (unfavourable age structure),
- low share of population with higher degree of education,
- low share of persons in employment.

For all the above characteristics we have chosen one indicator, calculated the average and standard deviation for all municipalities, calculated contingency tables and tested them for independence with Chi-square test. Municipalities in contingency tables were divided into two groups according to peripherality: (predominantly) central and (predominantly) peripheral and into three groups according to the values of the indicator: low (one standard deviation under the average), high (one standard deviation above the average) and medium (the rest).

The first demographic indicator that we used to test differences between central and peripheral municipalities was natural increase. Natural reproduction of Slovenian population is threatened by extremely low natality. In 2004 within EU only Czech Republic, Latvia and Poland had slightly smaller average number of children per woman while Slovakia had equal (1.25). The majority of other EU member states had considerably higher values. The average for EU was 1.5 and no member state had value above 2.0. In the same year Slovenia experienced negative natural growth (-0.3 per 1000; in 2002 -0.6 per 1000). Due to a larger number of small municipalities with higher decrease, the average value for municipalities was even lower (-0.7 per 1000; in 2002: -1.3 per 1000 with standard deviation 3.6 in 2004 and 4.0 in 2002).

Table 1: Natural increase in Slovenian municipalities in 2002

<table>
<thead>
<tr>
<th>Natural increase 2002</th>
<th>Central municipalities</th>
<th>Peripheral municipalities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low</td>
<td>27</td>
<td>18</td>
<td>45</td>
</tr>
<tr>
<td>Medium</td>
<td>76</td>
<td>17</td>
<td>93</td>
</tr>
<tr>
<td>High</td>
<td>49</td>
<td>5</td>
<td>54</td>
</tr>
<tr>
<td>Total</td>
<td>152</td>
<td>40</td>
<td>192</td>
</tr>
</tbody>
</table>


As regarding the natural increase in 2002 the waste majority of peripheral municipalities were in classes low and medium. The Chi-square test showed very high probability that the value of natural increase depends on peripherality or centrality (more than 99.9 % at 2 degrees of freedom). The situation slightly changed in 2004. Less than one tenth of the central municipalities was in the class low while the same share for peripheral municipalities was almost one third. The Chi-square test showed even higher probability. There were 120 municipalities that were in the same class in both years and 72 that were not. These were not only municipalities which were close to the limits of the classes. There were 3 municipalities that moved from class low to class high. One of them is small

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3 Population by age groups and sex, by ethnic affiliation, population declared as Italians, as Hungarians, as Roma, population by mother tongue, by religion, immigrants to Slovenia by country of first residence and sex and by year of first immigration and sex, last migration by type of migration and sex, population by place of enumeration and presence at the time of census, women aged 15 and over by the number of live-born children, population by language usually spoken in the household (family).
peripheral municipality Hodoš. This may therefore be a result of coincidental factors. Among other two there is an urban municipality Velenje. This is much more difficult to explain. Nevertheless the fact is that there are only 2 municipalities that were in the class low in both years. They are both from north-eastern Slovenia, but according to our criteria Kuzma is peripheral while Razkrižje is not. According to subjective judgement we would also define the border municipality Razkrižje as peripheral eventhough its seat is within 30 minutes isochrone of Murska Sobota. The presented data showed that natural decrease is not a reliable indicator of marginality and neither is reliable our objective definition of predominantly peripheral and predominantly central municipalities.

We hypothesized that marginal regions have higher outmigration than immigration and therefore the net migration per capita in predominantly peripheral municipalities should normally be negative. Net migration in the period 1999-2002 in Slovenia was 2.2 per 1000. The Chi square test showed very little or no dependence between peripherallity and the value of net migration. Almost one tenth of predominantly central and slightly more than one seventh of predominantly peripheral municipalities were in the class low. There were also 3 predominantly peripheral municipalities that were in the class high. The share of dependent population also did not show any dependency with the peripherality of municipality.

Aging index depends from peripherallity of the municipality with 98.8 % probability, while the share of undergraduate inhabitants obviously depends with 100 % certainty on peripherallity. The coefficient of localization for the number of undergraduates if compared with the distribution of population is 0.42 while for other earlier mentioned indicators varies between 0.12 for the distribution of live births and 0.29 for the distribution of immigrants. People with a higher degree of education are obviously very unevenly distributed within Slovenian municipalities and the lack of educated people is the most obvious in peripheral municipalities. Their location quotients vary between 0.14 and 0.90. The situation is worst in the most north-eastern Slovenian region Goričko.

5. Conclusion

From the presented theoretical framework and the rather subjective and fragmentary analysis based on some questionable presumptions we concluded that available demographic data does not give us a possibility for the creation of reliable demographic indicators of geographical marginality. The other possible conclusion is that there are no marginal municipalities (regions) in Slovenia. We created a simple aggregated »coefficient of demographic marginality« to check if there are any municipalities with only negative demographic characteristics. We used above 5 characteristics and the position in the class low\(^4\) (high) resulted in 1 point, medium in 0 and high (low) in -1 point. We devided the sum with the number of indicators so that the coefficient varies between 1 (demographically marginal) and -1 (demographically central). The highest calculated coefficient was 0.6. All 5 municipalities with that coefficient were central according to our relatively ambiguous definition. However two of these municipalities were city municipalities Koper and Velenje that are undoubtedly predominantly central. Negative demographic characteristics are as much the problem of marginal rural areas as they are the problem of cities. On the other side, peripheral areas may be attractive and therefore they may have positive demographic development. The lowest index -0.8 was calculated for peripheral municipality Trnovska vas in the region Slovenske gorice in north-eastern Slovenia.

\(^4\) Under if that is a negative characteristic and above if higher value is a negative characteristic (aging index).
How, for our purpose, unreliable is the demographic data shows the exchange of the share of people in employment with the share of dependent population in the coefficient. The only municipality with the coefficient 0.6 after that change was the central municipality Odranci (Prekmurje, north-eastern Slovenia near the border with Hungary and Croatia).

Finally we can conclude that:

- Geographical marginality is not an unambiguous and accurately defined characteristic and therefore measuring it is not easy if not almost impossible.
- The available demographic data for Slovenian municipalities cannot be used as a set of reliable indicators of marginality; however, they indicate some regions in our case municipalities that show more marginal characteristics than others.
- Even the municipalities that are peripheral without any reasonable doubt such as Osilnica, Kostel, Loška dolina and Loški potok may have some unexpected demographic characteristics: such as positive net migration in 2002 (all 4 and in the period 1999-2002 3 of them – Kostel had even one of the highest rates with the average annual rate of 18 per 1000 inhabitants). On the other side even undoubtedly central municipalities may have quite negative demographic characteristics.

**Literature**


Statistical office of the Republic of Slovenia, www.stat.si


**GEOGRAFSKA MARGINALNOST V SLOVENIJI Z VIDIKA PREBIVALSTVENIH KAZALNIKOV**

**Povzetek**


Danes logika kapitalističnega profita proizvodnjo čedalje pogosteje usmerja v območja s ceneno delovno silo in s tem povzroča brezposelnost tam, od koder se proizvodnja seli, hkrati pa novoaplozena postavljata v bolj ali manj brezpravni položaj neusmiljeno izkoriščane delovne sile. Na ta način ene in druge potiska na rob družbe in jih družbeno
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marginalizira. Seveda prisotnost posameznih marginalnih skupin prebivalstva na nekem območju še ne pomeni, da gre za geografsko marginalnost regije, kjer se nahajajo.

Nasprotno je pojem geografske marginalnosti težko opredeljiv in obstajajo številna različna pojmovanja. Po eni strani gre za poseben pristop do problematike območij z gospodarskimi, družbenimi in političnimi težavami, ki so do te mere zaostrene, da ta območja bistveno odstopajo od preostanka nekega širšega območja, ki mu to območje pripada. To odstopanje je v skladu z nekaterimi pojmovanji tako veliko, da tako območje sploh ni več sestavni del širšega območja, kamor bi po geografskem položaju sodilo, temveč je od njega ločeno. V tem primeru lahko govorimo o ločenem območju ali „izolatu“. V skladu z drugim konceptom lahko opredeljujemo geografsko marginalnost z vidika gospodarskih značilnosti, pri čemer se naslonimo na središčno-obrobn model (Center-Periphery). Marginalna območja so del obroba (periferije), a jih ne moremo enačiti z obrobjem. Na Sliki 1 je prikazana možnost razlikovanja na podlagi stopnje tržne vključenosti in stopnje razvitosti proizvodnih sil. V primeru, da je nizka le ena od navedenih, gre za obrobo (periferijo), če sta nizki obe pa za marginalno območje. Postavljanje meja med tem kaj je dovolj nizko za opredelitev marginalnosti, je seveda bolj ali manj subjektivno.

Marginalnost lahko pojmujemo tudi na podlagi koncepta „osrednjega toka“ (mainstream). V času osrednji družbeni tok, znotraj katerega se gibljejo življenjske poti večine pripadnikov, spreminja smer. Tako lahko nek posameznik, ne da bi bistveno spremenjal svojo življenjsko pot, del te prebije nizko, del pa znotraj osrednjega toka. V času, ko je v marginalnem položaju (zunaj osrednjega toka), se po določenih bistvenih značilnostih pomembno razlikuje od pripadnikov družbe, ki so znotraj osrednjega toka. To se sklad je tudi z izvirnim pomenom besede marginalen (npr.: napisan na robu strani v knjigi ali rokopisu). Beseda torej označuje nekaj, kar je bistveno drugačno od sosedstva, a je na nek način s tem sosedstvom povezano. Zato v tem primeru ne moremo govoriti o popolni ločenosti kot v primeru „izolata“. Za slovenske razmere lahko že na podlagi poznavanja temeljnih geografskih značilnosti trdimo, da marginalnih območij v smislu „izolata“ v Sloveniji ni. Predpostavljali pa smo, da obstajajo posamezna območja, ki kažejo določeno stopnjo marginalnosti. Zanimalo nas je, če dosegljivi prebivalstveni podatki omogočajo ugotavljanje marginalnosti slovenskih občin.

Občine kot analitične prostorske enote smo uporabili, ker so to najmanjše prostorske enote, ki jih lahko opredelimo kot jedrane (nodalne) regije, za katere lahko dobimo še dovolj uporabne prebivalstvene podatke. Težave pri analitičnem delu z njimi so posledica izjemo velikih razlik v velikosti. Te se z drobljenjem občin le še povečujejo. Občine smo razdelili na osrednje in obrobne glede na to ali je njihovo središče mesto (statistična opredelitev SURS), oziroma ali je v polurni izohroni (vožnja z osebnim avtom) enega od dvanajstih središč statističnih regij. Občine smo glede na izbranih pet prebivalstvenih kazalnikov razvrščali v tri skupine, glede na odstopanje od povprečja. Mejne vrednosti sta bili en standardni odklon pod in nad aritmetično sredino. Predpostavka je bila, da tolikšno odstopanje v smeri, ki pomeni neugoden odklon od povprečja (npr. pri starostnem indeksu je to navzgor) pomeni, da imamo opravka s prebivalstveno posledico marginalnosti. Razdelitev občin glede na naravni prirast (oz. upad), starostni indeks in delež prebivalcev z visoko izobrazbo so pokazali zelo visoko verjetnost povezanosti z našo delitvijo občin na osrednje in obrobne. Nasprotno pa pri stopnji selitvene rasti (upada) in pri deležu vzdrževanih testiranje s Hi-kvadrat testom ni potrdilo velike verjetnosti odvisnosti.

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Izračunali smo tudi preprost količnik marginalnosti, katerega vrednost je v razponu med 1 in -1, pri čemer 1 pomeni, da preučevana enota v vseh izračunanih količnikih v neugodni smeri za več kot en standardni odklon odstopa od povprečja. Izkazalo se je, da občin, ki bi bile vsaj blizu vrednosti 1 ni. To pomeni, da pri istih občinah posamezni količniki kažejo značilnosti, ki bi bile lahko povezane z marginalnostjo, drugi pa ne, ali pa kažejo celo nasprotno. Izkazalo se je tudi, da občine z najvišjim količnikom po naši opredelitvi vse po vrsti sodijo med osrednje. Prebivalstveni količniki tako po našem mnenju vsaj za slovenske razmere niso primerni za opredeljevanje marginalnosti in marginalnih območij. Očitno je namreč, da so neugodne prebivalstvene značilnosti prisotne tako v osrednjih kot v obrobnih območjih in obratno in po naši presoji tudi niso nujno posledica marginalnosti v gospodarskem, družbenem (političnem) ali kulturnem smislu.