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Functional Regions Defined by Urban Centres of (Inter)National Importance – The Case of Slovenia

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1 ABSTRACT

The main focus of this paper has been to determine the functional regions in the heterogeneous area of Slovenia defined by integrated urban system at the (inter)national level. The notion of polycentric urban development is taken from the local and regional perspective based on the principle of proximity where co-operation, exchanges and networks among cities can contribute to the development of integrated urban systems to overcome the legacy of the inherited urban structures. Delineation of Slovenia into functional regions is based on labour market approach, where daily labour commuting has been considered as the main factor, which determines connectivity/relation between predefined local urban centres and municipalities in the functional regions. The urban centres of national and international importance in Slovenia have been determined mainly according to the number of inhabitants and their role in the polycentric urban system of Slovenia according to the Spatial Development Strategy of Slovenia (SPRS 2004).

2 INTRODUCTION

The main aim of sustainable spatial development policy of a country is balanced development of the whole territory, considering also sustainable development of wider area from the international perspective. European Spatial Development Perspective (ESDP 1999) defines three fundamental goals that should be achieved equally in all the EU regions. The goals are economic and social cohesion, conservation and management of natural resources and cultural heritage, and a more balanced competitiveness of the European territory. For achieving these goals the present state of regional development has to be studied as the base for further economic and political decisions. Each analysed territorial area should be based on complex, open, dynamic and nonlinear system that works on basis of functional connections between smaller and larger territorial areas. Region is in this way considered as a dynamic system that is very complex and difficult to manage from the administrative point of view. Because of that i.e. »functional region« is the most appropriate unit for economic analysis and for interaction of political, social and economic processes (Tomaney and Ward 2000).

Nowadays, the urban region/area has become the most essential functional level of urban and regional systems (Antikainen 2005). However, two main concepts have appeared: the concept of Functional Urban Area (FUA) and the concept of Functional Urban Region (FUR). These concepts are some of the means to study social and spatial disparities in different city centred (urban) areas, and related problems, such as residential segregation, outward diffusion of economic activities and people from urban cores or disparities in labour markets.

The European FUA concept focuses on categorizing dense built-up areas that form contiguous cores of urban areas, and commuters' belts; FUA is therefore a unit from which a fixed percentage of commuting to work is directed mainly within the area. The FUA limits are determined through percentages of commuters having their job in the core or in another FUA unit. For example, the project ESPON 1.1.1 (2004): Potentials for polycentric development in Europe considered functional urban areas, as travel-to-work areas of the main urban centres according to the common criteria implemented for approximately 1600 FUA in 29 European countries. Here, FUA consisted of an urban core and the surrounding area that was economically integrated with the centre, and represented the (sub)regional labour market area. In the countries with more than 10 million inhabitants, FUA was defined as having an urban core of at least 15,000 inhabitants and over 50,000 in total population. For smaller countries, FUA should had have an urban core of at least 15,000 inhabitants

and more than 0.5% of the national population, as well as having functions of national or regional importance.

Like the European FUA concept, the Functional Urban Region (FUR) concept reflects an urban definition and delimitation based on daily flows, in practice often commuting to work. It represents another attempt to capture the economic sphere of influence of a city with a core city defined in terms of concentrations of employment and a commuting hinterland composed of all those areas from which more people commute to the particular city in question than to some other city. In everyday language, FUR is probably best approximated by the term metropolitan area. However, the FUR concept is broader that FUA concept: they are more extensively defined than local labour markets or travel to work areas, because they impose no cut-off limits (such as 15 or 20 % of their resident population) on commuting. They are more urban, indeed metropolitan, because they do impose lower limits, of 15,000 – 20,000 jobs before counting a focal urban area as an urban core.

A Functional Region (FR) is a region characterised by a high frequency of intra-regional economic interaction, such as intra-regional trade in goods and services, labour commuting and household shopping patterns (Karlsson and Olsson 2006). From that sense, FR concept is much broader than FUR (or FUA) concept. The basic characteristic of a functional region is the integrated labour market, in which intra-regional commuting as well as intra-regional job search and search for labour is much more intensive than the inter-regional counterparts. The dominant concept in defining functional regions is that of (local) labour markets (Cörvers, Hensen and Bongaerts, 2009); that was illustrated by the substantial literature in this field by, for example, Andersen (2002), Coombes, Green and Openshaw (1986), Casado-Di´Az (2000), Eurostat (1992), and OECD (2002).

In some previous research (Drobne, Konjar and Lisec 2009; Konjar, Lisec and Drobne 2010), the methods to delimitate the functional regions using only data on commuters have already been analysed and discussed for Slovenia. Those methods have been already tested to define administrative regions of Slovenia as well (Drobne et al 2009). In this work labour market approach has been used to define functional regions in Slovenia using pre-defined centres of national and international importance of Slovenia – according to the (SPRS 2004) – as core centres for functional regions. For that purpose, we discuss first the polycentric urban and regional development concepts of Slovenia in Section 3. In Section 4, background of functional regions, materials and practical methodology for identifying functional regions using labour market approach are presented. Moreover, the functional regions in Slovenia are calculated using software developed by the authors of this paper.

3 POLYCENTRIC URBAN AND REGIONAL DEVELOPMENT CONCEPTS IN SLOVENIA

According to the implementation of the hierarchy of central places defined by Vrišer (1988), seven levels of central places were designed for spatial planning and regional policy purposes in Slovenia: local centres (1-4 lower level) and regional centres (5-7 higher level) in the Long-term Development Plan of Slovenia 1986-2000 adopted in 1986 as the comprehensive strategy for social, economic, spatial, regional and environmental development of the Republic of Slovenia within the former Yugoslav Federation. This development plan was formulated according to the concept of polycentric development considering specificities of different (geographical) areas (»planning regions«) and the network of regional and local centres (58 towns) with different population size and functions. The most important 12 regional centres were: Ljubljana, Maribor, Celje, Kranj, Novo mesto, Nova Gorica, Murska Sobota, Postojna, and several city clusters (conurbations) such as: Koper-Izola-Piran, Trbovje-Zagorje ob Savi-Hrastnik, Slovenj Gradec-Ravne na Koroškem-Dravograd, Krško-Brežice, Jesenice-Radovljica, with their gravitation areas (i.e. »planning regions«) covering the whole territory of Slovenia (see Fig. 1).

After independence of Slovenia in 1991 and the local government reforms since 1994 with transformation of former (larger) communes (62) to new small NUTS 5 municipalities (147-192-193-210-211, etc.), the urban hierarchy has been slightly transformed in the Spatial Development Strategy of Slovenia (SPRS 2004) defining »centres of (inter)national, regional, inter-municipal importance« – together 51 »urban centres« with 64 towns and other urban settlements, considering also urban conurbations (city clusters) at all levels. The most important regional centres (or the »centres of national importance«) in SPRS (2004) are: Ljubljana, Maribor, conurbation Koper-Izola-Piran, Celje, Kranj, Novo mesto, Nova Gorica, Murska Sobota, Velenje, Postojna, Ptuj, and conurbations: Slovenj Gradec-Ravne na Koroškem-Dravograd, Jesenice-Radovljica-

(Bled), Zagorje ob Savi-Trbovlje-Hrastnik, Krško-Brežice-(Sevnica) with their gravitation zones (i.e. 15 potential functional urban areas) that are not territorially specified and overlap between each other. Ljubljana, Maribor and conurbation Koper-Izola-Piran are also considered as »centres of international importance« due to their size, the status of a capital city of Ljubljana, the importance of the port of Koper in Central Europe, and geographical location of urban conurbation Koper-Izola-Piran near the borders with Italy and Croatia, and the second largest city of Maribor near the border with Austria, close to Hungary and Croatia (see Fig. 2).

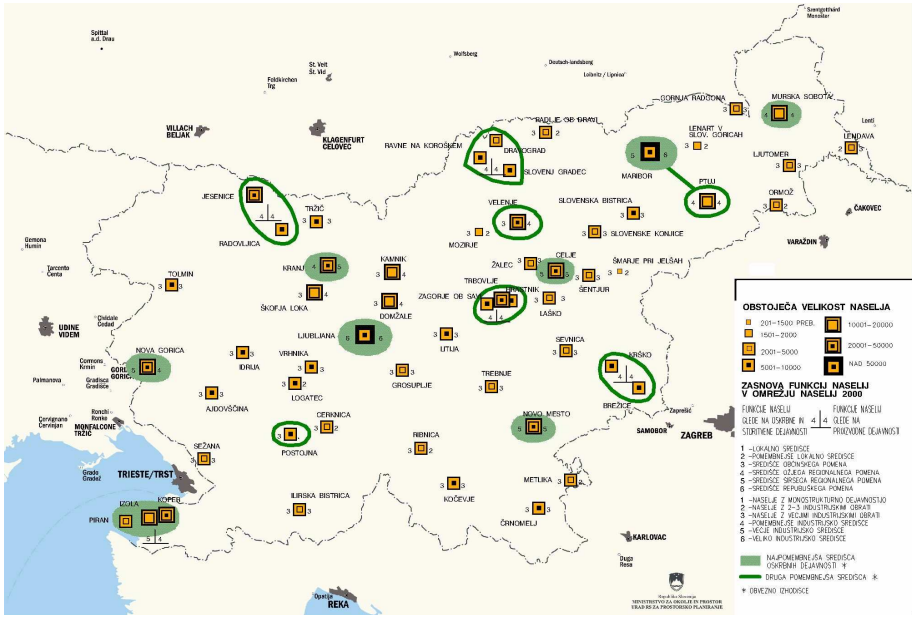

Fig. 1: Long term development plan of SRS 1986-2000 (1986): Urban network of 15 regional centres (denoted by green colour) and 43 local centres with city conurbations

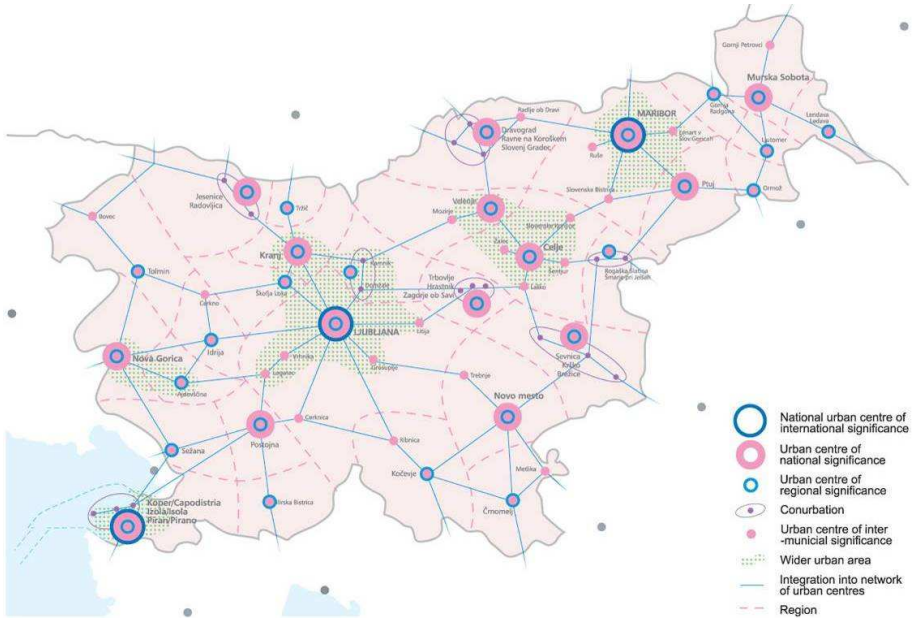

Fig. 2: Centres of (inter)national, regional and inter-municipal importance (regional and local centres) with city clusters, agglomerations and functional urban areas in the polycentric urban system of Slovenia (SPRS 2004)

Fig. 2 shows 51 »urban centres« of Slovenia (43 towns and 8 urban conurbations (21 towns and urban settlements) equals to 64 towns and urban settlements) defined by (SPRS 2004):

- 3 »centres of international importance«: Ljubljana, Maribor and Coastal conurbation (Koper-Izola-Piran);
- • 12 »centres of national importance«: 8 towns (Murska Sobota, Ptuj, Celje, Velenje, Kranj, Novo mesto, Postojna, Nova Gorica) and 4 urban conurbations (Jesenice-Radovljica-(Bled); Zagorje

ob Savi-Trbovlje-Hrastnik; Slovenj Gradec-Ravne na Koroškem-Dravograd; Brežice-Krško-(Sevnica);

- 16 »centres of regional importance«: 13 towns and 3 urban conurbations (Domžale-Kamnik; Šmarje pri Jelšah-Rogaška Slatina; Tržič-Bistrica);
- 20 »centres of inter-municipal importance«.

These 15 »centres of national importance« can be treated also as regional centres in Slovenia. Twelve of them are also centres of statistical NUTS 3 regions. Towns of Ptuj and Velenje were in 2008 proposed by the Government of RS as centres of two new administrative NUTS 3 provinces. Only one »centre of national importance« – city cluster (conurbation) Jesenice-Radovljica-(Bled) in Gorenjska statistical NUTS 3 region has not been officially proposed as the centre of new administrative NUTS 3 province.

In the polycentric development concepts from 1980s, the most important urban centres in Slovenia (e.g. regional centres) with their gravitation areas (planning regions) have been already highlighted. The new polycentric urban development concept (as before) emphasises the improved (equal) accessibility to public goods – administration, jobs, services and knowledge, that is located in these urban centres which are also important transportation nodes in Slovenia, and in Central Europe. Therefore polycentric development of (3-12-16-20) regional and local (urban) centres corresponds to the balanced regional development concept and development infrastructure along main European corridors V and X. During the preparation of the (revised) polycentric development concept in the Strategy of Spatial Development of Slovenia (SPRS 2004), the importance of urban agglomerations, city conurbations and their morphological and functional urban areas are being envisaged by the experts and policy makers, with potentials for cross-border cooperation taking in consideration improved cross-border mobility, accessibility, institutional links and networks, and cross-border, inter-regional and trans-national cooperation, and Slovenia's accession to the EU in year 2004.

3.1 Functional urban areas

Most jobs and economic activities in Slovenia are concentrated in the urban areas of Ljubljana, Maribor, Celje, Coastal conurbation Koper-Izola-Piran, followed by Kranj, Novo mesto, Velenje, Nova Gorica. Therefore travel-to-work migrations are the most intensive towards these cities. Most intensive commuting occurs in the gravitation areas of the largest employment (regional) centres such as Ljubljana, Kranj, Maribor, Celje, Velenje, Krško-Brežice, Koper-Izola-Piran, Novo mesto, Nova Gorica, Ptuj, Slovenj Gradec-Ravne na Koroškem, Murska Sobota. The Strategy of Spatial Development of Slovenia (SPRS 2004) promotes 15 »centers of national importance« (e.g. regional centres), including four city clusters, their gravitation and commuting zones as potential functional urban areas, even though they are not territorially defined. Twelve of these 15 centres of national importance are also centres of current 12 NUTS 3 (statistical or development) regions.

The project ESPON 1.1.1 (2004) considered functional urban areas (FUA) as travel-to-work areas of the main urban centres according to the common criteria implemented for approximately 1600 FUA in 29 European countries. The FUA consists of an urban core and the surrounding area that is economically integrated with the centre, and represents the (sub)regional labour market area. The analysis of FUA in Slovenia was prepared firstly according to the proposed methodology without any special modifications. As a result, six FUA of European importance were selected: Ljubljana (with Kranj), Maribor (with Ptuj), Celje (with Velenje), Novo mesto, Koper-Izola-Piran and Nova Gorica. According to the weighted results of ESPON 1.1.1. indicators (2004), Ljubljana FUA is the only urban area in Slovenia with the status of »weak« MEGA (Metropolitan European Growth Area) as one of 76 MEGAs in Europe. Due to the sea port function of international importance Koper-Izola-Piran FUA was given the status of transnational/national FUA while Maribor (with Ptuj), Celje (with Velenje), Novo mesto, Nova Gorica were identified as regional/local FUA.

Since it is important for Slovenia to be focused on small towns and middle-sized cities, and for the purpose of implementation of the INTERREG IIIB project PlaNet CenSE in Slovenia, the Ministry of Environment and Spatial Planning of RS (re)defined 10 FUA in 2006 having showed the most important regional centres – Ljubljana, Maribor, Koper-Izola-Piran, Celje, Kranj, Velenje, Novo mesto, Nova Gorica, Ptuj, Murska Sobota. Despite lower criteria for identification of other urban centres, the project did not take in consideration four city clusters of national importance (as one urban centre) with the common travel-to-work and gravitation areas. Therefore, it is more likely to talk about 15 FUA of European importance in Slovenia,

including MEGA Ljubljana, that are also important urban nodes in the polycentric and balanced development of Slovenia. Fig. 3 shows 10 FUA (re)defined in 2006 and marks 5 potential FUA (from top to bottom: Slovenj Gradec-Ravne na Koroškem-Dravograd; Jesenice-Radovljica-(Bled); Zagorje ob Savi-Trbovlje-Hrastnik; Brežice-Krško-(Sevnica); Postojna).

Most recently »Strategy for Regional Polycentric Urban System in Central-Eastern Europe Economic Integration Zone« (RePUS 2007) project implemented under the framework of the EU programme INTERREG IIIB CADSES addressed the problems of a more balanced, sustainable and polycentric urban system of middle-sized cities and small towns, that could strengthen emerging Potential Economic Integrating Zone (PEIZ) in Central and Eastern Europe. According to the RePUS methodology implemented in Austria, Italy, Hungary, Czech Republic, Hungary and Slovenia, 42 local functional urban areas (as local labour systems) and 17 regional functional urban areas (as regional labour systems) were identified in Slovenia (RePUS 2008); see Fig. 4.

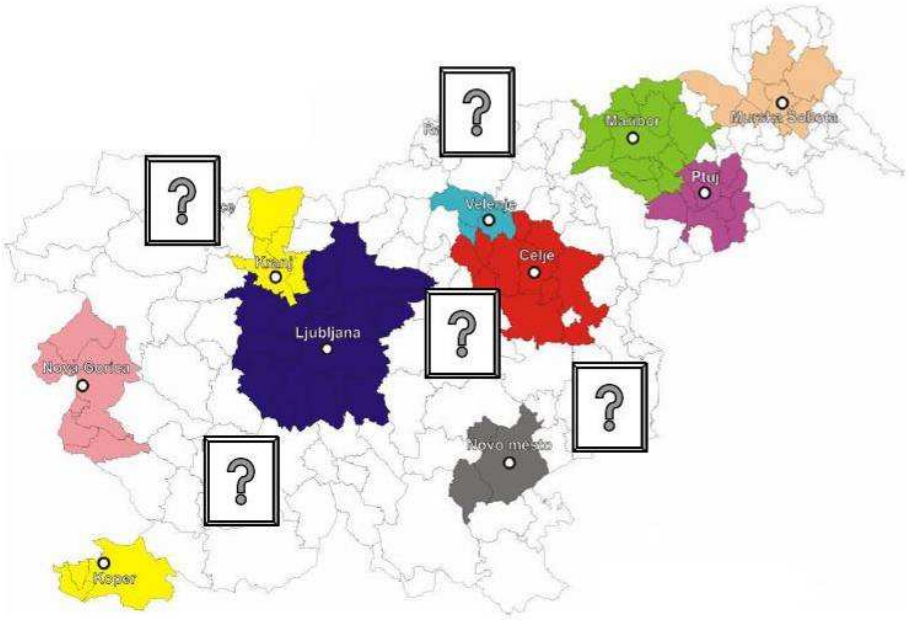

Fig. 3: Ten functional urban areas in Slovenia in 2006 (PlaNet CenSE 2006)

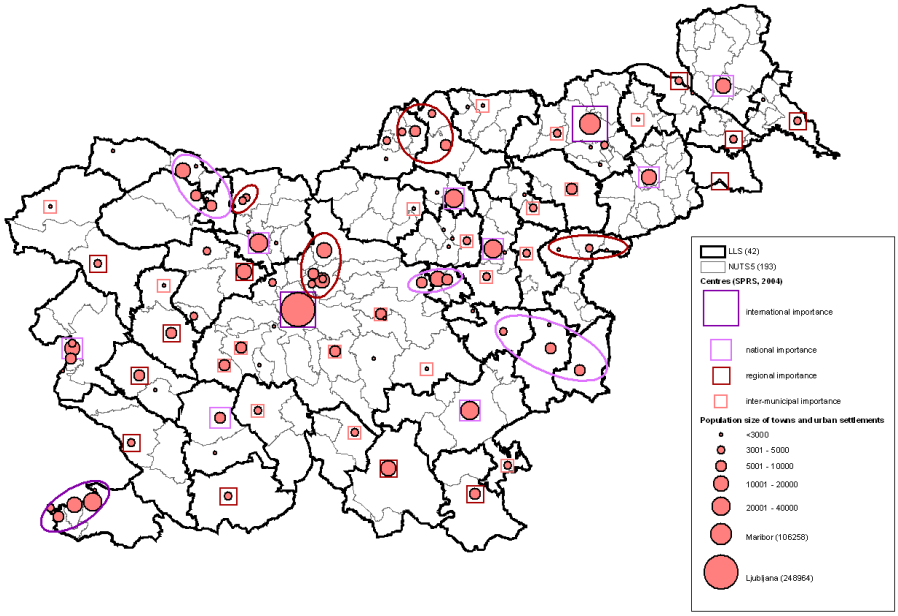

Fig. 4: Local and regional functional urban areas with urban network in Slovenia (RePUS, 2008)

4 FUNCTIONAL REGIONS

Functional region (FR) is the region defined by much more intense economic interactions inside the region than with any other area outside the region. A functional region is characterised by its agglomeration of

activities and by its intra-regional transport infrastructure, facilitating a large mobility of people, products, and inputs within its interaction borders.

In practise, two different concepts to delimit travel-to-work-areas are used: (a) delimitation around a centre, and (b) delimitation using algorithms or cluster analysis based on combination of distance, closeness, commuting thresholds, travel times, etc. It should be noted that certain centre-based definitions normally do not represent a division into regions or an exhaustive breakdown of the national territory but correspond to areas of extended urban influence; those portions of the national territory which lie outside this area of influence are all considered as rural areas. In delimitation based on centres, particular care needs to be taken in definition of these centres. While some countries identify centres according to the population or level of employment, others consider commuting conditions. In the latter case, the centre must be »self-sufficient«, which means that the number of workers living and working there is higher than the number of workers commuting to another centre, or it must attract a number of workers that is substantially higher than the number of workers leaving the centre to work outside.

4.1 Delimitation of functional regions using labour market approach

In our application of delimitation of functional regions, we used centre-based labour market approach that uses one-way commuter flows of inter-municipal working population. The model for delimitation of functional regions was described and discussed in (Drobne, Konjar and Lisec 2009), where centres had been defined by »functional approach« considering only data on commuters. Here, the municipalities were used as the smallest geographical areas to aggregate them into the functional regions. Data on inter-municipal commuting to work were acquired from Census 2002 (SORS 2009a). In 2002, there were a total of 287,272 inter-municipality commuters between 192 municipalities in Slovenia.

Urban centre			***Municipality***	
Rank	***Name***	***Population***	***Name***	***Population***
1	Ljubljana	268,423	Ljubljana	276,091
2	Maribor	96,408	Maribor	113,113
3	Koper-Izola-Piran-Lucija-Portorož	48,865 (24,658+11,317+4159+5793+2938)	Koper, Izola, Piran	84,638 (51,354+15,946+17,338)
4	Celje	38,047	Celje	48,991
5	Kranj	36,357	Kranj	54,188
6	Zagorje ob Savi-Trbovlje-Hrastnik	27,844 (6546+15,525+5773)	Zagorje ob Savi, Trbovlje, Hrastnik	44,750 (17,098+17,545+10,107)
7	Velenje	25,935	Velenje	33,226
8	Jesenice-Radovljica-Bled	24,715 (13,542+5924+5249)	Jesenice, Radovljica, Bled	48,674 (21,828+18,698+8148)
9	Novo mesto	22,874	Novo mesto	35,570
10	Ptuj	18,321	Ptuj	23,699
11	Brežice-Krško-Sevnica	18,374 (6558+7027+4789)	Brežice, Krško, Sevnica	67,487 (24,238+25,600+17,649)
12	Slovenj Gradec-Ravne na Koroškem-Dravograd	17,885 (7519+7030+3336)	Slovenj Gradec, Ravne na Koroškem, Dravograd	37,425 (16,662+11,722+9041)
13	Nova Gorica-Šempeter pri Gorici	16,810 (13,054+3756)	Nova Gorica, Šempeter-Vrtojba	38,250 (31,911+6339)
14	Murska Sobota	11,705	Murska Sobota	19,433
15	Postojna	8994	Postojna	15,455

Tab. 1: Urban centres of (inter)national importance (SPRS 2004) in municipalities and population on 1.1.2009 in Slovenia (SORS 2009b)

As a first stage of the applied methodology for delimitation of functional regions, municipalities that are strongly self-sufficient should be identified. In our application we used 15 centres of national and international importance defined in the Spatial Development Strategy of Slovenia (SPRS 2004), and already

indicated on Figs. 3 and 4. Tab. 1 shows 15 urban centres and urban conurbations of (intern)national importance in Slovenia (SPRS 2004) and the central (self-sufficient) municipalities that were applied in the labour market approach of delimitation of functional regions of Slovenia; note, that urban centre Šempeter pri Gorici has been included in a new urban agglomeration, together with Nova Gorica, due to very high percentage of commuters between them.

When self-sufficient municipalities, respectively groups of municipalities defined as urban conurbations, were defined, chains of municipalities from central (groups of) municipalities were created till condition (1) was satisfied:

$$\mathbf{FR}_i = \{x : f_i(x) \geq f_j(x)\}, \quad (1)$$

where $f_i(x)$ is the commuting frequency to the centre i at a location x, $f_i(x)$ is the commuting frequency to the centre j at a location x, and FR_i is the extension of the functional region i

$$(\mathbf{FR}_i = \{x : f_i(x) > 0\})$$

In practise, the chains of municipalities to the self-sufficient centres have been formed using bellow explained procedure. The chains have been calculated automatically using our own software based on Java platform, which considers the principle of maximum commuting flows for three types of municipalities: (a) the municipalities, that are directly connected with their maximum commuting flow of working population to the central municipality; (b) municipalities that are not directly connected with their maximum commuting flow to the central municipality, but they are connected with their maximum commuting flow to non self-sufficient municipality, which is than connected to the one of the central municipality; and (c) the pairs of municipalities, which present to each other the destination of the maximum flows, have been connected to the region, in which the direction of the second maximum flow was oriented.

Fig. 5 shows three functional regions defined by two urban centres and one urban conurbations of international importance at the NUTS 2 level, and Fig. 6 shows fifteen functional regions defined by nine urban centres and six urban conurbations of national importance in Slovenia at the NUTS 3 level.

From Fig. 5, the huge functional influence of the capital of Slovenia, i.e. Ljubljana, is evident at the NUTS 2 level. In the case of three functional regions, functional region of Ljubljana cover 78 % of the country (!). That is also the result of ESPON 1.1.1. (2004), where Ljubljana FUA is the only one urban area in Slovenia with the status of »weak« MEGA (Metropolitan European Growth Area) as one of 76 MEGAs in Europe (see also Fig. 7).

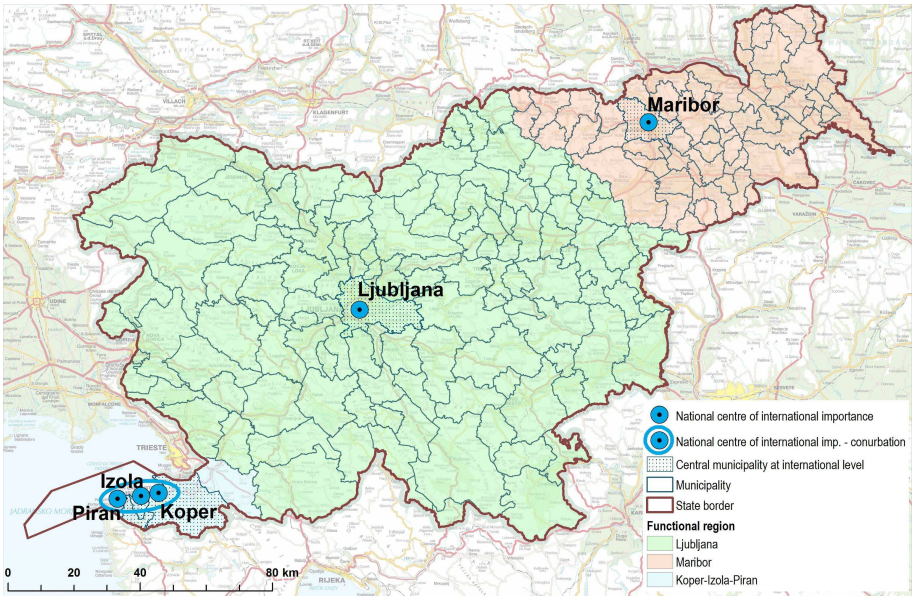

Fig. 5: Three functional regions defined by two urban centres and one urban conurbations of international importance in Slovenia

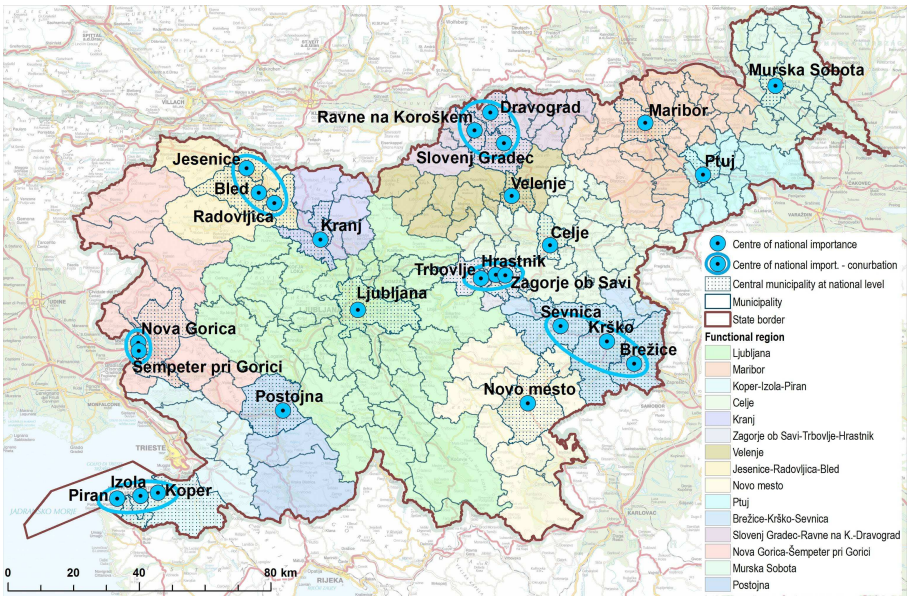

Fig. 6: Fifteen functional regions defined by nine urban centres and six urban conurbations of national importance in Slovenia

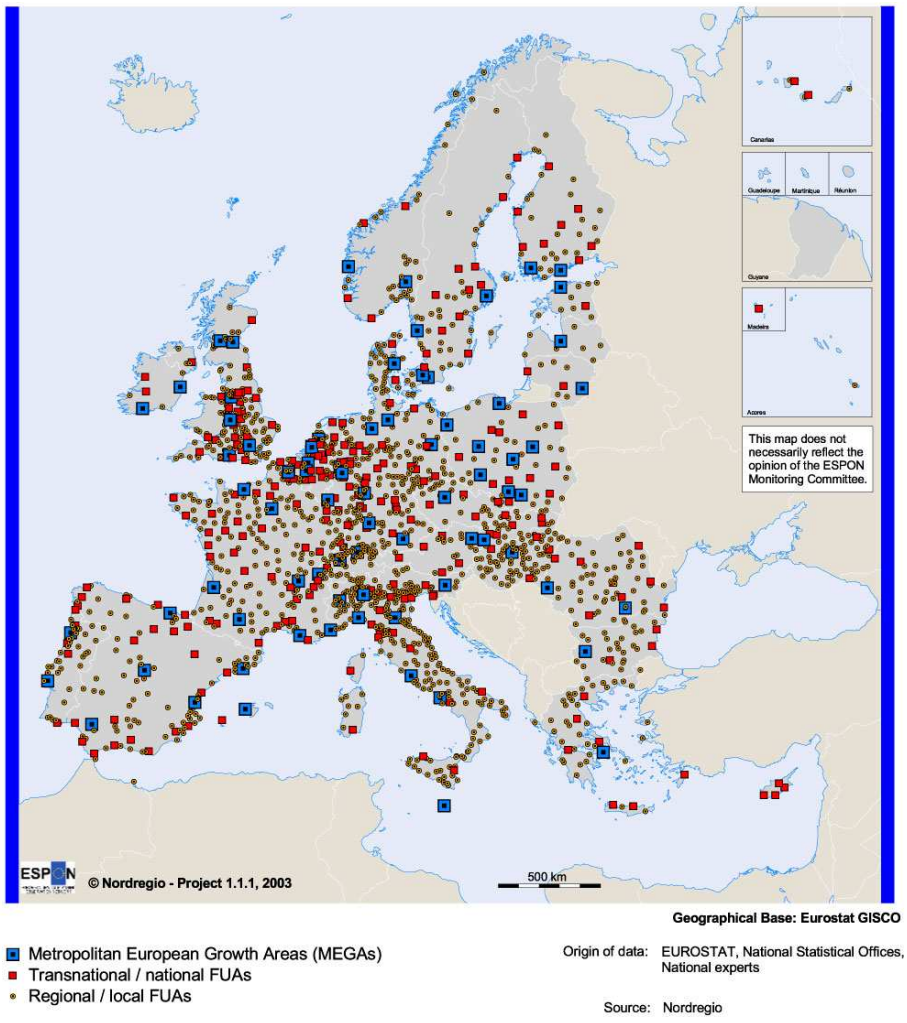

Fig. 7: Typology of functional urban areas (FUAs) in Europe (ESPON 2004)

Tab. 2 and 3 show some basic characteristics of functional regions at NUTS 2 and NUTS 3 level in Slovenia. At both level, functional region Ljubljana has the highest population. Discrepancy between functional regions at NUTS 2 level is obvious: urban conurbation Koper-Izola-Piran can not compete with functional region Ljubljana at all: there is almost 17-times less population in the smallest FR (Koper-Izola-Piran) than in the largest FR (Ljubljana) at NUTS 2 level of Slovenia!

This proportion remains the same at the NUTS 3 level (between Postojna and Ljubljana) – but with the exception of Ljubljana (and Maribor) other functional regions are more comparable at the NUTS 3 level. The average functional region at NUTS 3 level has population of almost 135,490 inhabitants (without Ljubljana 100,340 inhabitants).

Delimitation of functional regions around the urban centres and urban conurbations at NUTS 3 level in Slovenia has re-arranged the relative importance of functional connections in the (functional) region. Ranks of the importance (according to the population in the analysed entities) are not same for urban centres (and conurbations) and for functional regions (compare Tab. 1 and Tab. 3). Comparing the relative importance of functional regions to relative importance of urban centres (conurbations), there are five functional regions that have higher relative importance than their urban centres (including urban conurbations); those are Celje, Novo mesto, Nova Gorica-Šempeter pri Gorici, Murska Sobota and Brežice-Krško-Sevnica. Five functional regions with lower relative importance than their urban centres (conurbations) are Koper-Izola-Piran-Lucija-Portorož, Kranj, Velenje, Jesenice-Radovljica-Bled and Zagorje ob Savi-Trbovlje-Hrastnik. And, five functional regions of Ljubljana, Maribor, Ptuj, Slovenj Gradec-Ravne na Koroškem-Dravograd and Postojna have the same relative importance than their urban centres (conurbations).

Rank	***Functional region***	***Population***		***Number of municipalities***
		Number	***%***	
1	Ljubljana	1,488,805	73,2 %	134
2	Maribor	454,793	22,4 %	72
3	Koper-Izola-Piran	88,764	4,4 %	4
	Slovenia	***2,032,362***	***100,0 %***	***210***

Tab. 2: Population and number of municipalities in functional regions at NUTS 2 level in Slovenia

Rank	***Functional region***	***Population***		***Number of municipalities***
		Number	***%***	
1	Ljubljana	627,565	30,9 %	41
2	Maribor	265,423	13,1 %	28
3	Celje	190,423	9,4 %	20
4	Novo mesto	110,081	5,4 %	14
5	Koper-Izola-Piran	108,778	5,4 %	7
6	Nova Gorica-Šempeter pri Gorici	101,908	5,0 %	11
7	Murska Sobota	99,237	4,9 %	23
8	Kranj	93,920	4,6 %	7
9	Brežice-Krško-Sevnica	79,075	3,9 %	7
10	Ptuj	73,859	3,6 %	16
11	Velenje	67,868	3,3 %	12
12	Slovenj Gradec-Ravne na Koroškem-Dravograd	67,778	3,3 %	11
13	Jesenice-Radovljica-Bled	66,368	3,3 %	7
14	Zagorje ob Savi-Trbovlje-Hrastnik	44,750	2,2 %	3
15	Postojna	35,329	1,7 %	3
	Slovenia	***2,032,362***	***100,0 %***	***210***

Tab. 3: Population and number of municipalities in functional regions at NUTS 3 level in Slovenia

5 CONCLUSION

The ESPON 1.1.1 project (2004) found that Slovenia is one of the most polycentric European countries despite the small size of the country. This is a direct consequence of polycentric spatial and regional development policies since the end of 1960s. Polycentric development concept and distribution of jobs, services and financial subsidies have been also an instrument of balanced regional development policy in Slovenia, which was (partly) modified only by the local development (communal) policy in 1970s, and market reforms in 1990s. During 1990s the polycentrism has been in the shadow of centralisation tendencies and macro-economic priorities of Slovenia, as the new independent country, and the incomplete local government reforms. But the polycentric development concept has been present again since year 2000 in the most important new strategic development documents, such as the economic policy, regional policy, and spatial development policy, that are also complementary with the goals of the EU policy documents, looking over polycentrism as the main principle that guarantees effective, moderate and balanced spatial development (Zavodnik Lamovšek, Drobne and Pichler Milanović 2009).

In the paper, we discussed polycentric urban and regional development concepts in Slovenia which results defined urban centres of international and national importance in Slovenia (SPRS 2004). Using those, pre-

defined, centres of national and international importance of Slovenia as core centres and labour market approach, we defined functional regions in Slovenia. Functional regions have been analysed at NUTS 2 and NUTS 3 levels. As showed by other authors before, the daily interaction in the labour market can be considered as a good approximation for the functional region. In this way, delineation of functional regions can be used as a good starting point and framework for further analyses and research.

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