

6. Urban settlements network - instrument of the spatial- functional organization of the Republic of Serbia

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The area of Serbia, as well as the great part of South East Europe is insufficiently urbanised. The intensive urbanisation of Serbia began in the second part of the 20th century. Almost up to the 1960s, Serbia had exclusively agricultural character by the economic structure, while it was rural area by the structure of population.

The slow growth and the functional development of towns were interrupted by the social determination that the economic structure of the country should change by strengthening of industry. The economic situation in the Republic was changed by the gradual development of industries which also implied the changes in the spatial distribution of population and in its biological and socio-economic structures. The intensive urbanisation, on one side and deagrarization, on the other, caused by radical changes in social relations, brought to rapid migration of population from villages to towns, i.e. from less developed areas of the country into more developed ones, which was also followed by the intensive socio-economic, demographic, functional and physiognomic changes of settlements. The processes were partly planned and more often they developed spontaneously and elementally, having many positive and negative consequences.

6.1. Urbanisation - basis of development of urban centres and urban regions of Serbia

Industry, located according to its locational demands and conditions, was the main function in the development of cities. On certain level, it initiated the development of urban settlements, so that they could latter on, encourage the development of industry by their agglomerative advances. By the time, in the conditions of agglomerative economy, the double industrialisation-urbanisation link, based on the logic and principle of circular and cumulative causation, influenced the concentration of other functions in cities, strengthened their functional capacity and accelerated the overall socio-economic development. In the initial transitional phase, the urban functions were concentrated in the city cores, while in later phases, with the development of tertiary-quaternary activities, it came to the expansion of the urban way of life in the settlements of outer and inner urban surroundings. The processes of peri-urbanization, suburbanisation began and the spatial-functional dichotomy of village-town was gradually disappearing (Djurić, V., 1970.). The cumulation of functions and the mutual affect with other relevant factors

caused the reinforcement of networking the cities and their regional surroundings. The consequence was the diffusion of urbanisation and urbanity and the transformation of settlement structures in the area of urban impacts. The urbanisation economic base was the development of functions of labour centres -its flows, transitional phases and succession. The development of functions of labour centres in Serbia was developing in two phases. In the first phase, the function of labour directed the spatial-functional stream lines towards urban settlements, giving them the role of poles of concentration of functions and population, while in the second phase, the spatial-functional stream lines were directed from the centres of labour towards the regional surrounding, giving them the role of development centres or urbanity and urbanisation diffusion centres, i.e. the mediator of the structuring of urbanised regions.

More significant influences of larger cities on the transformation of their surroundings began in the 1960s, middle-size towns in the 1970., while smaller urban centres in the 1980s (Veljković, A., Jovanović, R., Tošić, B., 1995.). The influences of larger cities on the settlement-functional organisation of the regional surrounding were manifested by the demographic exodus and depopulation of rural settlements on one side, and the growth and development of urban and less or more urbanised settlements on the other side. That brought to the continual growth of urban population, functional and physiognomic development and transformation of the existing towns, the formation of new urban settlements (development of new towns - suburbs of industrial or residential character or by the transformation of mixed settlements into urban settlements), gradual urbanisation of suburban villages, as well as to the reduction of population of some villages even to their demographic disappearing (Tošić, D., Krunić, N., 2006.). Due to demographic redistribution which is lasting for the last five decades, one part of villages (suburban) is merging with the cities, the other part is becoming urbanised, while the most part is reducing or disappearing by the emigration of fertile and active population contingent. The reduction of the rural population was the resultant of the long-term emigration and decrease of natural increment. Simultaneously, the cities recorded the demographic growth and both natural and migration component prevailed. The immigration was preponderant to the 1980s, while the natural increment has prevailed since then to the present day. The high degree of correlation was established between urbanisation, spatial mobility and natural increase of the population of Serbia (Vojković, G., 2007.).

According to the 1953 Census, one-fifth of the total population (22.5 %) lived in urban settlements, while two-thirds of active population (67 %) was rural population. Vojvodina was the most urbanised with 29.5 % of urban population, then central Serbia with 21.2 % and Kosovo and Metohija with only 14.6 % of urban population. Even though the degree of urbanisation increased on around 56 % to 2002., the urban population did not increase equally. In the period between 1953. and 1961., the share of urban population increased on 29.8 % with the average growth rate of 48 ‰ (central Serbia 28.6 %, Vojvodina 38.3 %, Kosovo and Metohija 19.5 %). In the period from 1961. to 1971., the growth rate of urban population was 41.7 ‰, while the degree of urbanisation increased on 40.6 % (central Serbia 40.8 %, Vojvodina 48.8 %, Kosovo and Metohija 26.9 %). In the period between 1971. and 1981., the growth rate decreased on 23.8 ‰, while the share of urban population in total population increased on 46.6 % (Central Serbia 47.8 %, Vojvodina 54.1 %, Kosovo and Metohija 32.5 %). In the period between 1981. and 1991., the growth rate was far lower (13.6 ‰), while the degree of urbanisation increased on 50.7 % (Central

Serbia 53.5 %, Vojvodina 55.7 %, Kosovo and Metohija 37.5 %). In the mentioned period, the share of rural population in total population was reduced from 73.5 % to 28.3 %. In the last inter-Census period, the process of urbanisation in Serbia stagnated. The growth rate was around 2 ‰, while the degree of urbanisation increased on 56.4 % (Central Serbia 56.3 %, Vojvodina 56.7 %). In that period, the urban population increased for 91.386 inhabitants, while the population of other settlements decreased for 161.000⁷ inhabitants. Consequently, the increase of urban population was slower than the reduction of the rural population (Tošić, D., 2000).

6.2. Serbian urban settlements network

Contemporary Serbian urban settlements network, determined according to the Statistical Office of the Republic of Serbia, consists of 194 urban settlements: 114 in Central Serbia, 52 in Vojvodina and 26 in Kosovo and Metohija. As the last Census in 2002 did not register the inhabitants of Kosovo and Metohija, some of the basic demographic characteristics of 168 urban settlements in Central Serbia and Vojvodina will be presented here. Their significance for the regional organization of the Republic and its individual parts varies, as does their demographic size. Small urban settlements dominate in spatial structural and functional network organization. Out of 168 urban settlements, 51 have less than 5000 inhabitants, 41 from 5000 to 10.000, 58 range from 10.000 to 50.000, 14 settlements have from 50.000 to 100.000 inhabitants and only 4 have over 100.000 inhabitants (Belgrade with 1.118.980 inhabitants, Novi Sad with 190.602, Niš with 173.390 and Kragujevac with 145.890 inhabitants). There are 25 municipalities in Serbia (excluding Kosovo and Metohija) that have no urban settlements whatsoever⁸.

Table 9: Urban settlements distribution in Serbia⁹ according to demographic size by Census 2002.

Demographic size	Number of urban settlements	Population	Urban population	Position of Ljubljana
Up to 5.000 inhabitants	51	135.500	3.21	135.500
5.001-10.000	41	306.860	7.27	442.360
10.001-50.000	58	1.207.430	29.10	1.649.790
50.001-100.000	14	900.980	21.36	2.550.770
100.001-200.000	3	519.880	12.08	3.070.650
200.001 and more	1	1.118.980	26.53	4.189.630
Total	168	4.189.630	100	-

Source: Preliminary Census results in 2002, Statistical Office of the Republic of Serbia.

⁷ The methodology of the 2002. Census differs from the methodology of the previous 1991. Census. Data for 2002 refer to present population. During calculation of growth rate of urban population, the datum on the present population was also taken for 1991. Since the population of Kosovo and Metohija was not included by the last Census, there were not relevant indicators on the current situation of urbanisation of this part of Serbia.

⁸ Municipality centres without urban inhabitants have certain level of urbanity which is proportional to central function concentration in them.

⁹ In the table are presented results for the territory of Republic of Serbia without Kosovo and Metohija.

At first glance, it could be said that the urban settlement and nodal centre distribution in the Serbian urban network is favourable. However, more complex analyses of population concentration and functions in the urban settlements would open certain problems to argument. Belgrade is home to 26 % of urban population of Serbia (excluding Kosovo). The index of urban primacy of 5.87 points out its dominance (ratio of the population numbers of Belgrade and Novi Sad). Discord between the number of inhabitants of the leading settlement and other urban settlements shows that Serbia does not have a correct and uniformly developed urban system, i.e. that the urbanization flow had not been directed at the right time. If we were to critically analyze the justification of legal statistic criteria for determination of urban settlements, and apply a scientifically more justified model, as the Serbian geographers were calling for, we would find that a lower urbanization level of Republic of Serbia with the regional differences more visible and polarization even more pronounced.¹⁰

Table 10: Demographic size relation of the ten most numerous cities in Serbia, according to the Census 2002.

Urban settlement	Population	Index in relation to Belgrade	Index in relation to the previous city
Belgrade	1.118.980	1000	-
Novi Sad	190.162	0.169	0.169
Niš	173.390	0.154	0.911
Kragujevac	145.890	0.130	0.844
Subotica	99.471	0.088	0.676
Zrenjanin	79.545	0.071	0.957
Pančevo	76.110	0.068	0.955
Čačak	73.152	0.065	0.832
Smederevo	62.668	0.056	0.861
Valjevo	61.406	0.054	0.964

Source: Preliminary Census results in 2002, Statistical Office of the Republic of Serbia.

The size of the ten most numerous cities confirms the domination of Belgrade (1.118.980 inhabitants) or, rather, its urban agglomeration¹¹ as well as strong demographic polarization. The indexes shown lead to the conclusion that the concept of decentralized urbanization, regionally balanced and dynamically polycentric urban system, which was scientifically explained, incorporated in the Spatial Plan of Serbia of 1996 and socially justified, has not come to life.

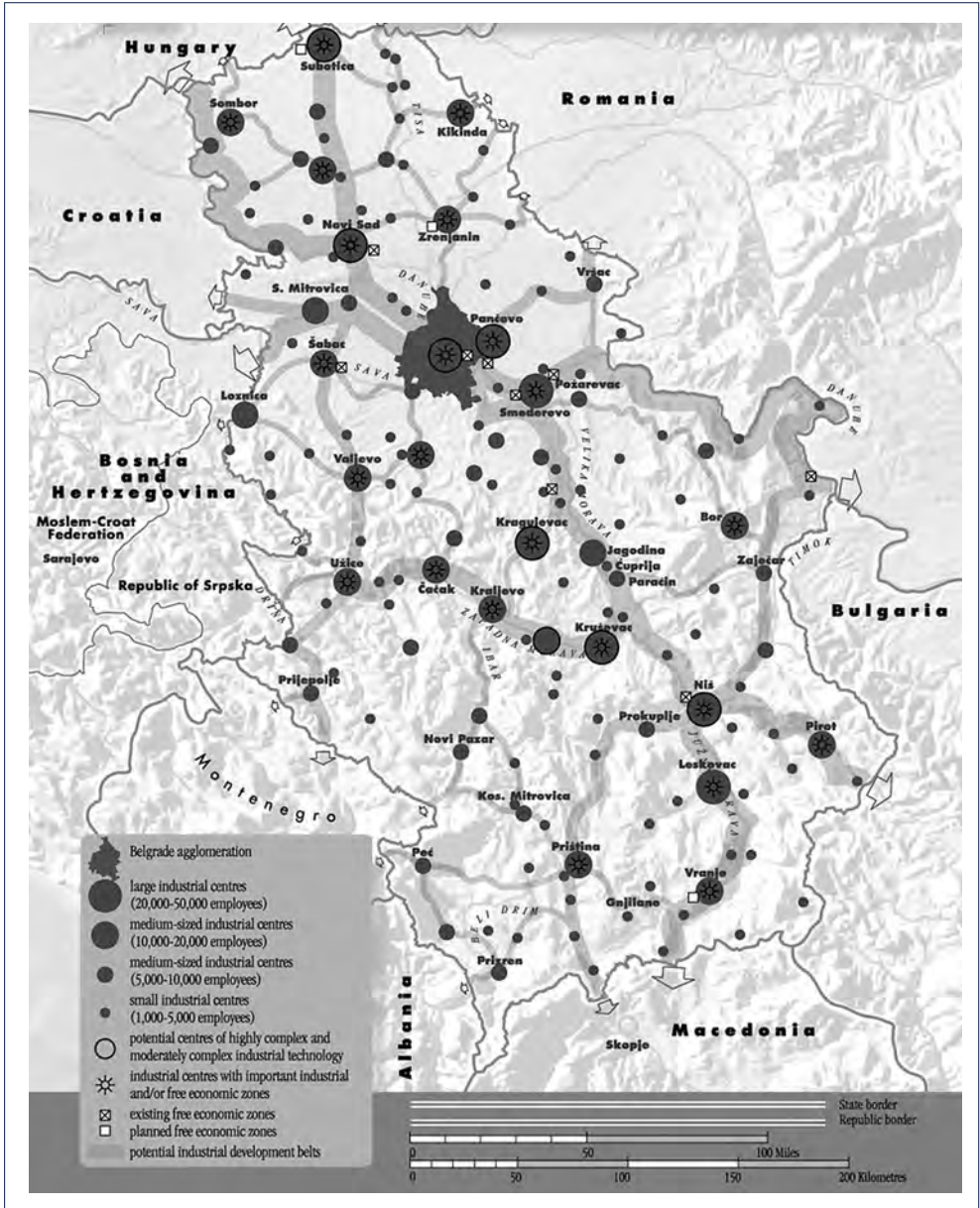
Polarization effects of urbanization, spatially manifested by demographic and economic-functional concentration, are also seen at the individual county level with the domination of their respective centres. Disproportion in demographic size of Belgrade and other larger cities is the result of incoherent and asymmetrical urban system of Serbia. There is an obvious absence of uniformly distributed urban settlements with 200.000 to 500.000

¹⁰ Criteria for character determination of settlements by Census 2002 have not been changed in relation to the previous two. Thus, some settlements that have a high level of urbanity, relatively high population concentration and good communal infrastructure are categorized as »others« and conversely, some of the settlements with low population concentration, undeveloped external factors and weak communal infrastructure are categorized as urban. Also, some of the settlements contained in larger urban agglomerations are categorized as rural, whereas at the same time, some of the smaller spa and tourist centres as well as mining towns are registered as urban settlements. There are several examples of this anomaly. Tourist centre Divčibare (223 inhabitants) has the status of an urban settlement, while Nova Pazova with 18.628 inhabitants has the status of a rural settlement.

¹¹ The City of Belgrade has 18 urban type settlements with a total of 1.280.639 inhabitants.

inhabitants, with macro regional functions, which would be the carriers of a balanced endogenous development of Serbia and links to integration of the Serbian urban system into the European urban system, so that, in time, it could participate more actively in the European development processes.

Figure 21: Belts of more intensive development in Serbia.



Source: Spatial Plan of the Republic of Serbia, 1996, Government of the Republic of Serbia, Belgrade, Map 9.

6.3. Analogy in hierarchy of urban centres and urban areas in Serbia

In Serbia has been established hierarchy of urban centres around which, on the basis of spatial and functional complementarities, has been formed their influential fields. On the hierarchical relations in the nodal centre and fields network influenced also their positions in communal and territorial-administrative organization of the Republic. Basically, developed are several forms of nodal centres and fields:

1. Smaller urban areas in rural environments have been developed by concentration of local population and functions in smaller municipal centres, which were transformed from commercial, trading and managing centres into urban type settlements with developed labour functions, thanks to industrial development. Until 1980s, they grew through migrations. Villages in the immediate surrounding were the most common migrant donors. They are also the centres of emigration because their functions were not sufficient to attract the population released from agriculture sector, which is why this population migrated to developed urban centres. Urban settlements with often more than 10.000 inhabitants belong to this type. They are the centres of local communal integration. Most of them do not have developed function thresholds, public or social infrastructure necessary for their rapid further development. Their future depends on their ability to diversify functions and participate in developing processes of their wider regional surrounding.

2. Smaller and larger urban settlement agglomerations, functionally networking with their suburbs and less urbanized periurban villages have the spatial structure that consists of cores of a higher nodal level and surrounding settlements that are functionally compatible to them. Up to the 1980s these functional cores had the role of growth poles and later on, they functioned as development poles. Namely, due to the lack of living space and insufficiently developed public, social, communal and technical- dwelling infrastructure in core areas, suburban villages become migrant destinations. That influences their demographic growth followed by an intensive dwelling construction and socio-economic transformation expressed with reduced share of agricultural inhabitants in overall and active population and increase of the households with non agricultural and mixed income. Since the functional transformation is mostly expressed in the settlements within these agglomerations, it is obvious that around their core zones start to form, more or less, continual periurban rings¹².

Functional core zones of the agglomerations had the activity structure of industrial and commercial centres. They began influencing social and geographical transformation and functional integration of their surroundings and creating smaller and larger functional urban areas and daily urban systems. Some of them, in certain cases, could grow into European type of functional urban areas. Most commonly they are municipal centres. In the Spatial Plan of Serbia they are defined as centres of functional areas as well¹³. Their future role is in functional integration of the territory of the Republic, although some of them have pre-dispositions to become cross-border regions (Užice, Šabac, Subotica, Kikinda, Vršac, Zaječar, Pirot, Vranje...).

¹² Periurban zones around our urban settlements are "conditionally" new spatial forms of settlements structures, emerged by morphological accreting and socio-economical transformation of suburban villages which by rule characterizes fast socio-economical transformation processes, way of life, culture and population mentality... Planned approach in resolving spatial, urban, social, economical, infrastructural, ecological, cultural and similar, characteristically for them, problems and conflicts, most often overdue to the process of their development.

¹³ According to the Spatial Plan from 1996, Serbia is divided into 6 macro regions with 34 functional areas (8 in Vojvodina, 5 on Kosovo and Metohija and 21 in Central Serbia).

3. Complex regional functional urban systems consist of several settlements whose integrativity results from interactions between their structural elements, which are different type settlements and have different hierarchy. Their character is that of functional urban, i.e. metropolitan regions with high level of urbanity and high share of urban population in overall population, high rate of labour employment in non-agricultural activities, diversified functions and stable daily labour migration. The most significant representatives of this settlement type are Novi Sad, Niš, Kragujevac, Subotica... During the last decade, their functions are in constant recession. They need fundamental restructuring, primarily in the economic sector. They are potential centres of a uniform and balanced future development of the Republic of Serbia.

4. Belgrade agglomeration is a complex and dynamic system of urban settlements with high functional and morphological connectivity, clear multilevel hierarchy, large gravitation zone and cross-border range. It is a potential centre of South East Europe with first-rate international significance, i.e. the centre of the future Euro metropolitan region.

Numerous forms of more or less urbanized areas and regional urban systems have been identified in Serbia and their spatial and functional organization has been established. However, Serbia is insufficiently urbanized. Regarding to lasting continuity, differences are clearly visible between policentrically urbanized Vojvodina, less urbanized Central Serbia (with unsymmetrical hierarchy structure in urban settlements system and wide discrepancy between functional capacity of Belgrade and other centres) and low urbanized space of Kosovo and Metohija.

Although a great number of authors called for a polycentric and balanced development of urban settlements network, through papers dealing with urban processes and urban structures, such a concept has not been adopted in regional planning and regional development practice. It was only while Spatial plan of Republic of Serbia was being made that an exact analysis of all the elements and regional development factors was done. This analysis provided a base for demetropolization of Belgrade agglomeration, alleviation of disfunctionality in the settlement system and the beginning of functional balancing. (Derić, Atanacković, 2000). Major decentralization instruments for regional development are macro regional centres (Beograd, Niš, Kragujevac, Užice, Priština and Novi Sad), which would, according to the author's opinion, become centres of future regional cooperation with the surrounding South East Europe region.

Although the Spatial Plan was adopted 12 years ago, the questions of territorial competences, functional homogeneity, infrastructure connectivity and regional urban centres networking in Serbia remain open. It is obvious that 34 regional functional centres, 6 of which are macro regional centres, did not integrate Serbian geographic space sufficiently.

Serbian geographic space is relatively well covered with a network of cities. However, due to the great differences in their demographic size, quality, territorial reach, diversification of functions and scope of impacts, they don't have the same roles in regional integration of Serbia. Several forms of these have been identified: urban settlements with great significance in integration of the Republic of Serbia into international integration processes; urban settlements of great importance in integration of Serbian countries; urban settlements that are parts of internal development corridors and urban settlements with local integration role (Tošić, D., 2000.).

Belgrade, Novi Sad and Niš belong to the first group. Belgrade is the core of 2,5 million agglomeration developed as a nodal point of Panonia - Sava development axis (Vienna - Budapest - Belgrade - Bucharest), primary Balkan Morava - Vardar development axis (Belgrade - Niš - Skopje - Thessalonica - Athens), north Sava - Panonia axis (Jesenice - Ljubljana - Zagreb - Belgrade), south Sava axis (Novi Grad - Banja Luka - Bijeljina - Belgrade) and Šumadija - Ibar axis (Belgrade - Gornji Milanovac - Kraljevo - Kosovska Mitrovica - Priština - Skoplje). Belgrade agglomeration with its periphery represents foundation of Danubian - Sava development axis - part of the European development axis. In a Serbian scope, Belgrade metropolitan region is approaching to qualitative restructuring and decreasing demographic pressure directed toward its core zone. In a wider sense, Belgrade is the core of the 2,5 million agglomeration¹⁴. However, the role and significance of Belgrade in functional organization of SEE are determined by its role as a crossroad of multimodal European corridors X and VII. Future position and significance of Belgrade in a spatial and functional European organization will depend on the degree of valorization of its excellent geographic position, infrastructural equipment of the parts of the mentioned corridors that pass through Serbia and the ability and competitiveness of its industry to adapt and participate in European development processes.

There are 157 settlements within administrative borders of the City of Belgrade, of which 18 belong to the urban settlement type. Functionally, Belgrade agglomeration connects Vojvodina - Panonia - Danube area and middle Balkan part of Serbia (Tošić, 1996). It was developed by spatial integration of urban settlements along the Novi Sad - Zemun - Belgrade - Pančevo - Smederevo line. It also contains the secondary urban cores of Obrenovac, Lazarevac and Mladenovac. The City of Belgrade had, according to the Census 2002., 1.574.050 inhabitants, of which 1.280.639 or 82.3 % were in the urban settlements. At the same time, 1.118.980 inhabitants or 87.4 % of the urban population of the City live in the Belgrade settlement as a major urban centre.

For the past twenty years, Belgrade metropolitan region is stagnating in its development. To move from classic polycentric agglomeration with a strong core and weakly developed suburban centres to a modern polycentric agglomeration with suburban centres` taking over some of the functional and spatial competences of the core, it is necessary to develop a strategy according to the methodology of the European Union. Namely, former and present relations in the region are characterized by a distinct polarization and centre - periphery dichotomy. The Belgrade settlement has 12 times as many inhabitants as Obrenovac - Lazarevac - Mladenovac agglomeration subcentres, which needs to take over the role of regional development centre. To decentralization of functions has to be added also the decentralized policy of agglomeration development planning is as well as the decentralized policy of public and social services. This strategy must aim towards a clear objective - incorporation of Belgrade into the network of European cities. This can be achieved through improvement of communications and traffic infrastructure, qualitative transformation, improvement of the industrial, commercial and cultural sector competitiveness, and acceptance of the need for development of new economy and European ecological standards. According to the "Red Octopus" scenario, Belgrade

¹⁴ When spoken, 2,5 million agglomeration of Belgrade, we think about its European scope. The position of Novi Sad is important in that sense. In the future plans about Euro integration processes, Novi Sad and his agglomeration can be observed as a subsystem to Belgrade euro metropolitan region (3MEGAs), that is Belgrade European metropolitan region can be planned as a bipolar agglomeration Belgrade-Novı Sad. In favour of that go some arguments that Novi Sad should be treated as a core of secondary European metropolitan region, type PUSH (Potential Urban Strategic Horizon).

is intended to be a future technology development centre in the South and South East Europe in the rank of Rome, Madrid and Barcelona (Cattan, N., Saint-Julien, T., 1998.). The question: "where is the Belgrade metropolitan going?" was answered partly in the Regional Spatial Plan of the Administrative territory of the City of Belgrade. However the Regional Spatial Plan does not make a difference between metropolitan and administrative area of the City of Belgrade.

Belgrade's main complement in international integration processes are Niš and Novi Sad. The City of Niš has 250.180 inhabitants of which 177.823 are in urban areas (Niš and Niš Spa). If applying the socio-geographic method in determining frontiers of Niš agglomeration, one would see that Niš is the centre of a polycentric metropolitan region with 350.000 inhabitants and a large impact area. Its exceptional regional position is insufficiently valued. A very significant, but in Serbia insufficiently equipped by infrastructure the corridor starts from Niš and follows eastward to Sofia and further to the southeast towards Istanbul, while southwards the Morava - Vardar - Axios development axis continues, going to Athens through Skopje and Thessalonica (as part of the corridor X). Predispositions to become secondary complements to Niš has Vranje who received a certain functions of trans-border cooperation with settlements in Kumanovska and Skopska valley in Macedonia. Since these settlements have expressively polarization effects, the influences of Niš have to be redirected by planned action to population empty periphery, especially towards east and northeast. Towards northeast, a quality link could be established (Niš - Knjaževac - Zaječar) which would improve the quality of networking of Niš area with Timočka Krajina development axis and eastern Danubian area. Infrastructural improvement is also necessary in the corridor Niš - Prokuplje - Priština.

The second group of urban centres includes towns that played the significant roles in the trans-republic cooperation in the former country in the past, as well as the centres that have been the potential part of the trans-border cooperation of Serbia and neighbouring countries. In the settlement network of such character, distinguished are some centres that could be significant in the near future in initiating and developing the integration processes between Serbia and the Republic of Srpska, i.e. Bosnia and Herzegovina. Since the Spatial Plans of the Republic of Serbia and the Republic of Srpska have taken the development centres and development axis, i.e. the development corridors as the main instruments of the equal regional development and regional integration of geo-space, there is a question of the need of their coordination and coherency. The coordination of the developmental-integration processes in Serbia and the Republic of Srpska should be realized by the coordinating development of the urban centres - connections nodes that are functioning on the trans-border level. The development of two corridors is planned by the Spatial Plan of the Republic of Srpska: Posavina (Novi Grad - Prijedor - Banja Luka - Doboј - Brčko - Bjeljina) and Podrinje-Herzegovina (Bjeljina - Zvornik - Višegrad - Srbinje - Gacko - Bileća - Trebinje)¹⁵, while the development of several development corridors is planned by the Spatial Plan of the Republic of Serbia (Danube - Sava development belt, the Morava development axis, the Western-Morava axis of development, etc.)¹⁶. The Posavina development corridor of the Republic of Srpska is compatible with the Danube

¹⁵ Gnјato gave the scientific basis for determining the functional significance of development corridors centres of the Republic of Srpska. See: Gnјato, R. 1997: Nodalno-funkcionalna regionalizacija Republike Srpske. Glasnik Geografskog društva Republike Srpske, sveska 2., Banja Luka.

¹⁶ On the significance of development corridors or development axes in the functional organisation of Serbia, see: Tošić, D. 2000: Gradski centri-faktori regionalne integracije Srbije. Glasnik geografskog društva Republike Srpske, sveska 5., Banja Luka.

- Sava corridor in Serbia.¹⁷ It is interesting that the Spatial Plan of Serbia does not predict the Podrinje development axis, but the corridor which is analogue to it, going the line Novi Sad - Sremska Mitrovica - Šabac - Valjevo - Užice - Prijepolje¹⁸. According to the Spatial Plan of the Republic of Serbia, the areas that can participate in the integration processes with the Republic of Srpska are in the influential spheres of the macro-regional centres of Belgrade and Užice and in the functional areas¹⁹ of Sremska Mitrovica, Šabac, Loznica, Valjevo, Užice and Prijepolje. According to the Spatial Plan of the Republic of Srpska, the areas that have the potentials to networking with Serbia belong to the Doboј - Bjeljina and Sarajevo - Zvornik nodal region. With coherency and complementarity, with accomplished networking of urban centres and corridors of the Republic of Srpska and Serbia, the conditions would be made for the development of the broader regional association that would network the settlements of the central Balkans.

Including the urban centres into the processes of integration through the synchronised development of the complementary activities from the field of labour (complementary economy-coordinating production programmes and production capacities, rational use of natural and social resources, free labour movement, joint out of the market...), services and public-social infrastructure (trade, transport, health, education, information...) and ecology is necessary for establishing structurally the more qualitative inter-corridor connections.

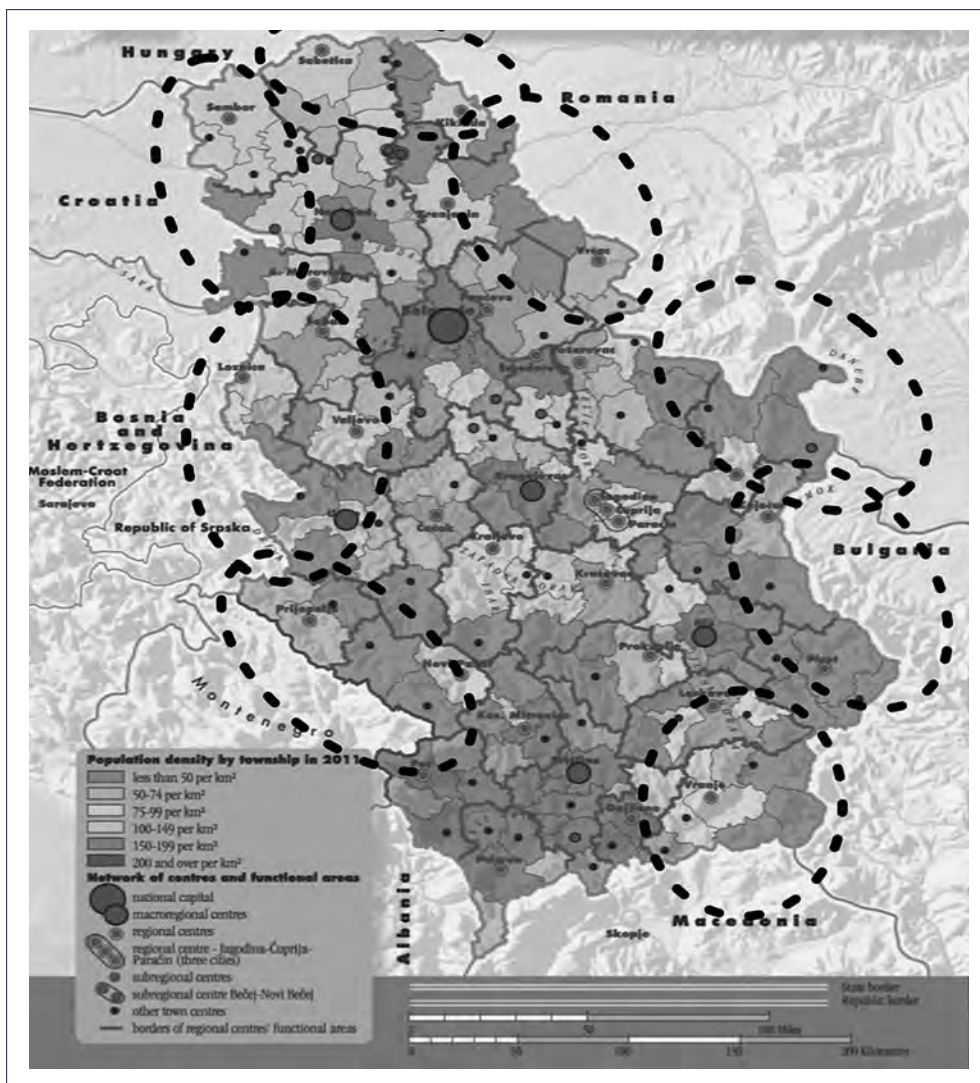
With an aim of more qualitative connection and trans-border cooperation among the population of two countries, the functional and infrastructural networking of the part of Podrinje in the Republic of Srpska, i.e. Bosnia and Herzegovina and the part of Podrinje in Serbia would be the main priority. Therefore, the emphasis is put on the development of the following lines: Užice - Višegrad; Foča - Pljevlja - Prijepolje; Prijepolje - Priboj - Višegrad; Priboj - Rudo - Cajnice; Bajina Bašta - Skelani - Srebrenica; Ljubovija - Bratunac - Srebrenica; Zvornik - Loznica - Valjevo; Bijeljina - Bogatić - Šabac; Bijeljina - Sremska Rača - Sremska Mitrovica; Bijeljina - Šid, etc. Užice and Loznica in Serbia and Višegrad, Zvornik and Bijeljina in the Republic of Srpska would be of the primary significance in the processes of strengthening the regional coherence and compactness, while the smaller centres which are in their spheres of influence would be of the secondary significance.

¹⁷ The Posavina development corridor of Republic of Srpska is the remnant of the Posavina corridor that existed in Social Federal Republic of Yugoslavia (SFRY) where Belgrade had the function of the dominant developing centre. In the Belgrade influential sphere, which was reduced by the disintegration of SFRY, in the time of its existence, were areas of Posavina in Bosnia and Herzegovina and in Croatia (large part of north-eastern Bosnia, Eastern Slavonia and Western Srem). The spatial-functional relations between Belgrade and Posavina in Republic of Srpska are still developing.

¹⁸ In the 1990s, there was an idea of Podrinje to be an axis of development that would integrate the parts of the Republic of Srpska and Serbia. See: Stepić, M. 1995: Podrinje-od pogranične regije do potencijalne osovine razvoja. Glasnik Srpskog geografskog društva, sveska LXXV, br.1. Beograd.

¹⁹ The term functional area was introduced into the Spatial Plan of the Republic; it is used as territorial group of several municipalities, connected with urban centre, i.e. regional centre. In the EU spatial planning practise, the term functional areas is defined as functional-urban regions.

Figure 22: Functional regions of Serbian urban centres; potential transborder region areas are delimited by dashed lines.



Source: *Spatial Plan of the Republic of Serbia, 1996, Government of the Republic of Serbia, Belgrade, Map 8.*

Other settlements, situated on the borders, also have the predispositions to participate in certain forms of the trans-border cooperation. Specially are emphasized: Subotica as the centre of the cooperation with the Hungarian settlements, Kikinda and Vršac as the bearers of the cooperation with Romania, Zaječar and Pirot as the centres of the cooperation between Serbia and Bulgaria, Vranje as the centre of the cooperation with Macedonia, Sremska Mitrovica, Bačka Palanka and Sombor as the centres of the cooperation with Croatia, etc.

Generally, all those settlements can be treated as the cores of the future transborder and transregional daily urban systems which, in the conditions of 'open' borders, are becoming the instruments of planning and realizing the trans-border cooperation in the area of economic and social development, culture, education, ecology, etc.

The third group of urban centres includes the urban settlements which make the parts of the development axes of Serbia²⁰. The axes of the development of Serbia have been represented by corridors of relations that connect the urban centres of different level of centrality, linear-polarisation agglomerations, concreted spatially. The primary development axes are the framework of the system - Podunavlje, Morava (Velika Morava and Južna Morava) and Zapadna Morava. The secondary axes of the development are more or less in the functional accordance with them. They are either differentiated insufficiently or equipped bad by infrastructure. In the network of development axes of the primary and secondary level, some geo-spatial wholes, in which the development-stimulating effect is weak, have been turned into demographic and economic depressions. They are most expressed in the eastern and south-eastern border and mountain parts of the Republic. The weakly developed centres of the local urban concentration have existed there.

The Podunavlje development axis of Serbia is mentioned in planned documents as the Danube-Sava development belt. The Danube - Sava development belt was formed on the basis of many spatial-functional interactions resulted from merging and complementing of the two basic macro-regions of Serbia: the Panonian - Podunavlje and the Middle-Balkan. That is the conditionally homogeneous physiognomic region (consisted of four sub-wholes: the Posavina and the Pannonian, Djerdap and Wallach-Pontian Podunavlje), but functionally, it is the most significant development-integrative axis of the Serbian geo-space, i.e. the functional region with complex structure, differentiated by the functional-gravitation relations of the centres that it connects (Apatin, Sombor, Bačka Palanka, Novi Sad, Sremska Mitrovica, Šabac, inner core of Belgrade agglomeration, Pančevo, Smederevo, Požarevac, Veliko Gradište, Golubac, Kladovo). The centres within this axis where the lines of communications cross the traffic corridors are of a special significance. In the part of Vojvodina, the traffic corridors diverge radially from Novi Sad in the north towards Subotica and in the east towards Zrenjanin. The network of traffic corridors and centres integrates the area of Vojvodina relatively well, but the traffic isolation of the settlements is visible in northern Banat. The secondary Timok development axis joins the belt in the eastern part of the Republic, connecting Kladovo, Negotin, Zaječar and Knjaževac. The Belgrade metropolitan has the dominant position in the Danube-Sava development belt.

The Morava development axis integrates the functional zones and gravitation areas of Smederevo, Požarevac, three towns (Jagodina, Čuprija, Paraćin), Niš, Leskovac and Vranje. In the part of the Velika Morava axis, the impacts of Kragujevac as the most developed urban centre of south Šumadija are felt. In the part of the Južna Morava axis, its development impacts do not almost reach the local urban centres of Gornja Toplica, Jablanica, Vlasina, Krajište and Pčinj, the settlements of which have been in the continuous demographic exodus.

²⁰ Djurić pointed out the significance of development axes in the regional organisation of Serbia by calling them functional wreaths (Djurić, 1970). Perišić defined them as linear agglomeration systems (Perišić, 1985); Radovanović established high degree of coordination of their stretching direction with the natural-traffic stretching (Radovanović, 1993-1994); Veljković gave them their original meaning of corridor of connection among poles and centres of growth and development (Veljković, 1995).

The Zapadna Morava development axis represents the linear-polarisation functional-regional whole which divides the geo-space of Serbia on northern and southern parts. It connects several urban centres (Užice, Sevojno, Požega, Lučani, Čačak, Kraljevo, Trsternik, Vrnjačka Banja, Kruševac and Stalać). Its sphere of influence includes: the Užice Region, Moravica, Dragačevo, Aleksandrovac and southern parts of Šumadija. The Zapadna Morava and the Ibar development axes of Serbia are connected in Kraljevo. The infrastructural facilities do not follow the spatial-functional significance of the axis. It does not have traffic propulsion. The Zapadna Morava urban centres are connected with Belgrade, i.e. the Sava - Danube development belt by railroads Požega - Belgrade and Kraljevo - Kragujevac - Belgrade. The Zapadna Morava urban settlements used to represent the immigration membrane which kept from immigration from Kosovo and Metohija towards Belgrade.

The significant role in the functional organisation of Serbia have also the centres situated in the parts that are out of the axes of development, such as Kragujevac, Valjevo, Novi Pazar, etc. In contrast to the urban centres, the integral parts of the development axes, the influences of which have linear spreading, the development impulses from the mentioned towns have radial spreading. The most acceptable model of their further development is the model of Polycentric Integration Areas (PIAs). They are, basically, the polycentric urban systems of the sub regional characters, organised according to the principles of "decentralized concentration".

Observing the network of growth and development axes and the centres they connect, their low density in the geo-space of Kosovo and Metohija can be noticed. Demographic and functional domination have been present there, as well as weak functional development of Kosovska Mitrovica, Prizren and Peć. The status of Kosovo and Metohija in the previous country (SFRY) contributed to a great extent to it.

The fourth group of urban settlements includes the centres of local urban concentration which do not have the developed functions to influence the organisation of the regional encirclement. They are developed in the mountain parts of Serbia or in its inner valleys. They are mono-functional and isolated and they have problems while coordinating their local development aspirations with the regional development flows. The examples of such settlements are the settlements of Babušnica, Lebane, Bosilegrad, Krupanj, Ljubovija, Tutin, Sjenica, etc.

The urban system of Serbia is neither compatible nor coherent with the aims of the formation of the European urban system. The urban systems of the European Union are characterised by high degrees of centralisation and expressed hierarchy, so the final goal of its developmental policy is the creation of the optimally structured polycentric net of cities. The functional specialization of smaller towns or their agglomerations is also significant. As the future European strategy is directed towards the polycentric urban structures, so the basic goal of Serbia is to adapt its planning to that concept.

According to the share of urban population (56 %), Serbia represents weakly urbanised area in relation to Europe as a continent and European Union, but according to the degree of urbanisation, it is on the level of the South-eastern European countries. The process of urban transition in the Serbian geo-space was intensified by the middle of the 20th century. It was developing in the conditions of industrialization and it had the

polarisation character. That brought to the development of the urban net which was characterised by the regional differentiation, the (in)compatibility of its parts, asymmetry and more often the territorial disconnection and isolation.

According to the spatial-functional structure, Serbia is a complex, dynamic and heterogeneous territorial system. The basis of its modern urban net consists of urban settlement - the poles and centres of growth and development and the functional corridors by which they are connected. The complex relationship of hierarchy was established among the urban settlements and the corridors established between them (Belgrade metropolitan, macro-regional centres, centres of functional areas, centres of local urban concentration). That caused the considerable regional differences in concentration and development of urban settlements and urban population.

The imperatives of further development of the net of urban centres of Serbia are the dynamics and spatial and developmental stability. That can be achieved by permanent decentralization of urbanisation. Only high degree of urbanity of regional wholes of the Republic guarantees its territorial, functional and economic compactness.