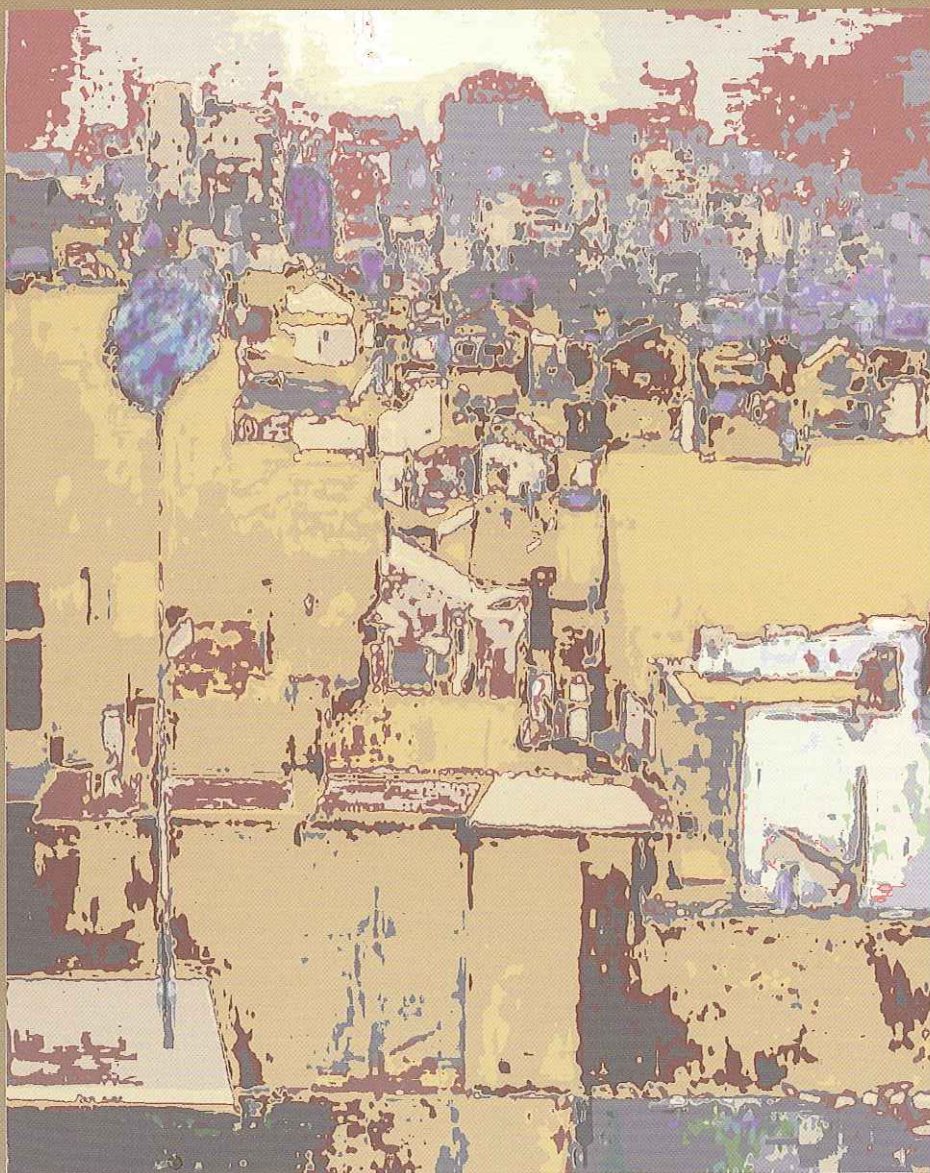


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December 2009 21



SCOPE AND AIMS

The review is concerned with a multi-disciplinary approach to spatial, regional and urban planning and architecture, as well as with various aspects of land use, including housing, environment and related themes and topics. It attempts to contribute to better theoretical understanding of a new spatial development processes and to improve the practice in the field.

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EDITORIAL

A new series of the international scientific journal SPATIUM has been launched. While this issue consists of papers that cover a variety of topics that will be discussed at the International scientific conference „Regional development, spatial planning and strategic governance“, which is organised by the Institute of Architecture and Urban & Spatial Planning of Serbia (IAUS) in December 2009 in Belgrade, Serbia, the following issues of the journal will be structured according to particular themes outlined in two or three year's editorial programme which will soon be communicated for collegial discussion.

Miodrag Vujošević
Jasna Petrić

TRACING THE DETERMINANTS OF ECONOMIC CROSS-BORDER INTERACTION IN THE EUROPEAN UNION

Dimitris Kallioras¹, University of Thessaly, Department of Planning and Regional Development & Technological Educational Institute of Larissa, Department of Tourism Enterprises

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The abolition of the artificial impediments of cross-border interaction inside the European Union, has released dynamics that have influenced significantly the economic space at the frontiers. In contrast, at the European Union external borders, the constraints concerning cross-border interaction with third countries have become more tangible in the sphere of reality. Under this framework, a new mix of opportunities and the threats seems to come forth together with a new political, social and economic map that redefines the notion of vicinity. In the present article, the study of the “border effect” in Europe is attempted through the investigation of the basic determinants of the spatial dynamics of cross-border interaction. The findings of the article contribute to the better understanding of the “border effect” with significant implications for both theory and policy.

Key words: borders, interaction, integration, vicinity, trade, investment, migration

INTRODUCTION

The abolition of border impediments concerning the movement of people and production factors is one of the most basic elements of the European integration. The abolition of the artificial border impediments inside the European Union (EU) has released dynamics and brought into the surface a new mix of opportunities and threats together with a new political, social and economic map. At the external EU borders, on the contrary, the barriers to cross-border interaction with the neighboring third countries became more sensible, forcing many people to discuss about a “fortress-Europe”.

But also inside the EU, besides the fact that most of the institutional barriers regarding the

movement of people, goods, and capital, have been vanished, the asymmetries at the level of the historical image, the culture, the language and the perceptions remain important. Characteristic is the fact that even between the six founding members of the EU significant differences regarding the social and economic practices can be detected, despite the fact that the economic barriers among them are practically abolished for half a century. Furthermore, it is obvious that the level of cross-border relations, taking place through trade, foreign direct investments (FDI) and migration, is certainly affected not only from economic but also from qualitative parameters such as history, language and culture (Topaloglou et al., 2005).

Regarding the EU external surrounding, the recently introduced EU Neighborhood Policy officially aims at the creation of a “ring of friends” through policies for the encouragement of economic and political cooperation. Inside this framework, the

extremely important geopolitical and economic procedures have accentuated the need for processed spatial policies regarding borders. Suffice it to say that the EU borders now with 16 new countries with populations that reaches almost 400 million inhabitants and Gross Domestic Product (GDP) that is smaller than the 10% of the corresponding EU one.

Scientific discussion regarding the spatial and economic impact of the “border effect” is still in a preliminary stage. There are many those supporting that scientific discussion has been encircled in ad hoc case studies which are not able, however, to propound more general theoretical assumptions (House, 1982; Rumley and Minghi, 1993; Clark, 1994). As a result, the answers to the question that concerns the determinants of cross-border interactions remain vague.

In the framework of this discussion a series of interesting questions came at the forefront. To what extent, the institutional integration

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determines the intensity of cross-border interaction among countries? Do geographical coordinates affect the pattern and the intensity of cross-border interaction at the national level? To what extent, the cross-border interaction among the EU countries appertains to a “core-periphery” model?

The present article aims to investigate the basic factors that affect and determine the spatial dynamics of cross-border interaction among the EU countries. The elements of cross-border interaction analyzed concern trade, FDI, and migration. Due to the lack of the necessary data at the regional level, the analysis concerns the national level. This restriction, however, does not reduce the empirical and the theoretical contribution of the article since the extraction of general trends regarding the issue under consideration is achieved in a very satisfactory way. The analysis includes both the EU countries and the EU neighboring countries. This sample is classified on the basis of geographical and geopolitical criteria (north, south, east, west) and development criteria (low GDP per capita, high GDP per capita)². Simultaneously, the significance of vicinity and integration for the pattern and the intensity of cross-border interaction are evaluated.

The next section surveys the theoretical discussion regarding the impact of the existence and the abolition of border impediments on cross-border interaction. The third section attempts a comparative evaluation of cross-border interaction among the various groups (on the basis of geopolitical and development criteria) of EU countries regarding the neighboring and the non-neighboring countries under consideration. The last section presents the conclusions of the article.

THEORETICAL OVERVIEW

It is widely accepted that borders act as barriers of cross-border interaction, increasing the international trade cost; distorting the market and increasing the industrial production costs (Suarez-Villa, 1992; Kamann, 1993; Ratti, 1993; Clark, 1994). Respectively, cross-border interaction would be strengthening if there weren't borders. (McCallum, 1995; Wei, 1996; Bröcker, 1998; Helliwell, 1998).

According these statements, it is clear that the intention of societies and countries to state borders among them comes along with one more cost, having spatial dimension. For the estimation of this cost, remarkable efforts can be found in the literature (Mackay, 1958; Bröcker, 1984; Nuesser, 1985; Rietveld and Janssen, 1990). Therefore, the reduction of border barriers at the institutional level, as a result of political integration and liberalization, undoubtedly affects the space and the economy (Hanson, 1996 and 1998). However, recent studies show that the abolition of economic barriers is not accompanied by analogous intensification of cross-border economic interaction (Collier and Vickerman, 2001). In other words, economic integration at the institutional level does not mean automatically financial market integration.

The crossing of borders in order to perform trade, FDI and immigration, it is by nature a phenomenon, which cannot be analyzed and interpreted, solely in economic terms. Recently, more and more articles in the literature analyze the border interaction as a social construction that demands interdisciplinary approach (Wilson and Donnan, 1998) while at the same time stress the dialectical relationship between space and social life (Paasi, 1992 and 1996; Kaplan, 1994; Pettman, 1996; Rabinowitz, 1998; Leontidou et al., 2002). However, the interdisciplinary analyses that have appeared so far haven't managed to bridge the theoretical gap among different statics (Newman, 2003; van Houtum, 2003).

Usually borders at the local or international level may operate as “institutions – filters” with their own rules of entrance and exit, specifying every time the degree of transportation of goods, capitals, services, people but also social principles (Paasi, 1996). The different language, for instance, between two neighbor countries discourages cross-border interaction (Meinhof et al., 2003). On the other side, the division “inter/extern” can be specified at the supra-national level (for example the EU) imposing regulations of inclusion or exclusion horizontally (Leontidou, 2003). The Schengen Treaty is the most prominent example of this type, as it is imposed on the whole of the external borders of the European Union³,

ignoring the individual social, historical, political or economic circumstances.

Moreover, it is interesting to examine the spatial distribution of economic activities as a result of the abolition of border barriers. It is true that the theory of integration and the corresponding theoretical models have failed so far to give satisfactory answers to the question of the distribution of trade, FDI and immigration at the intra-national level when borders are wiped out (Niebuhr and Stiller, 2002). For instance, does cross-border interaction include the border space at the regional level or it heads mostly to the capitals and the metropolitan areas, feeding polarization and “tunnel” phenomena (Petrakos and Topaloglou, 2008)?

Border areas are not considered generally to regard a popular location of economic activities mainly because of their distance from major metropolitan centers (Dimitrov, 2002). It is no coincidence that in most cases capitals are located in the mainland. The few cases where the capital is located near the borders (eg. Vienna) can be interpreted as the outcome of historical and political developments (eg. the former Austro-Hungary). The fact of reducing transportation cost and the economies of concentration induce companies to locate at the center and not at the borders because they ensure the possibility of a long-range market (Giersch, 1940; Lösch, 1944/1954). In the classic model of economic geography of Krugman (1991), the abolition of economic barriers will result in such reduction in transport costs in order to encourage companies to relocate in areas where there are already strong economies of concentration. So, the large market located in the center, attracts businesses and workers from smaller markets, increasing even further the placement in large markets. The conclusion of the analysis was that transportation cost plays a regulatory role in the spatial allocation of activities.

On the other side, the opening of borders offers access to businesses in a large market, like the EU market, resulting in the fact that border area acquires a degree of attractiveness. In other words, distance and market size determine greatly the balance between centripetal and centrifugal forces developed due to the removal of border barriers (Kallioras, 2006 and 2007; Topaloglou, 2008; Topaloglou and Petrakos, 2008). Hijzen et al. (2006), exploring the extent to which distance and the degree borders' openness affect cross-border investments, concluded that distance is

² For the needs of the present article the limit between low and high GDP per capita is set to be at the level of 20,000 euros per inhabitant.

³ To be accurate, members of the Schengen Treaty are 22 out of 27 EU countries.

negatively correlated with investment. However, when they looked at in particular cross-border mergers and acquisitions among similar manufacturing industries found that distance affects investment at a lower level. Moreover, policies such as transportation, telecommunications, research and development are important determinants of interaction (Engel, 1999; Heimpold, 2000).

As far as trade is concerned, empirical estimates have shown that increasing the distance between countries is negatively correlated with the intensity of trade relations between them (Rauch, 1991; Kinoshita and Campos, 2003). Under this view, borders and their obstacles can be seen as factors that increase distance (Johnston et al., 1994). Conversely, the reduction of trade barriers at the borders would increase trade by reducing the distance.

It is also important whether trade developed between two neighboring countries is inter-industry (exchange of products of different sectors) or intra-industry (exchange of products of the same sector). In the inter-industry case, less developed border areas are in danger of being locked in labor-intensive

specializations allowing integration to lead in an increase of spatial inequalities (Panteladis, 2002). These analyses challenge neoclassic approaches that support the idea that regional trade leads to equalization of wages of labor and capital among regions through specialization and exchange (Samuelson, 1964).

Some recent empirical surveys suggest that trade transactions are not only influenced from vicinity but also from the level of economic development. For instance, it has been ascertained that the Baltic and South-Eastern countries trade more with the developed countries of the EU than with themselves (Uvalic, 2002; Paas, 2002; Bartlett, 2009). These surveys have, also, indicated the positive effect of the trade agreements between these countries and the EU in the reinforcement of the reforms and the volume of trade transactions.

The integration between neighboring countries affects the regional labour market through three mechanisms; trade, FDI and migration (Boeri and Brücker, 2000). In this context, the elimination of border barriers creates new facts regarding the geographical coordinates of a

border region in a more integrated market and, as a result, the location conditions of enterprises and employees are affected. Proximity due to vicinity encourages migration flows, having as a result the impact of integration on spatial equilibrium, affecting the allocation of population and economic activities among countries (Niebuhr and Stiller, 2002).

In the neoclassical approach, the main cause of cross-border mobility of labor is the difference between the level of wages and unemployment, which operates in a balancing way. Post-neoclassical theories analyze migration as a complex and complicated phenomenon, giving emphasis either on social (Sjaastad, 1962; Todaro, 1969; Fisher and Straubhaar, 1996) or on sectoral (Harris and Todaro, 1970) characteristics. Other analyses highlight the cost associated with distance and with the lack of information for the opposite side (Schwartz, 1973; Tassinopoulos, 1999; Janssen, 2000). In traditional theories of location it is concluded that the removal of border barriers in the labor market will have positive impact on both sides of the border. However, the theory of new economic

Table 1: The EU countries under consideration and their adjacent countries

EU COUNTRY	GEOPOLITICAL POSITION	DEVELOPMENT LEVEL	GEOGRAPHICAL VICINITY (BORDER COUNTRIES)
GREECE	SOUTH	LOW	BULGARIA, TURKEY, ALBANIA, ITALY
ITALY			FRANCE, AUSTRIA, SLOVENIA, SWITZERLAND, GREECE, CROATIA, BOSNIA, MALTA, ALBANIA
SPAIN			PORTUGAL, FRANCE
PORTUGAL			SPAIN
BULGARIA	EAST		GREECE, SERBIA, ROMANIA, TURKEY, FYROM
ROMANIA			HUNGARY, SERBIA, MOLDAVIA, BELARUS, UKRAINE
SLOVENIA			AUSTRIA, ITALY, CROATIA, HUNGARY
SLOVAKIA			POLAND, CZECH REP., AUSTRIA, HUNGARY, UKRAINE
CZECH REP.			GERMANY, POLAND, SLOVAKIA, AUSTRIA
HUNGARY			SLOVENIA, SLOVAKIA, AUSTRIA, ROMANIA, CROATIA, SERBIA, UKRAINE
POLAND			GERMANY, LITHUANIA, BELARUS, UKRAINE, SLOVAKIA, CZECH REP., RUSSIA, SWEDEN
LATVIA			ESTONIA, LITHUANIA, RUSSIA, BELARUS, SWEDEN
LITHUANIA			LATVIA, BELARUS, POLAND, RUSSIA, SWEDEN
ESTONIA			RUSSIA, FINLAND, LATVIA, SWEDEN
SWEDEN	NORTH	FINLAND, NORWAY, DENMARK, GERMANY, POLAND, LITHUANIA, LATVIA, ESTONIA	
DENMARK		GERMANY, SWEDEN, NORWAY	
FINLAND		RUSSIA, SWEDEN, ESTONIA, NORWAY	
AUSTRIA	WEST	HIGH	GERMANY, CZECH REP., HUNGARY, SLOVENIA, SWITZERLAND, ITALY
BELGIUM			GERMANY, LUXEMBURG, NETHERLANDS, FRANCE, UNITED KINGDOM
GERMANY			POLAND, AUSTRIA, CZECH REP., SWITZERLAND, FRANCE, BELGIUM, LUXEMBURG, NETHERLANDS, DENMARK
FRANCE			GERMANY, LUXEMBURG, BELGIUM, ITALY, SWITZERLAND, SPAIN, UNITED KINGDOM
LUXEMBURG			GERMANY, FRANCE, BELGIUM
NETHERLANDS			GERMANY, BELGIUM, UNITED KINGDOM
IRELAND			UNITED KINGDOM
UNITED KINGDOM			IRELAND, FRANCE, BELGIUM, NETHERLANDS

Source: Authors' Elaboration

geography argues that if wages rise in border areas due to better access to areas with high purchasing power (as a result of integration), then there may be not only external but also internal migration flows (Fujita et al., 1999). Especially, if centrifugal forces prevail on centripetal, the result will be a spatial spread of business and labor. Other studies of the new economic geography school, support that integration will further exacerbate the labor market of border areas that had regional character before the removal of border barriers (Niebuhr and Stiller, 2004). In the same direction, Buettnner and Rinke (2004) support, by empirical findings, that the reduction in travel costs due to integration will increase job offer at the border areas of developed countries; as a result, the mean salary will decrease and the unemployment will increase in these areas.

In the realm of the real world, however, the assumption of full interregional and international mobility of labor is not confirmed. In recent models of analysis, the assumption of full mobility of labor is declining and the case of imperfect mobility is supported (Fujita et al. 1999; Puga, 1999).

According to the assumptions of the new economic geography, central border regions acquire geographical advantage in an economic union, attracting both enterprises and consumers. Especially, when enterprises are vertically linked, the incentive of spatial concentration is strong (Niebuhr and Stiller, 2002). From this perspective, border regions situated at the core or near the core of the EU appear to be more favored. Undoubtedly, there are border regions in Europe which had always favorable geographical position in relation to the economic core of Europe, for example the regions at the borders of France-Belgium, Germany-Austria and Germany-the Netherlands.

The models that analyze the spatial impact of integration usually ignore the non-economic barriers, such as the cultural, historical or social differences, at the borders. Experience, however, shows that apart from economic considerations, borders are often associated with different nationalities, languages, cultures and attitudes that influence the shape and intensity of economic interactions (Topaloglou et al., 2005). In other words, even if the barriers disappear completely, the level of cross-border economic interaction will be lower than the respective level of economic interaction within countries, because of the

presence of non-economic barriers (Brenton and Vancauteran, 2001; Afouxenidis and Leontidou, 2004).

EMPIRICAL INVESTIGATION

Methodology

This article attempts to investigate the factors that determine the cross-border economic interaction of the EU countries. In the empirical part below, the economic interaction is analyzed in terms of trade (exports and imports), FDI (outgoing and incoming) and migration (outgoing and incoming), and refers to the national level.

Given that cross-border interaction is associated with proximity, it is interesting to examine whether this factor is sufficient to interpret cross-border mobility. In other words, to what extent the "micro-geography" of spatial proximity is associated with the "macro-geography" of economic integration and the new geopolitical map of Europe.

To address these questions the EU countries have been classified on the basis of two criteria. The first criterion has to do with the macro-geographic and the geopolitical characteristics of the countries. In this context, four groups of countries have been formed. These groups contain the Southern, the Eastern, the Northern, and the Western EU countries. The group of the Southern EU countries includes Greece, Italy, Spain and Portugal, which, despite their traditional "western" orientation, have always exhibited a degree of underdevelopment and political diversification that had, to some extent, geographical features (Petrakos et al., 2004). The group of the Eastern EU countries includes the recently acceded countries, which are (still) undergoing political and economic transition since 1989. The group of the Northern EU countries includes Finland, Sweden and Denmark, which, despite the fact that apparently belong to the "west", they were chosen mainly because of their political, organizational and geographical particularities (the so-called Scandinavian model). The group of the Western EU countries includes the countries that have identified historically and geographically with the "western" political and economic model for Europe. The second criterion has to do with the level of development. In particular, on the basis of the per capita GDP level, the groups of more developed and less developed countries are formed. The group of more developed EU

countries includes the Western and the Northern countries, whereas the group of less developed EU countries includes the Eastern and the Southern countries.

The results concerning the importance of vicinity and integration for each country separately are synthesized for each group of countries in terms of trade, FDI and migration and in relation to the rest of the European countries. The "rest European countries" are grouped into: (a) border and EU members, (b) border and non-EU members, (c) non-border and EU members, and (d) non-border and non-EU members. Without neglecting the fact each country has its own peculiarities with regard to its commercial ties, investment flows and migratory pressures, the aim of the analysis is to identify macro-geographic trends with political and economic characteristics. Table 1 presents the EU countries and their adjacent countries (i.e. the countries that have borders with the EU country under consideration).

Interaction of Southern EU Countries

The first part of the empirical investigation refers to the interaction that takes place in Southern Europe. The results are presented in Table 2 and Figure 1.

Concerning trade transactions, vicinity does not seem to be a critical determinant of cross-border interaction, while total exports are slightly higher than total imports. Taking into consideration that trade activity is mainly of inter-sectoral type, as the southern EU countries are mainly specialized in agricultural and industrial consumer goods, one can explain why the bulk of trade is oriented towards non-border countries that are EU members. This indicates that integration is a critical determinant of cross-border interaction.

Concerning FDI flows, it can be observed the vast majority of investment is directed towards to (or is coming from) non-border countries that are EU members. Noticeable is the fact that vicinity is not a determinant of investment decisions concerning the southern EU countries. The interpretation of this fact should be sought in the characteristics of the productive base and structure of these countries and relatively long distance from the economic center of the EU. Moreover, these countries do represent neither low-cost destinations nor high-technology destinations with research and financial infrastructure. However, one can not that, at least in relative

terms, the area is mainly FDI receiver and not FDI sender.

The shares of migration in relation to border countries that are not EU members are very important on both the outgoing and, mainly, the incoming migration. From the results, it becomes evident that vicinity has a decisive effect on migration. Moreover, these findings illustrate the problem of both legal and illegal immigration, which is evident especially in the southern EU countries. Taking into account the balance between incoming and outgoing migration, one can easily ascertain the EU south is a net receiver of migration. In the recent years, especially, the statistics show that these countries act in practice as the “gate of Europe”.

Interaction of Eastern EU Countries

The second part of the empirical investigation refers to the interaction that takes place in Eastern Europe. The results are presented in Table 3 and Figure 2.

The situation concerning trade activity presents many similarities with the respective that concerns the Southern EU countries, except that trade with non-border countries that are not EU members is slightly higher. Given that these countries are Russia, Ukraine and Moldova, one can identify the role that the “initial conditions”⁴ and cultural proximity (Slavic origin, language, history etc.) continue to play in trade relations.

The outgoing and, especially, the incoming FDI are, essentially, divided between the non-border countries that are EU members, the border countries that are EU members, and the non-border countries that are not EU members. The extremely low percentages concerning the FDI flows to and from the border countries that are not EU members are noteworthy. These findings lead to the conclusion that, initially, economic integration is an important determinant of FDI. Furthermore, proximity with the EU countries provided an opportunity to the Eastern EU countries to broad the EU market area towards the east. The growth of the market obviously favours the emergence of scale economies, through the abolition of border obstacles, as it can be noticed that the incoming FDI are far more than the outgoing

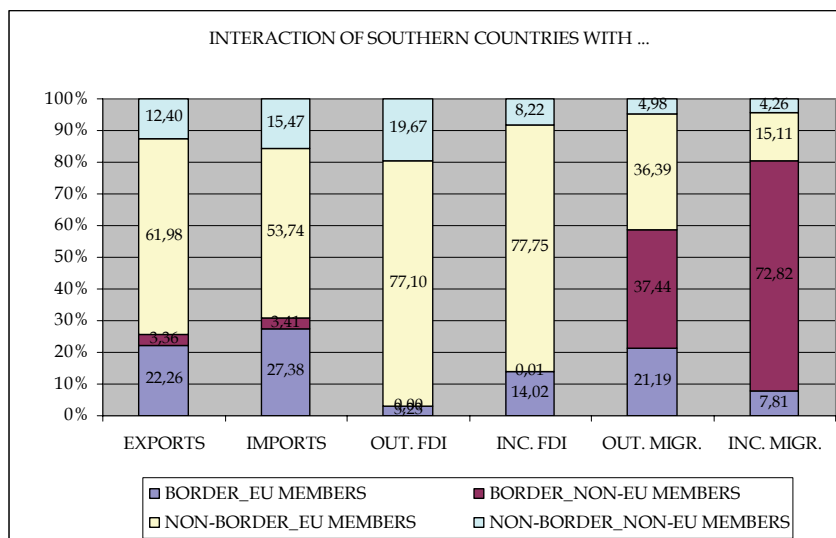
⁴ The notion “initial conditions” refers to the already-shaped historical, social, political and economic conditions at the borders.

Table 2: Trade, Investments and Migration Flows of the Southern EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	56,22%	Outward FDI	26,14%	Outward Migration	29,76%
Imports	43,78%	Inward FDI	73,86%	Inward Migration	70,24%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Source: Authors' Elaboration – Data derived from the National Statistical Services of Greece, Italy, Spain and Portugal

Figure 1: Interaction of the Southern EU Countries with the Rest of the European Countries, Year 2006



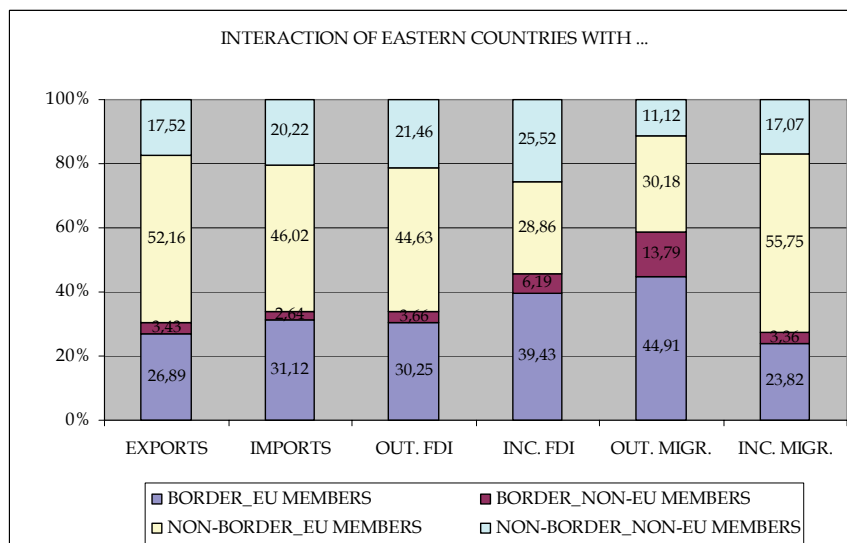
Source: Authors' Elaboration – Data derived from the National Statistical Services of Greece, Italy, Spain and Portugal

Table 3: Trade, Investments and Migration Flows of the Eastern EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	52,16%	Outward FDI	34,73%	Outward Migration	56,06%
Imports	47,84%	Inward FDI	65,27%	Inward Migration	43,94%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Source: Authors' Elaboration – Data derived from the National Statistical Services of Bulgaria, Romania, Slovenia, Slovakia, Czech Rep., Hungary, Latvia, Lithuania and Estonia

Figure 2: Interaction of the Eastern EU Countries with the Rest of the European Countries, Year 2006



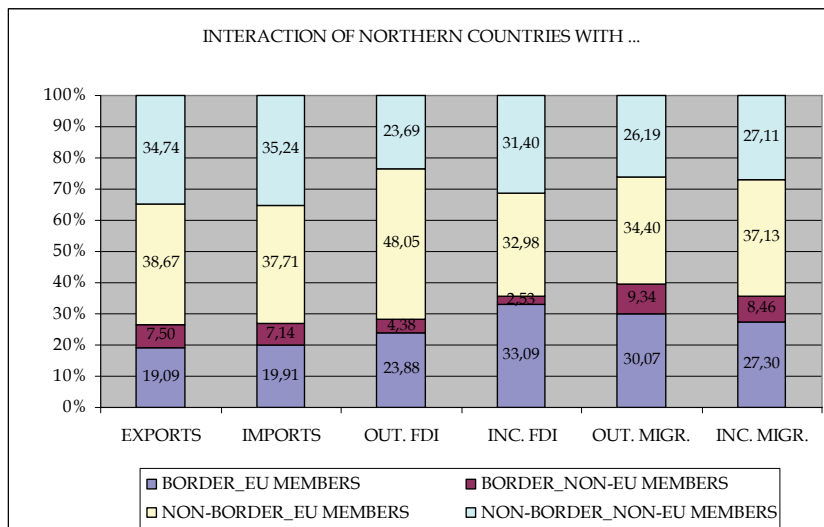
Source: Authors' Elaboration – Data derived from the National Statistical Services of Bulgaria, Romania, Slovenia, Slovakia, Czech Rep., Hungary, Latvia, Lithuania and Estonia

Table 4: Trade, Investments and Migration Flows of the Northern EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	50,18%	Outward FDI	49,64%	Outward Migration	53,67%
Imports	49,82%	Inward FDI	50,36%	Inward Migration	46,33%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Source: Authors' Elaboration – Data derived from the National Statistical Services of Greece, Italy, Spain and Portugal

Figure 3: Interaction of the Northern EU Countries with the Rest of the European Countries, Year 2006

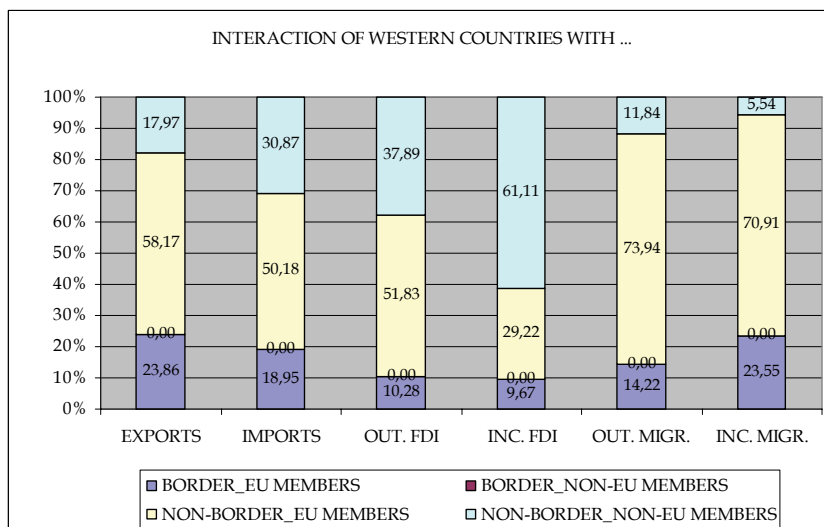


Source: Authors' Elaboration – Data derived from the National Statistical Services of Sweden, Denmark and Finland

Table 5: Trade, Investments and Migration Flows of the Western EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	48,74%	Outward FDI	63,14%	Outward Migration	43,73%
Imports	51,26%	Inward FDI	36,86%	Inward Migration	56,27%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Figure 4: Interaction of the Northern EU Countries with the Rest of the European Countries, Year 2006



Source: Authors' Elaboration – Data derived from the National Statistical Services of Austria, Belgium, Germany, France, Luxembourg, the Netherlands, Ireland, and the United Kingdom

ones. Furthermore, the strong interaction between the Eastern EU countries and the non-border countries that are not EU members verifies the critical role of "initial conditions" concerning investment decisions. To this direction, empirical findings argue that the strong economic ties between the former Soviet Union countries continue to affect the flow and the direction of investment (Topaloglou, 2008).

Significantly larger proportion of interaction is recorder in relation to the outgoing migration. The largest percentage, in particularly, concerns the border countries that are EU members, suggesting that vicinity is the predominant determinant of interaction. Regarding the incoming migration, in contrast, it can be observed that the higher percentages of interaction concern the non-border countries that are EU members. This finding reveals the crucial role of economic integration regarding cross-border interaction.

Interaction of Northern EU Countries

The third part of the empirical investigation refers to the interaction that takes place in Northern Europe. The results are presented in Table 4 and Figure 3.

The intensity of interaction in terms of exports appears to be almost identical to that of imports. The largest percentage concerns the non-border countries that are EU members, indicating the important role of economic integration in trade relations. It can also be noted that the percentage of trade with the non-border countries that are EU members is almost equal to the percentage of trade with the non-border countries that are not EU members. This finding indicates the intense openness of these countries, in which the factor of vicinity is not shown to be decisive.

The interaction concerning FDI refers almost equally to the incoming and the outgoing FDI. The largest percentage of outgoing FDI concerns the non-border countries that are EU members, underlying the important role of economic integration in cross-border interaction. In contrast, the largest percentage of incoming FDI concerns the border countries that are EU members, underlying the significance of vicinity in cross-border interaction.

The percentage of interaction that refers to outgoing migration is slightly large than the respective percentage for the incoming migration. Moreover, the highest percentages

of both outgoing and incoming migration concern the non-border countries that are EU members, indicating the importance of economic integration in cross-border interaction.

Interaction of Western EU Countries

The fourth part of the empirical investigation refers to the interaction that takes place in Western Europe. The results are presented in Table 5 and Figure 4.

The percentage of interaction that refers to imports is slightly lower than the respective that refers to exports. This result is mainly due to the interaction the border countries that are EU members and reflects the impact of economic integration on cross-border interaction in terms of trade.

The percentage of the outgoing FDI is far greater than that of the incoming. The largest percentage of the outgoing FDI, in particular, concerns the non-border countries that are EU members. This finding reveals the crucial role of economic integration in cross-border activity in terms of outgoing FDI.

The percentage of the incoming migration flows is significantly larger than that of the outgoing, revealing that Western EU countries are net receivers. More specifically, the larger percentage of cross-border interaction in terms of migration concerns the non-border that are EU members and reveals that economic integration is the most crucial determinant of cross-border interaction.

Interaction of More Developed EU Countries

Having analyzed the characteristics of cross-border interaction for each geopolitical group of the EU countries, it could be interest to examine the degree to which cross-border interaction in terms of trade, investment and migration is determined from the level of development. In this framework, Table 6 and Diagram 5 present the results regarding cross-border interaction of the more developed EU countries (i.e. the Northern and the Western EU countries).

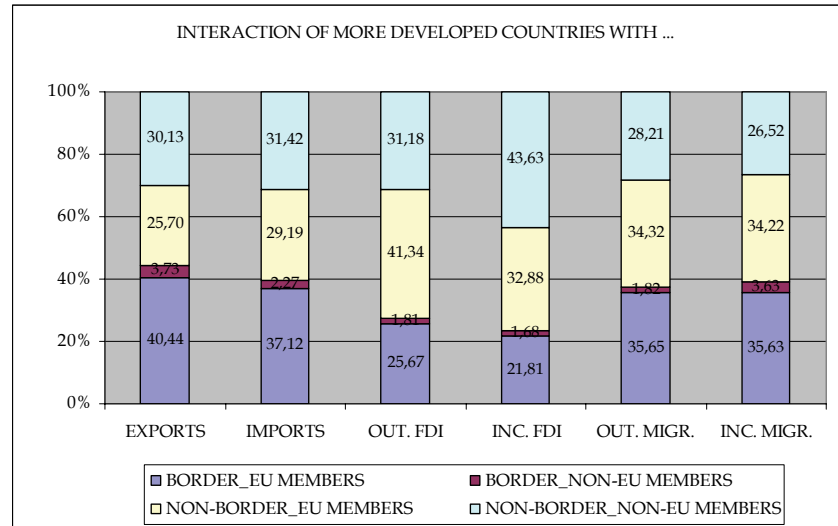
The trade interaction between the more developed EU countries and the rest of the European countries concerns, oddly enough, imports and exports almost equally, despite the fact that the inter-industry character of the trade transactions between the more and the less developed countries leads, in the long-

Table 6: Trade, Investments and Migration Flows of the More Developed EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	48,88%	Outward FDI	62,03%	Outward Migration	43,94%
Imports	51,12%	Inward FDI	37,97%	Inward Migration	56,06%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Source: Authors' Elaboration – Data derived from the National Statistical Services of Sweden, Denmark, Finland, Austria, Belgium, Germany, France, Luxemburg, the Netherlands, Ireland, and the United Kingdom

Figure 5: Interaction of the More Developed EU Countries with the Rest of the European Countries, Year 2006



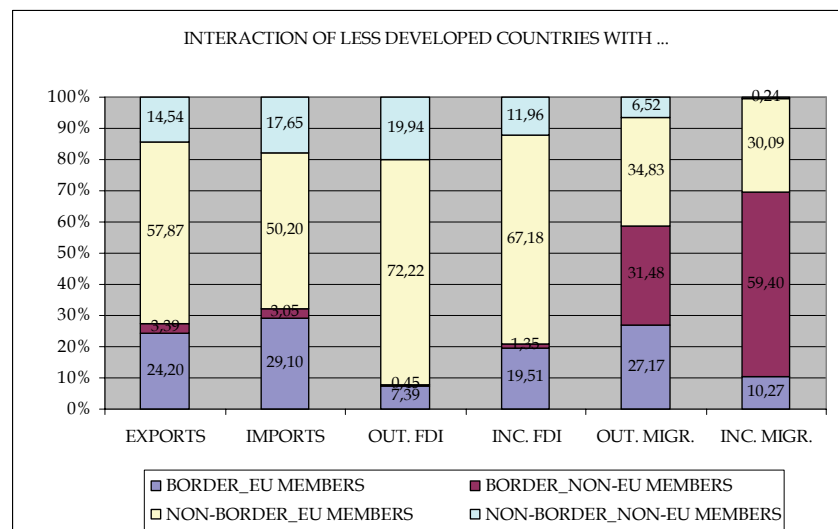
Source: Authors' Elaboration – Data derived from the National Statistical Services of Sweden, Denmark, Finland, Austria, Belgium, Germany, France, Luxemburg, the Netherlands, Ireland, and the United Kingdom

Table 7: Trade, Investments and Migration Flows of the Less Developed EU countries with the rest of the European Countries, Year 2006

TRADE FLOWS		FDI FLOWS		MIGRATION FLOWS	
Exports	54,44%	Outward FDI	27,62%	Outward Migration	67,61%
Imports	45,56%	Inward FDI	72,38%	Inward Migration	32,39%
TOTAL	100,00%	TOTAL	100,00%	TOTAL	100,00%

Source: Authors' Elaboration – Data derived from the National Statistical Services of Greece, Italy, Spain, Portugal, Bulgaria, Romania, Slovenia, Slovakia, Czech Rep., Hungary, Latvia, Lithuania and Estonia

Figure 6: Interaction of the Less Developed EU Countries with the Rest of the European Countries, Year 2006



Source: Authors' Elaboration – Data derived from the National Statistical Services of Greece, Italy, Spain, Portugal, Bulgaria, Romania, Slovenia, Slovakia, Czech Rep., Hungary, Latvia, Lithuania and Estonia

term, in anisomeric trade relations. Furthermore, it seems that the factor of economic integration has an important impact on cross-border interaction since the bulk of trade relations concern the non-border countries that are EU members.

Concerning FDI, it is obvious that the percentage of the outgoing FDI is significantly larger comparing to the respective of the incoming FDI. This is an expected finding, since the more developed EU countries are, usually, the basic senders of investment flows towards the less developed countries. Concerning the outgoing FDI, in particular, it is evident that the largest percentage of interaction concerns the non-border countries that are EU members. This fact demonstrates the important role of economic integration to the direction of the cross-border investment flows. The largest percentage of the incoming FDI, in contrast, concerns the non-border countries that are not EU members. This finding seems, initially, to be paradox since neither the factor of economic integration nor the factor of vicinity has a significant impact on cross-border interaction. At this point, it should be noted that practically these percentages represent a small volume of incoming investment flows. Moreover, Russia and Norway being third countries which have no borders with the core of the more developed EU countries have developed, during the last years, mainly in the sector of energy, significant investment activity in the European space.

Concerning migration, the incoming migration is significantly higher than the outgoing migration. This finding is in harmony with the findings of many surveys that detect a positive relation between the level of development and the volume of the incoming migration. The largest percentage of cross-border interaction, in terms of both the incoming and the outgoing migration, concerns the non-border countries that are EU members. This finding reveals that economic integration favors the migration flows towards the more developed EU countries.

Interaction of Less Developed EU Countries

Continuing the analysis of the characteristics of cross-border interaction on the basis of the level of development, Table 7 and Diagram 6 present the results regarding cross-border interaction of the less developed EU countries

(i.e. the Southern and the Eastern EU countries).

The percentage of trade interaction that refers to exports is significantly higher comparing to the respective interaction that refers to imports. This finding is important, since it provides serious evidence that the inter-industry type of trade between the more developed and the less developed countries does not operate against the balance of trade of the less developed countries. In other words, the specialization of the less developed countries mainly in the agricultural sector or in industrial consumer sectors does not have a negative impact on the exports towards the more developed countries. Noticing, that the bulk of trade transactions concerns the non-border countries that are EU members it can be ascertained that the impact of economic integration on cross-border interaction is important.

The largest percentage of the incoming FDI comparing to the outgoing FDI reveals that the less developed EU countries are net recipients of cross-border investment flows. The largest percentage of interaction concerns the non-border countries that are EU members, revealing the important role of economic integration. This finding, together with the fact that the geographic factor is associated with the level of development, reveals the mix of parameters that have an important impact on the direction of investment flows. In other words, the less developed EU countries represent both geographically and economically the periphery of the EU.

The less developed EU countries represent the basic senders concerning cross-border migration. The largest percentage of outgoing migration concerns the non-border countries that are EU members. However, besides the impact of integration, equally important is the impact of vicinity on the cross-border migration flows. It is noteworthy that the largest percentage of the incoming migration concerns the border countries that are not EU members. In this case, one could insist that the perspective for the access to the enlarged EU labor market, together with the factor of vicinity, made the less developed EU countries more attractive to the neighboring third countries of the EU.

CONCLUSIONS

The analysis has attempted a theoretical and empirical investigation of the basic determinants of cross-border interaction

among the European countries. More specifically, based on data that concern the year 2006, the dynamics of cross-border interaction, in terms of trade, FDI and migration, have been examined. The basic question under examination concerns the investigation of the degree that the economic integration, the vicinity and the geographic – geopolitical factor determine trade, investment and migration flows at the border areas. According to the analysis, the following findings can be extracted:

Concerning cross-border interaction in terms of trade and FDI, evident is the fact that economic integration seems to be the most crucial determinant comparing to the factor of vicinity. For each of the groups examined, on the basis of geographic and development criteria, the percentages of interaction concern mainly the non-border countries that are EU members. In other words, the spatial impact of the abolition of trade and investment barriers at the borders, in the framework of the creation of an enlarged economic market, is extremely significant.

In contrast, the cross-border migration flows reveal different patterns of interaction concerning each group of countries. More specifically, concerning the northern, the western and the more developed EU countries, vicinity seems to be the most important factor of interaction. In contrast, concerning the southern, the eastern and the less developed EU countries, economic integration seems to be the most important factor of interaction. Given that migration flows towards the southern and, mainly, the eastern EU countries are not usually having characteristics of high specialization, it is logical for the outgoing migration to be oriented towards the corresponding sectors of neighboring EU countries. Of course, for the extraction of safer conclusions a further analysis, regarding the structure, the duration, the objectives and the spatial characteristics of migration, is considered to be necessary.

Certainly, the holistic examination of the economic cross-border interaction in Europe requires the investigation of more determinants, besides economic integration and vicinity. It is obvious that in the framework of this investigation factors such as European and national policies, transportation and telecommunications networks, cultural proximity and other geopolitical parameters can not be ignored.

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TOWARDS RE-REFORMING THE EU COHESION POLICY: KEY ISSUES IN THE DEBATE AND SOME THOUGHTS ON PERIPHERAL REGIONS

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Two years after the inception of the fourth programming period, the debate on post-2013 cohesion policy has already been launched. In fact, public consultation was launched in 2007 and considerable steps have followed since then, while others are about to start. At the same time, the new strategic guidelines and rules that guide cohesion policy have only been in place for a short period and as yet their impacts are not clear. Critical events and major political issues that concern the whole EU structure are the main factors behind this evolution. In particular, the economic recession in addition to the prospects for the new EU Treaty could be considered decisive elements in the launch of the debate on future cohesion policy.

More specifically, among the issues highlighted in this context are the distinction between efficiency and equity objectives, the need for a place-based strategy, high growth sectors and their contribution to cohesion, and the potential for creativity and innovation. Overall, it seems like old dilemmas of spatial development recur, while contemporary ones also gain ground.

The outcome of this debate is of significant importance for all EU regions not only in budgetary terms, but also in terms of strategic policy goals. This paper examines the above future policy issues with an emphasis on regions faced with particular difficulties such as less favored regions as well as those in the EU periphery.

Key words: EU cohesion policy, territorial cohesion, European high growth sectors, less favored regions, Lisbon strategy, place-based approach.

INTRODUCTION: THE REFORMS OF COHESION POLICY

In the context of the EU, growing importance has been given to cohesion policy over the last decades in both financial and institutional terms. After its launch by the Single European Act in 1986, it was officially established through the Council Regulation which put EU Structural Funds (SFs) into the context of economic and social cohesion (Petzold, 2008). This has led to a continuous strengthening and restructuring of regional policy over the four successive programming periods since 1989. Transformations are

clearly illustrated in the series of rules (regulations, guidelines and so forth) governing strategic priorities, implementation rules and financing criteria for actions eligible for structural aid in each specific programming period.

Successive transformations of the EU cohesion policy have a complex origin and character. In general terms the deepening and widening process of the EU is the underlying cause for such transformations. Coping with regional competitiveness across the EU constitutes the justifying basis for the establishment of cohesion policy as such. Consequently, the nature of regional imbalances as well as changes occurring in spatial development patterns and trends, usually affect the successive transformations of the EU cohesion policy. Of particular importance is the

interpretation of the above mentioned imbalances as well as the prevailing conception of the factors that determine regional imbalances and related changes.

It is widely acknowledged that the course towards establishing and strengthening EU cohesion policy is closely related to major theory and policy issues that concern the role of the state, the dilemma of liberalization versus regulation, and of equity versus efficiency. Whatever the answer to these dilemmas is, the fact remains that cohesion policy was established in the late eighties when the effects of the withdrawal of the state from its interventionist role began to emerge. In 1989, the establishment of cohesion policy was accompanied by a major transformation whose key principles continued to be in force in the three programming periods that followed

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it. Further to this, the fourth programming period is characterized by major changes which, while not contesting cohesion policy principles, introduce a great deal of new institutional and financial rules. What is more important is that in this way cohesion policy tries to adjust to transformations occurring in the whole EU structure.

From the view point of individual EU regions, such transformations are important in various ways. Primarily, they determine the way each region is regarded in relation to the rest of the Union's regions. For instance, of particular significance is the cohesion policy objective which covers each region in the sense that it determines the amount of resources it can receive and, moreover the way in which these resources should be spent. The latter has to do with the prevailing strategic priorities and eligibility criteria which guide each cohesion policy objective. In addition, transformations in the EU cohesion policy usually induce institutional transformations at the regional or national level in the form of (new) Funds implementing rules and management procedures. In turn, regional and national bodies have to comply with them in order to be eligible for EU structural aid. As a consequence, the successive transformations of cohesion policy have the potential to affect the institutional social capital of the regions (EC 1999a, 138-143). More generally, this has to do with the "Europeanization" process which has often been cited as having fundamental influence on the regions' institutional capacity (Getimis and Grigoriadou, 2004)².

The transformations of EU cohesion policy express the way in which the dominant political forces in the Union prefer to channel the resources of SFs (and Cohesion Fund) which represent a considerable part of the EU budget. In this context, the positioning of the Union in the global terrain in relation to the existing or emerging geopolitical situation is not without importance. This parameter has accentuated since 2000 over the third programming period 2000-2006 in the sense that a growing interest in promoting the competitiveness objective at various EU levels and policies has gradually gained ground, as expressed in the Lisbon competitiveness strategy (European Council, 2000). This trend has intensified in the fourth

programming period under the influence of two major developments, namely EU enlargement and the renewed Lisbon strategy. As a result, for the current 2007-2013 programming period cohesion policy is primarily oriented towards promoting competitiveness of the whole European Union.

It could be argued that cohesion policy is currently undergoing its most important restructuring since its establishment in 1989. First and foremost, the relationship between cohesion and competitiveness is being transformed (Thoidou, 2008). Furthermore, a series of major and minor transformations have been introduced concerning both strategic orientations and contribution from SFs to help promote its commitment to competitiveness.

On the other hand, individual regions are faced with changes in both their relative position and the cohesion instruments available. While the effort is supposed to be towards improving regional competitiveness, the question arises as to the extent to which they are actually endowed with physical and human assets such as infrastructure, research and development, innovation, and human capital (OECD, 2009), or are still faced with significant inadequacies in infrastructure and socio-political configuration. This question, which is particularly pertinent to less favored and peripheral regions such as those in South East Europe gains significance in view of the debate on post 2013 cohesion policy.

In trying to address the abovementioned question, this paper focuses on the recent and forthcoming reforms of EU cohesion policy. In the second part that follows, transformations which have been introduced in the last reform for the 2007-2013 period are briefly presented. In the third part some representative topics in the debate on the next programming period are pinpointed on the basis of the most representative documents. Particular emphasis is put on regions faced with developmental challenges. The paper concludes with a few remarks on the key issues.

THE REFORM OF THE 2007-2013 COHESION POLICY

The years 2000 and 2001 saw the launch of the effort towards the Lisbon and Gothenburg strategy objectives (European Council, 2000 and 2001). As far as cohesion policy is concerned, the 2000-2006 programming period could be considered transitional with respect to these objectives. The revised

indicative guidelines for the SFs and their coordination with the Cohesion Fund did stress the relationship between cohesion policy and competitiveness. In fact, a kind of "reprogramming" was necessary after the Operational Programs of the third period had started, in 2003. The intermediate revision was intended to contribute to the achievement of the new strategic objectives of the Union "through the co-financing of investments aimed at improving employment, economic and social cohesion as well as the competitiveness of the Union's different regions". This entailed putting more emphasis "on competitiveness factors such as accessibility, knowledge society, innovation, research and development, the environment, employment, social integration, and life-long education and training, especially in a context of economic and social restructuring resulting from technological changes and a process of economic catch-up in the Union" (CEC, 2003: 5).

In the 2007-2013 programming period the enlargement of the Union was one of the key events that significantly influenced the shape of cohesion policy. At the same time cohesion policy is considered to have made an important contribution to the achievement of the Lisbon and Gothenburg strategies' objectives. It is argued that cohesion policy must be mobilized to achieve these objectives, since on the one hand it must be seen as an integral part of them, while on the other it has to incorporate their objectives (CEC, 2004: 3). Cohesion policy was completely committed towards achieving the Lisbon strategy objectives from the very beginning, as all Community policies did. The 2005 Spring European Council declared that "Europe must renew the basis of its competitiveness, increase its growth potential and its productivity and strengthen social cohesion, placing the main emphasis on knowledge, innovation and the optimisation of human capital". The aim being this, all resources, including those for cohesion policy, should be mobilized "in the Strategy three dimensions (economic, social and environmental) so as better to tap into their synergies in a general context of sustainable development" (EC, 2007b: xiv).

As a consequence, the Council Regulation defining the strategic guidelines on cohesion stressed that these guidelines should aim to "foster an increase in the strategic content of cohesion policy with a view to strengthening

²The case of Greece is representative of the impacts of the Europeanization process on local institutions and governance (Foutakis and Thoidou, 2006).

synergies with, and helping to deliver, the objectives of the renewed Lisbon agenda.” (The Council of the EU, 2006: 12). This was not only a question of the strategy’s orientation but a matter of resources. Indeed “limited resources available to cohesion policy should be concentrated on promoting sustainable growth, competitiveness and employment” having regard to the renewed Lisbon strategy (CEC, 2005: 4).³

A series of changes have been introduced in the 2007-2013 period that concern both strategic orientation and the organizational structure of the Funds.⁴ What is important in these changes is the linking of the profile and fundamental goal of cohesion policy with both the rules and procedures which govern it and the content of the programs and projects which are funded.

A “more strategic policy” is deemed to be a key characteristic of the 2007-2013 cohesion policy, which is dedicated to supporting and further promoting the overall EU strategy which is the competitiveness (Lisbon) strategy. In turn, this is based on “more confidence placed in the MS” that lightens the role of the Commission which can concentrate on a strategic approach. At the same time this results in a higher degree of responsibility for the Member States (MS). Monitoring and control rules are characterized by simplification (e.g. reduction of the number of funds and programming stages) and harmonization of the rules governing the Funds. The structural aid may be applied to all EU regions, provided that objective Regional Competitiveness and Employment covers all EU regions which are not eligible for Convergence objective. In sum, the main elements of the reform set in the above context are: the strategic approach – linking cohesion policy to the Lisbon process, concentration and simplification, earmarking, and new instruments of cohesion policy (EC, 2007a: 6-7, EC, 2007b: 125-131).

³ The justifying basis for this is the slowing down of economic development in the Union after 2001 with the resultant increase in unemployment and related social implications. Furthermore the Union faces challenges stemming from the European and the global context. “So that the Lisbon and Gothenburg objectives might be supported by all possible means, during preparation for the fourth programming period, linkage to cohesion policy was promoted” (Foutakis and Thoidou, 2007).

⁴ For a comprehensive presentation and analysis of the 2007-2013 reform see Bachtler et al., 2007, and EC, 2007a.

The influence of the Open Method of Coordination, which had already been launched at a Community level, has been decisive in this respect (Faludi, 2008). Of the major transformations which concern the whole EU orientation, it is undoubtedly the exclusion of the European Agricultural Guidance and Guarantee Fund (EAGGF) from cohesion policy that to some extent revokes the integrated approach which was the epicentre of the 1989 reform (EP, 2005).⁵

COHESION POLICY IN TRANSITION

Towards a new reform after 2013

The debate on post 2013 cohesion policy started in 2007, while the last reform of cohesion policy had not exceeded half of its total duration and what is more, the impact of the implementation of the new strategic guidelines and rules was still not clear. From the very beginning it has been declared that it is a part of the wider debate on the budget and future priorities of the Union. Ensuring the contribution of cohesion funds to achieve overall EU competitiveness, promoting effectiveness, simplifying the procedure of policy implementation in addition to preparing future policy are the main issues of the debate. More particularly, the issues of the debate are described as follows:⁶

- “Improving the way regional and local resources from all territories are used, so that they contribute to the competitiveness of all Europe.
- Focusing the policy more on results so that its impact can be measured.
- Continue simplifying the process used to implement the policy, at the same time ensuring it remains effective.
- Focusing the policy towards the future and helping regions deal with future challenges.”

Important elements, are among others: ongoing public consultation regarding the budget review, public consultation on the *Green Paper* concerning territorial cohesion, and ministerial and high-level events (EC,

⁵ The European Agricultural Fund for Rural Development (EAFRD) is no longer involved in the cohesion policy and now it has its own legal basis (EC, 2007a).

⁶ See http://ec.europa.eu/regional_policy/policy/uture/index_en.htm

2008a). The progress of the debate can be traced through a series of successive EU documents and procedures.⁷ Undoubtedly, one first step could be considered the declaration of a will to continue cohesion policy after 2013 along with its strong funding capacity, in parallel with a continuous commitment to the competitiveness and sustainable development of the entire EU, while at the same time the latter is suggested to be of at least equal importance with the endeavor towards addressing regional disparities. Cohesion policy “is perceived not only as an instrument to address the significant disparities in the enlarged European Union, but also as a policy to develop the competitiveness of all the European regions and promote sustainable development throughout the European territory” (EC, 2008a: 3).

As far as the content of future cohesion policy and the main areas to be focused on are concerned, some evidence can be drawn by the main development sectors which are thought to drive growth and regional competitiveness and are characterized as “European high growth sectors”. These are identified as “those with above average employment or GVA growth” and are aggregated under three broad categories: (a) financial and business services, (b) trade transport and communication, (c) construction and (d) high and medium-high tech manufacturing (EC, 2008a: 8, 10).⁸ In turn,

⁷ The following documents and procedures represent the background of the reform (see http://ec.europa.eu/regional_policy/policy/future/index_en.htm).

• the *5th progress report on cohesion* (EC, 2008a) in which the results of the consultation launched in 2007 were summarized. This marked the beginning of discussions on the policy’s future.

• the *Regions 2020 report* (CEC, 2008b) which stresses the need for adapting the policy’s framework “to help regions improve how they deal with globalization, ageing populations, and climate and energy challenges”

• the *6th progress report on cohesion* (CEC, 2009) in which final results of the public consultation examining the green paper on territorial cohesion are presented.

• the *Barca report* (2009) which is an independent analysis of European cohesion policy.

• the *reform of the EU budget* that concerns not the financial framework and its overall size but the structure and direction of the budget as well as the way it works (http://ec.europa.eu/budget/reform/issues/issues_en.htm).

• the *Lisbon Strategy post 2010* (<http://www.cor.europa.eu/pages/EventTemplate.aspx?>

⁸It is noted that this sector cannot be identified at the regional level (EC, 2008a: 8). On the other hand, the financial, construction and automobile sector will be particularly hit by the ongoing economic recession (CEC, 2009: 3).

evaluation of the situation in EU regions and countries with respect to these sectors is essential in the effort to estimate their potential in the years to come.

Following this, the *Regions 2020* report identifies the main challenges which EU regions are about to be faced with. The prospective analysis of the potential impacts of the major challenges in the next decade reveals that there are significant differences in vulnerability of regions to the challenges from globalisation, demographic change, climate change (CEC, 2008b, EC, 2008b).

Furthermore, in addition to the high growth sectors, the central role of innovation together with creativity is emphasized in the Sixth progress report on cohesion. The term creativity is used here in the sense of "generating a new and useful idea, and innovation as putting a new and useful idea into practice. The regional dimension means that an idea has to be new and useful in the region". It is argued that to boost creativity "regions need to develop their own talent, attract talent and be tolerant of diversity" (CEC, 2009: 4).

The case of less favored regions

The regions' vulnerability to the above mentioned factors shows their relative position in the future. All of them will face a number of key challenges, including among others: adapting to globalisation, demographic change, climate change, and the energy challenge. More particularly the situation in the regions is as follows (CEC, 2008b: 17):

"For globalisation, South and South Eastern regions appear to be highly vulnerable, but considerable variations can be observed in both Germany and the new Member States. For demographic change, there is significant variation across European regions, once again with slightly greater vulnerability in South and South Eastern regions. However, it should be stressed that there is a lag in the demographic transition of the new Member States and that the effects will be very similar in the next generation to those already seen in the old Member States. For climate change, there is a relatively strong core-periphery pattern, with Southern regions faring worse. The pattern for energy is largely country specific, with a weak core-periphery pattern at a European level."

Overall, some regions, especially those in South East Europe, appear to be vulnerable to challenges of both globalization and demographic decline, while at the same time they are not well placed or adequately endowed in order to adjust successfully to the new environment.

The analysis undertaken in the context of the *Fifth progress report on cohesion* (EC, 2008a: 8-9) suggests that, despite the improvements achieved in the least prosperous regions and the strong convergence among European regions in recent years, Convergence regions "still have a considerably lower GDP per head, at 58% of the EU average...". They also have relatively low employment rates and high unemployment rates. GVA growth and employment creation are positively influenced by the three high growth sectors. However, these sectors are not capable of compensating the reduction of employment in agriculture. On the other hand, GVA growth is higher in industry, which in turn is liable to the risk of decline. On a national basis the share of the GVA of high and medium-high tech manufacturing sector is still low, especially in Romania, Bulgaria, the Baltic States, Greece, and Portugal, which are also experiencing low productivity in this sector. At the same time the share of educated, skilled and knowledge workers lags in Convergence regions. Hence, they may be "vulnerable to increased global competition" (ibid.).

The challenge for less favored regions and countries is how to orientate restructuring towards the high growth sectors in which the economy of the Union has its "clearest global growth perspective". In order that the high growth sectors "can also be powerful motors of the EU convergence process" less favored regions and countries need a "tailored policy response" (EC 2008a, 10). The issue is then, if they are capable of achieving such a restructuring and to what expense.

With respect to the major future challenges to all European regions it is argued that the policy's framework has to be adapted "to help regions improve how they deal with globalization, ageing populations, and climate and energy challenges ... This will be an important input into the future design of cohesion policy post 2013". More specifically the following "lessons" are drawn for cohesion policy (EC, 2008b):

- "Need for continued support for all European Regions to drive forward regions

to focus on the promotion of new approaches, reorientate private and public investments.

- Continued focus on the Lisbon Agenda.
- Reinforcement of investments to address the challenges posed by the shift to the low carbon economy.
- Reinforced territorial cooperation to address common problems."

At the same time, acknowledgement of the role of creativity and innovation and the relevant analysis has led to highlighting of the potential of Convergence regions in some particular aspects of creativity and innovation such as Foreign Direct Investment (FDI) and productivity growth. It is suggested that Convergence regions can exploit foreign firms "by embedding them in their regional economy and improving their absorption capacity. Strong links between foreign firms and local suppliers increase efficiency, local employment and knowledge transfers". Improvements in educational attainment and participation in training could sustain their high productivity growth. Moreover, "these regions should increase their appeal to leisure and business travellers by, for example, stimulating cultural and creative activities. This would boost exchanges of new ideas and possibly increase the appeal of the region to new residents and returning migrants" (CEC, 2009: 10).

The question arises however as to the extent to which less favored regions are capable of following the path of prosperous areas. As we have argued in a previous paper (Foutakis and Thoidou, 2007), to equate the priorities of cohesion policy with those of the Lisbon strategy is not without its problems. The analysis of the 2000–2006 Structural Funds programs confirmed that overlapping between the objectives of cohesion policy and of the Lisbon strategy "is greater in regions undergoing conversion than in regions whose development is lagging behind." In the former, 80% of the actions would coincide with the priorities of the Lisbon strategy, while in the latter this is true of 30% in cohesion countries and 60% outside (ibid., EP, 2005: 7).

The evolving environment: critical issues

While the abovementioned issues came to light during the course of the cohesion policy follow up and future planning, of critical importance in the debate are some developments which

formulate the Union's characteristics as well as the overall socio-economic trends that dominate the global arena. In particular, the pursuit of territorial cohesion as well as the outbreak of economic recession could be considered among the critical determinants to the outcome of the debate.⁹

Territorial cohesion is an inherent parameter in the formulation of the EU cohesion policy that seems to be receiving increasingly greater emphasis. Its incorporation into the new (Lisbon) EU Treaty indicates the importance of its future role. However, despite the fact that it has been associated with cohesion policy since the middle 1990s¹⁰ and continuously complements economic and social cohesion, it still constitutes a complex notion with various meanings for the various actors involved in planning and implementing cohesion policy. The Territorial Agenda (Informal Ministerial Meeting, 2007) and following this, the Green Paper on territorial cohesion (Goulet, 2008) contribute to the clarification of its content. Nevertheless, its content has not yet been fully identified.

According to some contributors to the relevant debate at the EU level the inclusion of territorial cohesion in the Lisbon Treaty should not be considered new, since the former has already been integrated into cohesion policy along with economic and social dimensions (EC, 2008a: 6). More generally, according to recent EU documents in which the results of the public consultation on territorial cohesion are presented (CEC, 2009), some of the issues highlighted with respect to territorial cohesion are the following:

- The relationship between territorial cohesion and economic and social cohesion.
- The degree of its focus on territorial features.
- The emphasis on the solidarity dimension.

- The distinction between sectoral and spatial policies and the consequent need for overcoming it through a territorial approach.

- The need for an explicit approach to territorial cohesion to be adopted.

- The spatial scope and the reference unit of cohesion policy, in the sense that, if territorial dimension occupies a prominent position in cohesion policy the latter should be applied to various spatial entities irrespective of the level of their economic development.

- The procedure of territorial governance along with issues of policy coordination, citizens' participation, and involvement of local actors.

Several questions arise in relation to the above issues. A rather rhetorical question which is posed in the context of the *Green Paper on Territorial Cohesion* (Goulet, 2008) is: "Do regions with specific geographical features require special policy measures?" A differentiation in the way the spatial dimension is approached is revealed by the way territorial cohesion is perceived. The term "flexible geography" seems to be differentiated from with the rigid approach to the concept of "spatial development" which prevailed in the 1990s. On the other hand, place-based strategies seem to represent the most important policy lesson drawn until now from the debate on cohesion policy and in particular on territorial cohesion.

A place-based policy approach is suggested so that the "reference to places" is stressed (Barca, 2009: 93). Such a reference could restore the concept of spatial development and promote the coherence of its three dimensions (economy – society – environment). This is compared to the weakened spatial aspect of current cohesion policy, which is said to be open to "several inappropriate interpretations", for instance when it is perceived "as a tool for financial redistribution among regions". In this context, while NUTS II areas are considered to be suitable for management of the programs, "almost never are the appropriate unit of intervention". There is a strong case for place-based development policy to be the starting point and the core of the reform. More particularly, this policy that aims at both "core economic and social objectives" can be defined as (Barca, 2009: vii, 93, 5):

- "a long-term development strategy whose objective is to reduce persistent

inefficiency (underutilization of the full potential) and inequality (share of people below a given standard of well-being and/or extent of interpersonal disparities) in specific places,

- through the production of bundles of integrated, place-tailored public goods and services, designed and implemented by eliciting and aggregating local preferences and knowledge through participatory political institutions, and by establishing linkages with other places; and

- promoted from outside the place by a system of multilevel governance where grants subject to conditionalities on both objectives and institutions are transferred from higher to lower levels of government."

The launch of the debate almost coincided with the outbreak of economic crisis and the consequent efforts undertaken by the EU in response to it (CEC, 2008a, 2008c, EC, 2009). Cohesion policy is mobilized towards financing the recovery program of the EU given that it represents one of the main EU spending blocks (along with the CAP) and is characterized as "the largest source of investments in the real economy". It is also perceived as an "expression of European solidarity" for European citizens "most in need" that at the same time strengthens growth and contributes to economic and social cohesion. Within the recovery plan, cohesion policy is said to provide some crucial assets that support people, areas and economies in need such as: "considerable support to public investment, including those at regional and local level; a stable, secure, targeted source of financing that can be used to stimulate economic recovery; much needed public investment to boost internal demand in the short term and put the economy on a sustainable development path in the medium term" (CEC, 2008a).

Acceleration of investment through cohesion policy programs and simplification of their implementation are at the core of changes. Introducing greater flexibility, giving regions a "head start" and targeting cohesion policy programs on "smart investment" are the drivers of this change (EC, 2009).

With respect to the priorities and content of 2007–2013 cohesion policy, its commitment to the renewed Lisbon strategy is materialized through the earmarking of more than 65% of cohesion funds for investment in the priority areas of the growth and jobs strategy. These

⁹ As noted above, of particular significance are the developments concerning the EU budget.

¹⁰ Territorial development was first discussed in the Europe 2000 and Europe 2000+ reports in the early 1990s. The concept territorial cohesion first appeared in a meeting of the Assembly of European Regions in Antwerp (1995) and was introduced in the Treaty of Amsterdam in 1997 (Goulet, 2008: 6). It was then incorporated in the ESDP (EC, 1999b) and associated with economic and social cohesion in the second report on Economic and Social Cohesion (EC, 2001).

areas concern: (a) people, (b) business, (c) infrastructure, and (d) energy, and research and innovation.¹¹ It is in these sectors that the *European Recovery Plan* organizes its proposals for the EU to undertake particular action and promote intervention by principles and recommendations, targeted legislative changes and non-legislative measures (CEC, 2008a).

However, one issue arises as to the areas and the bodies participating in this earmarking "exercise". Moreover, for the less favored areas of the Union it is not easy to overcome shortages in physical, human and institutional capital in order to be able to follow competitiveness-based development (Foutakis and Thoidou, 2007).

It is worth mentioning that the *Sixth progress report* on cohesion directly addresses the abovementioned relationship between cohesion policy and the Lisbon strategy with further focus on creativity which, together with innovation "can help the Union to emerge faster and stronger from the current economic crisis. This is why the European Economic Recovery Plan together with Cohesion Policy targets investments that strengthen the EU long term competitiveness, such as entrepreneurship, access to finance for SMEs, human capital, ICT, green technology and energy efficiency" (CEC, 2009).

CONCLUSIONS

The aim of this paper was to examine the background and the key themes of the debate on cohesion policy post 2013, with a focus on less favored regions such as Convergence and peripheral regions in South East Europe, which appear to be the most vulnerable to future challenges. The effort was to highlight critical

issues emerging for future cohesion policy as well as challenges regions will be faced with in the next 2013-2020 period. Overall it seems possible that the upcoming reform will be based on the 2007-2013 cohesion policy transformation, which introduced a series of changes in both the objectives of cohesion policy and the way its instruments, that is the Funds, are used. In this context, some issues emerge that could be critical in determining future cohesion policy.

Particularly important is the degree up to which cohesion policy objectives are committed to overall EU goals. The question could be if addressing regional disparities still constitutes the starting point and the final target of cohesion policy, or if it is expected to result in the fulfillment of the overall EU objectives to which it "contributes" as a significant funds repository and delivering procedure.

Since the early 2000s considerable commitments of resources and effort from cohesion policy are required to pursue various key EU policy objectives and strategies. Firstly, this has to do with the Lisbon competitiveness strategy which was complemented by the sustainability (Gothenburg) dimension. Now it seems that cohesion policy has to contribute not only to the Lisbon strategy but also to the effort to overcome economic recession. This affects both the content of interventions (e.g. intelligent investment) and the management procedure (e.g. more simplification).

The target areas of cohesion policy, while not directly disputed, seem to be under question. A considerable change has occurred in the last programming period, since all EU regions are now eligible for funding under the cohesion policy objectives. This differentiates from the strict identification of objective 1 and objective 2 regions that prevailed in all previous periods following the 1989 major cohesion policy transformation and also predisposes to "territorial flexibility". The outcome of the debate on the meaning and content of territorial cohesion is expected to strongly affect the issue of target areas, in particular the spatial scope and the reference unit of cohesion policy.

The content of the interventions supported by cohesion policy is related to the two issues mentioned above. As has been declared with respect to the response to crisis, "Cohesion Policy programs have the potential and the necessary flexibility to ensure that targeted assistance can be delivered now to address

priority needs and to accelerate spending in the areas with most growth potential" (CEC, 2008a). Cohesion policy appears to be focused on two groups of areas: the ones with "priority needs" and those with "most growth potential". In this context the Lisbon strategy priorities are strengthened, provided that they are believed to have the greatest impulse potential for growth and jobs creation: "Maintaining focus on the "earmarked" Lisbon investment priorities is crucial as these priorities can contribute to quicker recovery and address long-term challenges such as improving competitiveness and adapting to a low-carbon economy" (ibid.).

The Lisbon strategy focus and the recovery plan prejudice knowledge intensive soft interventions together with specialized hard infrastructure as well as demanding planning and management procedures. And as Hubner (2008) suggests, "the essentials of the Lisbon strategy will continue to be relevant", even if it is possible "that the guidelines will have to be adapted to take account of developments in the intensity of the challenges that are coming already to the fore". Hence, it could be argued that mostly regions and countries which are already oriented towards the Lisbon strategy development path will be able to exploit the EU aid towards confronting the crisis. The question is, whether the target areas where "priority needs" are concentrated are capable of exploiting new development instruments that fit the areas with "most growth potential".

As far as less favored regions are concerned it could be argued that while their positioning in future cohesion policy is not directly contested, their overall role and prospects are rather questionable. In addition they seem to be the most vulnerable in future challenges and threats, as the report *Regions 2020* stressed. With respect to cohesion policy all the above mentioned key issues, namely the objectives, the target areas and the content of cohesion policy, are of particular significance for their future ability to overcome weaknesses and improve their relative position.

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¹¹ In turn, these areas are based on the three priorities on which cohesion funds are targeted, in order that the Lisbon and Gothenburg (competitiveness and sustainable development) strategy to be promoted, namely: "(a) improving the attractiveness of Member States, regions and cities by improving accessibility, ensuring adequate quality and level of services, and preserving the environment, (b) encouraging innovation, entrepreneurship and the growth of the knowledge economy by research and innovation capacities, including new information and communication technologies, and (c) creating more and better jobs by attracting more people into employment or entrepreneurial activity, improving adaptability of workers and enterprises and increasing investment in human capital." (The Council of the EU, 2006).

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STRATEGIC PLANNING AS A REGIONAL DEVELOPMENT POLICY MECHANISM – EUROPEAN CONTEXT

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The increasing interest in a strategic approach to space arrangement at all levels, and particularly on the intra and interregional level, as well as the changes in the area of spatial and regional planning, are some of the basic characteristics of theoretical and practical activities and efforts undertaken and realized in the field of organization and arrangement of space in the European Union during recent decades. Strategic planning gained importance in the framework of those changes, particularly owing to the growth of the environmental complex and sustainable growth planning, but also because of the need for a higher security of markets and states. Strategic spatial planning can be defined as a quite diverse planning activity. It is considered that "new" strategic planning will not represent a return to comprehensive planning, but will rather be a combination of traditional and new approaches to planning of sustainable development where an integrative role will be progressively assumed by spatial and regional plans and programs. Apart from a review of the development of strategic planning, this paper considers the importance and role of strategic planning as a mechanism of regional development and "new" regional politics, based on the contemporary development of critical thinking and practical experiences in the European Union.

Key words: strategy, spatial strategic planning, regional planning, regional policy

INTRODUCTION

This paper consists of three parts. The first part selectively presents a variety of interpretations of the concepts of strategy, strategic planning and strategic spatial planning which have been in use in the theory and practice of spatial planning in the EU in recent decades. Further, general changes in the theory and practice of spatial and regional planning in the same period are considered, and (cor)relations between these changes and the increase of interest in the strategic approach in spatial and regional planning policy have been considered. Finally, through an analysis and interpretation of the role of strategic planning in the

framework of "new" regional policy, a commentary is made on the creative potential of strategic planning as a mechanism of regional development.

STRATEGIC SPATIAL PLANNING - MEANINGS AND GENERAL FRAMEWORK

Terms such as **strategy and strategic spatial planning** have been theoretically interpreted in a variety of ways in the ambiguous and complex field of planning. Thus there are several different available definitions. Many authors are of the opinion that in the world of planning the notion of a blanket definition for the terms **strategy and strategic** is both impossible and inappropriate. For an analysis of the implementation and role of strategy in planning practice a **contextualization** of terms in respect to the contemporary and frequently

specific social, economic and cultural change is required (Calvaresi, 1997).

The term **strategy** has its origin in warfare science (Salet & Faludi 2000, Lacaze 1996, Piroddi 1996), and F. Sartorio (2005) holds that the original meaning of the concept of strategy is important it sums up two components of planning that occur – one in the theory of planning, the other in the practice of planning. The first component deals with *implementation*, long term visions, desired and sustainable ideas about the potential future. The second component relates to the *presence of one or more stakeholders* who conduct different activities in order to achieve divergent and frequently opposite goals, which have different manifestations.

It is believed that the terms **strategy and strategic planning** in contemporary town planning practice were first systematically employed by the end of 60s during debates on

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structural planning which was the focus of interest in Britain, Holland, France and Germany (see Table 1). Strategy and strategic planning were then interpreted as a **part** of the complex **process of planning and as an inter-institutional interaction** (not yet as a long-term vision of development). It must be stressed that the development of theory was at that time under the strong influence of strong economic and demographic growth, which sought a certain framework for spatial transformation. During these years, discussions on spatial planning and strategic planning affected the development of new planning theories as well as the expansion of the boundaries of planning activities and actions (F. Sartorio, 2005).

circular or parallel, the strategic spatial planning processes, especially in last two decades, have been more democratic and transparent, more complex in character and often slower to arrive at an agreement compared to military or corporate processes – the main reason is the large number of stakeholders involved. The period of the 70s and 80s was characterized by the public emergence of private investors as the first non-governmental stakeholders and participants with certain interests in the planning process, aside from the state.

During the 90s, a crisis occurred in which the powerful stakeholders gradually lost their role and authority, and the domination of the market as a basic regulatory mechanism of

balanced spatial development. It can be understood as a social process for coordinating actors and institutions in fragmented, uncertain environments in order to empower and motivate key stakeholders and to provide a decision framework for the management of spatial change (Hutter&Wiechmann, 2005).

In practice, there is a definition which has been used more than others, because it has seemed the most acceptable – Albrechts (2001) sees **spatial plans** as a strategic framework for action, and **strategic spatial planning** as a **"set of concepts, procedures and tools that must be tailored to whatever situation is at hand if desirable outcomes are to be achieved"**. Strategic plan making is

Table 1. The term strategy in planning and strategic planning

Discourses		Main concept	External influences
Orign of the term	Goal-oriented action	Assumption of both a <i>static</i> and <i>dynamic</i> environment	Warfare sciences
1950s – 1960s	Structural planning	Introduces a <i>process</i>	Theories of design-making
1970s – 1980s	Organizational planning	Introduces <i>uncertainty</i> and <i>performance</i> of the city as a system	Enterprise and organizational planning
1990s	Strategic planning	Introduces <i>interaction</i>	Policy analysis
	Strategic behaviors		Governance

Source: F.S. Sartorio (2005): *Strategic Spatial Planning*. In: *disP* 1 62:3

The new meaning of strategic planning is related to a time of crisis and the complete collapse of planning as a discipline during the 70s and 80s of the previous century, when the principles of rationality and efficiency came onto the stage, and the market was positioned as a dominant regulatory mechanism (the so called period of "Thatcherism" and "Reaganism"). One part of the professional public thinks that **strategic planning** in the public sector actually **originates** from corporate strategic planning, which was in expansion in this period. The reasons for this interpretation of corporate strategic planning in the field of spatial planning lie in the fact that transnational companies in this period, and until the present have been stronger, more influential and important organizers of the world economy than the national states. That is, this type of planning and the instruments used by private corporations, have yielded positive effects in the field of spatial and town planning (Vujošević, 2002). Thus, some of the new strategic principles are based on a conventional rational approach in the preparation and decision making process: 1) status overview; 2) analysis; 3) research and evaluation of alternatives; 4) selection of strategy; and 5) monitoring. In all of this there is much more interaction and cooperation. Within the procedures, which are not linear but

development came to an end. This brought about the renaissance of planning and the establishment of the latest type of strategic planning whose basic characteristic was the onset of involvement of the civil sector in the planning process.

This variety of strategic planning, to a certain extent exists even today, although in divergent forms. Strategic planning in practice today, and even more so the implementation of strategies in planning, are constantly varying and changing. In general, **strategic planning** can be used to determine mission, vision, values, goals, objectives, roles and responsibilities, timelines, etc. It can be described as the systematic, integrated approach of policymaking, which takes into account context, resources and the long term (Dimitrou, Thomson, 2007).

Across Europe there is a growing interest in **strategic spatial planning**. Still, the terminology used to discuss strategic spatial planning is constantly evolving, as it relates to and comprises a variety of approaches and the institutional contexts in which it is developing are very diverse too (Sartorio, 2005). So, strategic spatial planning can be defined as a **quite diverse planning activity**. Strategic spatial planning emphasizes the dynamic nature of strategy-making for sustainable and

as much about the process, institutional design and mobilization as about development of substantial theories."

According to A. Faludi and W. Salet (2000) three strategic planning approaches can be distinguished today, primarily as a result of various administrative frameworks. Those are:

- (1) institutional approach,
- (2) communicative or "discursive" approach, and
- (3) interactive approach to planning.

A short commentary of each of them follows:

▪ **The Institutional approach** results from the normative arrangement and setup of a society, which is also a framework for the interpretation of planning issues, where the planning issues can affect the reconstruction of the normative framework, but yet it is the framework defining the role and responsibility of stakeholders in the planning process. This approach connects the strategic planning theory with the social theories and political system theories in the field of economics, politics and legal framework (Faludi, Salet, 2000). The institutional approach develops in two basic directions: one oriented towards the legitimization of planned activities, and the other observing the institutionalization

processes mainly in terms of its potential for the implementation of plans and projects.

• **The Communicative approach** has the longest tradition and comprises the capacity of a strategic plan to use the symbols to represent the social attitudes and establish new grounds for action (Salet&Faludi, 2000). With a premise that it is possible to "picture" even the "collective consciousness" and social interest by the formation of spatial representation, represented through the spatial plan, this approach relies on the planning concepts, cartography, land usage presentations, etc. Lately, interest has been focused on the social discourses and ways in which they have been structuring changes, with the goal of improving planning process characteristics.

• **The Interactive approach** developed in the 80s and 90s as a reaction to traditional approaches, where state services and institutions had the role of main coordinators of the spatial planning process. Such a one-sided practice compromised not only the legitimacy of planning but its efficiency, too. The interactive approach thus developed various forms of state participation and coordination, as well as links among the stakeholders, with an ever present tendency towards liberalization and efficiency of state policy on one hand, and the development of the social awareness and participation of the civil sector on the other hand.

Against this background, according to P. Healey (1997), strategic spatial planning can be understood as a "social process through which a range of people in diverse institutional relations and positions come together to design a plan-making process and develop contents and strategies for the management of spatial change. This process generates not merely a formal output in terms of policy and project proposals, but a decision framework that may influence relevant parties in their future investments and regulatory activities. It may also generate ways of understanding, ways of building agreement, of organizing and mobilizing to influence in political arenas."

SPATIAL AND REGIONAL PLANNING – LINK WITH STRATEGIC APPROACH

Spatial planning is a very complex issue – it is a way that we intervene in the processes of spatial development in order to create a different and hopefully more sustainable

structure. Planning actions and functions from past to the future are very different (see Table 2). Spatial planning operates at different scales: local, regional and increasingly at the transnational and cross-border level. Therefore, **it is a wider concept than regional planning; it embraces this**, but is a wider concept. It is "a political as well as technical process - it is political not only in the sense of the politics in the process, but the concepts and ideas that we use in spatial planning are also political" (Nadin, 2000).

to define spatial planning thus "spatial planning goes beyond traditional land use planning to bring together and integrate policies for the development and use of land with other policies and programs which influence the nature of places and how they function" (ODPM, 2004).

Spatial planning according to the EPSON³ aims to create a more rational territorial organization of land uses and the linkages between them, in order to balance the demand for development with the need to protect the environment, and

Table 2. Planing actions and functions: from past to future

Time orientation	Planning actions	Planning functions
Past	React	Operational
	Respond	
	Mitigate	
	Control	
	Manage	
Present	Adapt	Managerial
	Anticipate	
	Prepare	
	Change	
	Shape	
Future	Create	Strategic

Source: Couclelis H.(2005): Where has the future gone? Rethinking the role of integrate land-use models in spatial planning. In: *Environment and Planning A*37: 1353-1371

In spite of the broad definitions of spatial planning, two dichotomy conceptual models are present: 1) spatial planning is land-use management and regional planning (in the traditional sense, as a branch of land use planning); and 2) spatial planning includes sectoral co-ordination through territorial strategy - an "umbrella" activity embracing the interests of various sectors with spatial policy impacts. Those currently in the field have tended to favor the second model – spatial planning is a wider, more inclusive approach to considering the best use of land than traditional land-use planning. PPS 12² goes on

to achieve social and economic objectives. In that sense, Dimitrou (2007) defines spatial planning as a "set of policies and tools of intervention at different levels and for different horizon dates, designing to assist the management of **strategic change** taking place within territories, their economies and societies, directed largely (but not exclusively) by the public sector."

Along with the change of political and socio-economic circumstances in the last decades of the 20th century and the reinterpretation of traditional regional theories, planning moved through several phases. In the fifties and sixties, during the times of the so-called planning optimism and enthusiasm, planning was a **dominant mechanism** for solving social and economic issues. In the 70s and 80s a **planning crisis** occurred and almost a complete collapse took place when the market mechanism and efficiency principles gained

² PPS 12 (Planning Policy Statement 12), Committee on Northern Ireland Affairs, Sixth Report. PPS 12 provides government guidance on the new arrangements for the preparation of local development documents, which will comprise the local development framework. The local development framework is largely a portfolio of local development documents that collectively deliver the spatial planning strategy for the local planning authority's area. Local development frameworks are intended to streamline the local planning process and promote a proactive and positive approach to managing development.

³ European Spatial Planning Observatory Network – Study Programme on European Spatial Planning (EPSON)

primacy in the period of deregulation and privatization. By the turn of 90s, there was a **renaissance/restoration** in planning, incited by the development and implementation of new "hybrid" planning approaches and models. These were based on a combination of traditional approaches in the field of regional/spatial planning and environmental protection under the paradigm of **sustainable development**.

One of the obvious results of the changes in theory and practice of spatial and regional planning, especially in the European Union territory in the last twenty years has been a renewal of interest in a **strategic approach** to spatial arrangement at a variety of spatial-functional and organizational levels. This has remedied the degraded role and legitimacy of spatial planning within the system of the social regulation of development. After a period dominated by a "project-led approach" and a "market-led approach" in the issues related to the relationships between social regulation and the market, the public and private sectors, spatial organization and land use, during the nineties a shift towards the so-called middle way occurred during the 90s towards a "proactive approach" and a "development approach". There are tendencies, not only in the well-developed but also in a number of transitional member countries of the European Union, the Czech Republic for instance (Sykora, 2000), to manage the spatial development and arrangement via an **integral strategic approach** instead of through "planning minimalism" which was favored until recently, using a number of strategic planning documents at a national and regional level.

Strategic/developmental planning has been gaining importance due to the increase of the environmental complex and the planning of sustainable development, but also due to the need for a higher security of the market and planning authorities in the circumstances of the negative consequences of uncontrolled growth. In fact, as the shift towards the models of sustainable development is a question of social survival, it is impossible to realize the sustainability concept without planning (by relying, for instance, on market mechanisms and environmental policy which are not in accord with other decisions). Yet, certain authors think that planning, however, "cannot assume a new, modernizing and emancipating role unless it has been transformed itself, because the existing theoretical and

methodological approaches and institutional arrangements in planning do not facilitate that" (Blowers, 2000).

Many commentators think that new strategic planning will not mean a reverse of comprehensive planning, but will represent a combination of modified regional marketing from the 80s and new approaches to sustainable development planning from the 90s. Most can be expected from the development of a synthetic approach in the field of spatial arrangement, environmental protection, urban and rural development. This approach could represent an adequate conceptual framework for (new) attempts to integrate economic, spatial and environmental planning, where the integrative role is progressively assumed by the spatial and **regional plans and programs**, uniting in this way the elements of spatial planning, environmental protection and socio-economic development in the fold of sustainable development. In this, the **projects**, and those joined as **programs**, become an **important guiding instrument of development**. Equally important are the **strategic developing frameworks** wherein the programs and projects are formed and conducted. It is likely that developmental programs and projects will be frequently located within the strategic framework of spatial/regional and town planning. Bendavid (1972) even provided a draft of a special planning approach "concept - strategies - projects" in regional planning which facilitates inclusion of developmental programs and projects during the entire planning process, that is, attempts to balance "planning" and "program-project" approaches². Yet in theory and practice the question of ways and modalities of integration of strategic programs into planning remains open. A part of the scientific and professional public is of the opinion that a "danger" is present, to reduce planning to a mere preparation and implementation of programs and projects.

EU STRATEGIC SPATIAL POLICY - IMPLICATIONS FOR STRATEGIC PLANNING IN MEMBER STATES

EU institutional and policy framework is going through a period of considerable change and it is clear that they will also influence the way in which strategic spatial planning evolves in the member states. Many documents and program activities are relevant for strategic planning in the EU, such as the Leipzig Charter on sustainable European cities (2007), ESPON,

the Green Paper on Territorial Cohesion (2008), URBACT etc. Yet, three major aspects of EU strategic spatial planning and development policy, which has influenced the development and practice of strategic spatial planning in the member state, are:

▪ The making of the **ESDP** and **Territorial agenda**

A document on European spatial planning that is intended to be used as a common reference point for spatial policy coordination and as a means of supporting the work of national and regional spatial policy-making bodies. Returning to the ESDP itself, it is important to emphasize that the ESDP, despite much inaccurate description and discussion, is not a "master plan", nor is it a "big structure plan" that attempts to define or develop the future settlement pattern and spatial shape of the EU as a whole. The objectives of the ESDP are much more modest and consist of the three fundamental goals of European policy:

- economic and social cohesion;
- conservation of natural resources and cultural heritage; and
- more balanced competitiveness of the European territory.

In the words of the **ESDP**, in order to "achieve more spatially balanced development, these goals must be pursued simultaneously in all regions of the EU, and their interactions taken into account" (ESDP, 1999). These three general goals have influenced the form and content of three policy guidelines for the spatial development of the EU: 1) development of a balanced and polycentric urban system and a new urban-rural relationship; 2) securing parity of access to infrastructure and knowledge; and 3) sustainable development, prudent management and protection of nature and cultural heritage.⁴

⁴For example, a key principle of Irish National Spatial Strategy (NSS, 2002) is polycentric development as the most appropriate way for balanced regional development without halting the growth of the Greater Dublin Area or national competitiveness. Despite a lack of explicit reference to the ESDP and its underlying concepts, such as polycentric development, it is clear that the NSS approach to developing a strategic framework for the future spatial structure of Ireland mirrors the ESDP's approach for development of Europe as a whole (Davoudi&Wishardt, 2005). There are clearly

• **The Territorial agenda** (Leipzig, 2007) is a document founded on the ESDP, but with new elements introduced. In this document, for the first time the notion of spatial cohesion is included in strategic spatial planning. Territorial cohesion is considered the third dimension of cohesion policy, and therein the requirement that the territorial dimension should obtain a more prominent role in the future cohesion policy has been stressed, with the aim of achieving economic and social welfare. It is recommended that the **territorial dimension should be integrated into the strategic processes** supporting the cohesion policy both at the **national and the EU levels**. Cities and regions are given a stronger role in conducting EU policy. Regional identities and potential, the needs and diverse characteristics of regions, cities, rural and other areas have gained importance through the policy of territorial cohesions (as well through the other regional development policies) by assuming a **strategic approach to the integrated territorial development** and by implementing the **subsidiary principle**. "Cohesion policy of the EU should be able to adapt, in a more efficient way than nowadays, to the territorial needs and importance, to the specific geographical challenges and potentials of regions and cities" (Territorial agenda). On the other hand, "certain strategies of development of cities and regions should more closely consider the national and European context. It is important that national, regional and local questions are closely coordinated with the EU policy... which particularly refers to the rural development policy, environmental protection and traffic policy as well as to the cohesion policy of the EU" (Territorial agenda).

• The evolution of the **EU Structural Funds** - four aspects of the operation of the

Structural Funds are of particular interest in relation to strategic spatial planning in the member state: 1) the level of coincidence between the distribution and utilization of the Structural Funds budget and the ways in which domestic regional policies are elaborated and implemented, 2) the Structural Funds regional programs can be seen to influence the ways in which domestic infrastructure policy has emerged, and this, in turn, is reflected in other aspects of strategic planning policy, 3) the preparation of the Structural Funds regional programs was the first experience in many regions of partnership working at a regional level, and 4) the new territorial governance models which have emerged in recent years reflect many of the lessons from the Structural Funds learning experience.

• The development and growing influence of the planning elements of EU **environment policy** - Subsequent programs have seen the introduction of many new policies and legislation, including a series of measures that have a number of direct and indirect implications for strategic spatial planning. Examples of the influence exerted by EU environment policy include the introduction of measures concerned with environmental assessment (EA), strategic environmental assessment (SEA), waste management, pollution control, water management, transport and land use. As a result of these initiatives, and alongside the incorporation in the Treaty of Amsterdam in 1999 of a duty of sustainable development as a central task of the EU, it is now reasonable to conclude that EU policy and action has "become the single most significant factor affecting the development of the national environmental legislation of the member states" (Barns&Barns, 1999).⁵

⁵In some situations the influence of EU environment policy upon strategic spatial planning has been direct, as in the case of the introduction of SEA as a fundamental screening mechanism which is used to ensure the conformity of plans with sustainable development criteria, whilst in other cases the pattern of influence has been indirect. In some member states the environment policy is primarily a framework for spatial and regional policy – in Sweden, the national environmental quality goals represent guidelines for spatial planning and the construction sector. Central and regional government agencies have to coordinate their community planning across sector boundaries in order to promote ecologically sustainable development and a good living environment for all.

Although a number of other EU policies also influence strategic spatial planning, including matters related to transport, agriculture, trade, industrial development, research and development, social inclusion, competition, and energy policies, it is not intended to deal directly with the content of these policies. However, because in recent years the EU has increasingly attempted to establish a more corporate approach to its policy-making and to its implementation processes and procedures, a number of what are described as "horizontally-supporting", or indirect policy influences are evident in the ESDP/Territorial agenda, Structural Funds and environment policies. This emphasis on the greater coordination of policies and actions is, in itself, one of the areas of influence exerted by the EU on the design and operation of strategic spatial planning systems in member states.

The influence of EU policies upon the structure, organization and purpose of strategic spatial planning and planning practice at the national–regional–sub-regional level in member states is very different and primarily depends on the institutional and methodological framework and approach in every member state, but also on the political climate.⁶

However, the new territorial policy dimension – confirmed by the Treaty of Amsterdam – offers opportunities for new networks and linkages between governments, cities, agencies and regions.

STRATEGIC PLANNING AS A MECHANISM OF REGIONAL POLICY

Regional issues, reflected in the existence of social, economic and spatial differences, is a platform for **institutional intervention at the regional level – regional planning and regional policy** as regulatory and directional mechanisms of interregional and intraregional development. Many authors think, and the

⁶ For example, a central theme in the recent history of the relationship between the strategic planning system of the UK and the context for strategic spatial planning that is provided by the relevant EU policies, is the tension which exists between the essentially adversarial and responsive nature of the UK (and especially the English) planning system and the more strategic and proactive approach which is the hallmark of the ESDP and some (but not all) of the planning systems in continental European member states (Roberts&Beresford, 2003).

indications that the Strategy has adopted a "potential" rather than a "redistribution" based approach to achieving balanced regional development (Walsh, 2004), mirroring the ESDP's departure from traditional regional policy (Davoudi, 2003). The NSS draws on the European experience and concludes that, "successful regional development in today's Europe" has been achieved by adopting three forms of spatial planning: "urban clusters of neighboring cities ..., urban networks between more distant cities... (and) urban-rural partnerships" (DELG,2002).

practice in the European Union countries seems to confirm this, that the **nature of certain developmental problems always require intervention at levels between the central and the local**, that is, that the **regional, "middle" level of planning and management is necessary** for a legitimate and efficient public business administration (Martins, 1986; Wannop, 1995; Pusić, 1989; Vujošević, 1996). In theory, it is a dominant opinion that there will always be disparities and that due to this fact regional planning and regional policy must remain a constant activity. The **regional planning**, which in the past had a **primarily political and social motivation**, in the EU and the majority of developed countries in the last decades obtained its **developmental and economic dimension** and has evolved into a **new approach to the totality of socio-economic and spatial development. "New" regional development policy** now unites two components – **developmental and regional**, and is viewed both as: 1) a new approach to the **development of the national economy** based on the **regional principle** ("regional growth of economic activities leads to the growth of the entire national economy") and 2) a new approach to **regional development** with significantly **broader developmental influence** on the total social and spatial development.

Throughout Europe an increase of interest in **strategic spatial planning** is notable. Strategic spatial planning concerns major spatial development, which may arise on any scale, but is more **typical of the regional and national scale** (Faludi, 2000). Strategic spatial planning at this level is a typically public-sector led socio-spatial process, aimed at influencing the future spatial distribution of activities (Albrechts, 2004).

The renaissance of strategic planning is beyond doubt within the context of urban and regional planning in Europe (Healey et al. 1997, Salet&Faludi 2000). In many respects current approaches take part in a general shift within the planning system from physical land use planning to extensive strategic planning to articulate a more coherent spatial logic for land use regulation, recourse protection, and investments in regeneration and infrastructure (Albrechts, Healy&Kunzmann, 2003). Instead, **strategic spatial planning is focusing on territorially integrated policy approaches and long – rang planning to improve the quality of life, to strengthen regional identity, and to develop new forms of**

regional collaboration. Symptomatic in the implementation of recent concepts of strategic planning in practice is the close linkage between vision and action and a general attempt to enhance a **regional capacity**. Strategic spatial planning requires a continuous social plan-making process to fulfill its functions of empowering and motivating stakeholders and of providing **orientation for local and regional actors** (Hutter&Wiechmann, 2005)⁷.

When discussing potential for restoration of the legitimacy of spatial and regional planning, there are diverse opinions. The affirmative arguments can be observed in the successful operation and created credibility of planning-management activities and policies, programs and projects. Regional planning demonstrated the ability to successfully address some problems concerning region, such as, for example, solving the issues of socio-economic disparities within several territorial units, and the development of rural regions within tourist regions. The opportunities of regional planning according to numerous authors (Faludi&Valk,1994; Ward, 1994; Rydin 1994; Vujošević, 2000) result from its potential as a development regulation mechanism, and those are: 1) solving developmental issues whose nature requires intervention at a "medium" level (implementation of subsidiary principle); 2) integrating spatial planning and economic policy at a regional level (the so called "spatial efficient sectoral planning") with the aim of a balanced and regular regional and spatial development; 3) integrating environmental protection into regional interventions; 4) integrating urban and rural development; and

5) more efficient planning and managing interventions.

On the other hand, some authors (Friedmann, 2004) argue that too much attention in planning practices has been given to the production of strategic plans and too little to locally-based studies of the dynamics of urban socio-spatial development.

However, in general, regional spatial strategies are expected to:

- establish a "spatial" vision and strategy specific to the region - for example, identifying in general terms areas for development or regeneration for a longer period
- contribute to the achievement of sustainable development
- establish regionally specific policies, which are expected to add to rather than replicate national ones
- address regional or sub-regional issues;
- establish priorities for environmental protection and enhancement;
- outline key priorities for investment, particularly in infrastructure, and identify delivery mechanisms, in order to support development;
- identify how the region's waste should be dealt with;
- be consistent with and supportive of other regional frameworks and strategies.

CONCLUSION

Across Europe there is a growing interest in strategic spatial planning. The renaissance of strategic planning falls beyond doubt within the context of urban and regional planning. Still, the terminology used to discuss strategic spatial planning is constantly evolving, the very term "strategic spatial planning" relates to and comprises various approaches and the institutional contexts of its development is also very diverse. So, strategic spatial planning can be defined as a quite diverse planning activity. If we focus on the practice, under the term "strategic spatial planning" it is most often comprised of a set of concepts, procedures and tools that must be tailored to whatever situation is at hand if desirable outcomes are to be achieved, and spatial plans see these as a strategic frameworks for action.

Strategic spatial planning concerns major spatial development, which may arise on any

⁷For example, until 1996, Scotland had a "two-tier" system of local government with regional and district councils. Generally, the regions were responsible for strategic policy through the preparation of structure plans, while district councils were responsible for a local plan and development control issues. The new unitary authorities (with an obligation to prepare both a structure plan and a local plan) are both strategic and local planning authorities. However, in a number of areas (notably around Glasgow and Edinburgh), for strategic planning purposes, a number of unitary authorities are brought together to produce strategic plans on a joint committee basis. The Scottish Government is of the view that the preparation of both a structure plan and a local plan is an unnecessary burden for most parts of the country, so that it is likely in the near future that only the 4 conurbations (plus possibly Inverness) will have a strategic development plan, with most parts of the country having only a local plan (Bowman, 2008).

scale, but still are more typical for the regional and national scale. The relationship between these levels and the EU policies is very important for the EU. In this light, three major aspects of EU strategic spatial planning and development policy that has influenced the development and practice of strategic spatial planning in the member state are: 1) the making of the ESDP and Territorial agenda, 2) the evolution of the EU Structural Funds and 3) the development and growing influence of the planning elements of EU environment policy. Integration of the territorial dimension into the strategic processes supporting the cohesion policy at the EU and national level is recommended. Cities and regions are given a stronger role in the implementation of EU policy, and regional identities and potentials, needs and different characteristics of regions, cities, rural areas and other areas strengthen their importance in the process of territorial cohesion through assuming a strategic approach to an integrated territorial development, and through the application of the subsidiariness principle.

Still, the influence of EU policies upon the structure, organization and purpose of strategic spatial planning and planning practice at the national–regional–sub-regional level in member states is very different and primarily depends on the institutional and methodological framework and approach in every member state, but also of the political climate.

At the regional level, strategic spatial planning is a typically public-sector-led socio-spatial process, aimed at and influencing the future spatial distribution of activities. Strategic spatial planning focuses on territorially integrated policy approaches and long – term planning to improve the quality of life, to strengthen regional identity, to establish a "spatial" vision and strategy specific to the region, to establish regionally specific policies, to contribute to the achievement of sustainable development and to develop new forms of regional collaboration. Still, the EU is of the opinion that certain city and regional development strategies should take into account the national and European context and that it is important that national, regional and local issues are closely related to EU policy, which particularly refers to the rural development policy, environmental protection and traffic policy, as well as the cohesion policy of the EU.

When discussing the potential for restoration of the legitimacy of strategic spatial and regional planning, there are diverse opinions. Although the opportunities for strategic planning at a regional level are great, there are also opinions that too much attention in planning practices has been given to the production of strategic plans and too little to locally-based studies of the dynamics of urban socio-spatial development.

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REGIONAL COMPETITIVENESS AND TERRITORIAL INDUSTRIAL DEVELOPMENT IN SERBIA

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In the paper are investigated the regional competitiveness and the territorial aspects of industry in Serbia. There are analysed the key recent movement in industrial development of Serbia and macrolocational factors and territorial organisation of industry. The research of possible structural changes of industry and identification of its key development sectors is the important component of territorial development analysis in Serbia. This paper points to the kinds and types of industrial zones and industrial parks as fundamental models of regional and urban development of that activity with critical retrospection on the industrial zones in Serbia (greenfield and brownfield industrial locations). There are shown results of evaluation the regional competitiveness from a stand-point of possibilities of industrial development on the regional level (NUTS 3) by comparative analyses and Spider method. Results are used as one of the bases for making preliminary draft of territorial development scenario of this activity in Serbia and for the possible allocation of the future industrial zones and industrial parks in region level.

Key words: territorial development of industry, regional competitiveness, industrial zone and industrial park, greenfield and brownfield locations

INTRODUCTION

The spatial organization of Serbia's industry is a reflection of the previous development policy and territorial aims of industry. In the conditions of a global economic and financial crisis and due to the impact of the transitional recession, a strong process of deindustrialization has intensified in the towns of Serbia and large territorial differences have emerged, thereby resulting in a concentration of capacities in the Belgrade and Novi Sad region. The inherited regional disparities in the levels of development are a huge development problem, as they are a consequence of spatial concentration, spatial polarization, specialization and fragmentation of the elements of industrial structure in the urban tissues of towns and along the corridors of thoroughfares.

From the viewpoint of planning Serbia's territorial development, many questions are asked in order to alleviate and eliminate the unfavorable effects of rapid structural change

in this sector and the unfavorable effects of possible scenarios for the total and industrial development. In the future, it will be inevitable to introduce new patterns regarding organization and exploitation of territorial capital on the grounds of sustainability.

One of the key issues is the adoption and harmonization of Serbia's new industrial policy with the EU industrial policy (Lisbon revisited, 2004, EC, 2003, Savić, Zeković, 2004) based on the principles of competitiveness and sustainability. This process has its own territorialized expression, evident in the dynamic changes of the spatial structures of towns and regional wholes, in the emergence of new economic poles in urban areas, new locational-spatial forms of industry and economic activity. The contemporary regional/territorial industrial development based on sustainability implies the implementation of instruments of industrial zones and parks as models of regional and urban development. The development strategies and disposition of industrial zones and parks of different ranks has not yet been determined in Serbia. Their allocation should respect macro-locational factors and criteria, the capacity for organizing creative resources

of a region, regional and metropolitan advantages. A preliminary draft of the scenario for the territorial development of industry has been analyzed, with suggestions of possible solutions at the level of district groups in Serbia (NUTS 3).

TERRITORIAL INDUSTRIAL DEVELOPMENT IN SERBIA

Main tendencies in the industrial development of Serbia

The main problems of Serbia's economic and industrial development even before the global economic crisis have largely been a consequence of the process of transitional recession and the changes in the wider surroundings, and they have had an impact on the polarization and concentration of spatial

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development (Zeković, Hadžić, 2006). The key problems have stemmed from an insufficiently competitive economy/industry, untransformed current structure, and a slow transitional process of privatization and the restructuring of enterprises (Zeković, 2006). Among them, especially, are important the relatively low level of economic and industrial activity, slow structural change, large regional disparities in development and disposition of industrial capacities, low level of investments, high unemployment, low competitiveness, a lagging in innovations, know-how, new technologies, inefficiency in the use of material input, and ill-equipped infrastructure of industrial locations.

Based on the findings of the document *Industry of Serbia, 2008* and the *Report on Serbia's Development (2007)*, the structural changes in the industry in the period 2001-2008 were characterized by the beginning of the process of reforms of economic subjects; by a low level of industrial production (on average 2.1% annually or 49.1% of the level from 1990); growth of work productivity rate by 10.8% which indicates growth of its competitiveness; by a big share of food processing and chemical industries in the GDP; reduction of industrial employment in the period 1995-2008 by 319,238 persons (Table 1); and by participation of industry in the gross added value by 23.7%.

In 2008, 181,148 enterprises were registered in Serbia, of which 6,150 enterprises were in the industry. In 2008, 2,006,047 persons were employed in Serbia, of which 493,867 persons or 24.6% in industry (in 1996, 41.6%, Table 1). In the industrial structure, there are 2,568 enterprises that employ 11-50 workers, 1,045 enterprises with 51-250 employees and 360 big enterprises with over 250 workers. The

process of privatization, restructuring and bankruptcy is the most intensive in the industry, with big socio-economic consequences, a reduction of employees and impact on the spatial disbalance in the regional development of Serbia. According to the Agency for Privatization (2007), the bankruptcy has been filed for 451 enterprises. Most of the enterprises filing for bankruptcy are from the textile industry, wood processing, metals processing, the production of metal products and machines, food processing industry, lead and zinc, stone and nonmetals mining, production of cellulose, electronic industry etc. Regional differences in industrial development and the gap between the undeveloped regions and the Belgrade region has widened, which is illustrated by data on the concentration of industry in Belgrade (Table 2).

Territorial guidance of industrial development

Estimations of the territorial development of Serbia's industry are based on the use of several available sources, records of the republic agencies for economic registry, privatization, development of small and medium enterprises, promotion of export, statistical data, verified development documents (National Strategy for Economic Development 2007-2012; Strategy for the Regional Development of Serbia by 2012, (2007); Serbia's Strategy for Joining the EU, 2005), data of the Economic Chamber of Serbia, regional spatial plans.

One of the consequences of transitional recession is also the drastic fall in the total and industrial employment in Serbia. In the period 1990-2008, the total number of employees in Serbia was reduced by 407,000 persons, of

which the highest number in the industry - 320,000 persons. Large industrial centers, which were employing over 20,000 workers fell from 9 to 2 in the period 1996-2008; the number of medium industrial centers with 10-20,000 workers dropped from 17 to 4; and the number of medium industrial centers employing 5-10,000 workers dropped from 26 to 18 (Table 3, Graph 1). These changes in the numbers of industrial centers are indicators of large regional spatial disparities. Industrial employment has increased in Novi Sad, Mladenovac, Lajkovac, Žitište, Bogatić, Lapovo, Kladovo and Žagubica, while in around 50 small and medium centers the level is stagnant. (Table 3)

Within the Danube-Sava area and in the valleys of the Big, West and South Morava rivers, there were 420,000 industrial workers in 1991 (46% of industrial employment in Serbia), while in 2008, there were 345,000 workers (64.7% of industrial employment).

Spatial concentration of industry in the Belgrade and Novi Sad area is a result of global inefficiency of production factors. It is also the result of a lack of engagement of resources by undeveloped regions, such as Southern Serbia, region of Stari Ras (municipalities Novi Pazar, Tutin, Sjenica, Prijepolje, Priboj and Nova Varoš), or the result of the process of transitional recession in the devastated regions (Eastern Serbia, part of Central Serbia).

The general concept of decentralization and partial demetropolization of industrial activity, predicted by the Spatial Plan of RS (1996), has not been carried out for various reasons, mainly, because of the accumulated socio-economic problems, development problems in the industry, impact of transitional recession and market factors, general macro-economic policy, lack of industrial and regional policy, policy of competition and policy of innovation, the influence of the institutional frameworks and other factors.

In the previous period, there has been no intensifying of development in the planned zones (firstly, in the Danube-Sava zone and the valleys of Big Morava, W. Morava and S. Morava), but there has been further concentration of industry in the area of Belgrade and Novi Sad. The area of metropolitan suburbia is, even in the European frame, a space that is characterized by dynamic development and structural changes. The intensifying of development of this area is

Table 1. Main indicators of industrial growth in Serbia for the period 1996-2008

Indicators	1996.	2008.	Difference 2005/96
-industrial share in the national income of RS (in %)	31.05	34.05	+ 4
-industrial share in total employment in RS (in %)	41.62	24.61	- 17.01
-number of employed in industry	813,195	493,867	- 319,328
-total number of employed	1,953,678	2,006,047	+ 52,369

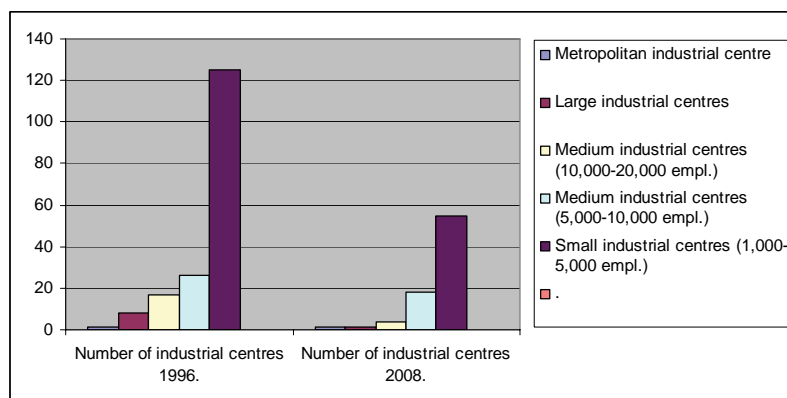
Table 2. Indicators of change of industrial growth and concentration of industry in Belgrade (Zeković S. 2008)

Indicator	1996.	2008.	Difference 2005/96
-share of national income of BG's economy in the national income of RS (in %)	24.14	33.74	+ 9.6
-share of total number of BG's employees in the total number of employed in RS (in %)	24.01	31.24	+ 6.23
-share of BG's industry in the national income of RS's industry (in %)	22.61	25.32	+ 2.71
-share of employees in BG's industry in the number of employees in the RS's industry (in %)	15.23	16.37	+ 1.14

Table 3. Changes in the number of industrial centers in Serbia in the period 1996-2008 (Zeković S., 2009, in *Strategy of Spatial Development of Serbia by 2020*)

Size of industrial centre (number of industrial workers)	Number of industrial centers 1996.	Number of industrial centers 2008.	Difference + or -
1. Metropolitan-industrial centre >50,000 employees	1 (Beograd)	1 (Beograd)	0
2. Large industrial centres (20,000-50,000 employees)	8 (Novi Sad, Niš, Kruševac, Subotica, Kragujevac, Pančevo, Smederevo i Leskovac)	1 (Novi Sad)	-7
3. Medium industrial centres (10,000-20,000 employees)	17 (Zrenjanin, Kikinda, Sombor, S.Mitrovica, Lazarevac, Požarevac, Užice, Kraljevo, Čačak, Šabac, Loznica, Valjevo, Trstenik, Jagodina, Bor, Vranje, Pirot, Priština)	4 (Subotica, Pančevo, Kragujevac, Niš)	-13
4. Medium industrial centres (5,000-10,000 employees)	26	18 (Kikinda, Zrenjanin, Pančevo, Valjevo, Šabac, Valjevo, Smederevo, Požarevac, Jagodina, Trstenik, Užice, Čačak, Kraljevo, Kruševac, Pirot, Leskovac, Vranje, Bor)	-8
5. Small industrial centres (1,000-5,000 employees)	125 (with Kosovo)	55 (without Kosovo)	-70

Graph 1. The process of deindustrialization in Serbia – according to the size indicator of industrial centers, in the period 1996-2008.



conditioned by strong influences of the process of the globalization of economy, in which foreign investments are the pivot of big structural and spatial changes. The obvious lack of space for economic purposes in the Belgrade metropolitan area offers strong chances of development to the surrounding areas of municipalities that are along the highway. However, the phenomenon of a potential development and the consequences of a linear urban agglomeration in the direction Belgrade - Novi Sad have not been studied enough in the republic and regional frames. The Spatial Plan of the Republic of Serbia projects the development of high tech economic activities in the areas of Belgrade, Novi Sad, Niš, Kruševac, Pančevo, Trstenik, Kragujevac and Subotica. In practice, a technological park was realized in Vršac (Concern „Hemofarm” on 25ha), Zeković S., 2004. In Belgrade, the scientific-technical park „IHIS”, Zemun was founded in 2006.

In the spatial structure of industry, new spatial forms have been initiated – *free zones, industrial parks, technological parks, business*

incubators for SME. Although according to the SPRS, the realization of 23 free zones has been projected, however based on the available data in 2007, four free zones were registered. In the last several years, the establishments of business incubators for SME have been initiated in Bor, Knjaževac, and Lazarevac etc.

During the last 2-3 years, an important process of implementing the planned solutions for spatial organization of industry has begun with the *National Investment Plan of Serbia* (by building a regional transportation infrastructure, communal infrastructure, by supporting the construction of industrial zones, by financing production programs and small and medium enterprises etc). The support for building 64 industrial zones in the towns of Serbia, at the same time, means support for the realization of the planned solutions and competitiveness of economy and area on a national and local level.

Industrial localities

An industrial zone is a collective location, or limited space belonging to a greater number of firms from the same or different industrial branches, i.e., a locational form of business infrastructure, which apart from other location models (industrial park, technological park, free zone, business incubator, business center, airport zone of development et al.) represents an attractive instrument for drawing investments into the region or country, in order to reduce the territorial disparities at the levels of total and industrial development. Based on available knowledge, there is little available space for industrial development in the towns of Serbia in the form of infrastructurally organized locations. Usually, investors are offered individual undeveloped locations. In view of providing attractive and convenient industrial localities in towns, Serbia has strong competition in its neighboring countries, especially in the category of *greenfield* investments, which have a key role in the growth of national economy.

According to type of investments and the establishment and construction of zones, *greenfield zones* are more frequently in use, and more rarely are *brownfield zones*. *Greenfield* zones mean construction on undeveloped localities, while *brownfield* zones include developed spaces, usually abandoned or devastated industrial and other complexes in town centers. Activating brownfield localities is one of the key instruments of functional and urban transformation of a larger part of space in the towns of Serbia.

Industrial zones are an important instrument of the new industrial, regional and spatial development policies of Serbia. They are based on the principles of European industrial policy, primarily, in view of eco-restructuring of production, growth of employment, growth of business competitiveness and territorial competitiveness of regions in which they are located, encouragement of cooperation, development of low-carbon production activities, transfer of technological innovations, challenges and development of SME.

Based on the definition from the *Report on the state of certain industrial sectors of RS, 2008*, *industrial parks* represent groups of enterprises in the field of production activities and services concentrated on a specified territory and sharing the same infrastructure. Industrial zones and parks in Serbia are in the initial phase of development and are mainly of the general type (with exceptions like the automobile industry complex in Kragujevac). Potential foreign investors have an interest in dislocating parts of their production from their home (and other) locations because of the group of favorable macro-locational factors in Serbia, as well as for a group of attractive micro-locational conditions in the potential and planned zones, especially due to cheaper highly-skilled workforce, market etc. An alternative to industrial zones and parks in attracting foreign investors are individual locations that are acquired in the privatization process of former social enterprises or by purchasing land for construction outside the developed economic localities. Unequal development of industry and economy has left relatively large areas of Serbia far behind, causing spontaneous migration processes from rural to urban, from undeveloped to more developed regions. This process has led to a territorial disbalance in the disposition of populations and industries in a relatively narrow region of Serbia. The intensity and dynamics of these processes, with the applied

method of industrialization, have been reflected in the territorial disparities and distinct domination of Belgrade in the spatial structure of Serbia.

A wider analysis should provide insight into the current patterns of land use in industrial zones, their spatial organization and disposition in towns and regions of Serbia, in a way that would enable further harmonization of branch and spatial structures of industry with the market trends and pressures on areas. The main problem is that there is no informational database regarding the final account of spaces and other parameters of the current zones in the towns of Serbia. According to incomplete data of the Serbian Chamber of Economy (SCE), there are over 320 existing and planned industrial zones (IZs) in Serbia, and currently a process is undergoing for the collection and processing of data about industrial zones for the realization of the project "CD Industrial zones in Serbia", which the SCE is working on together with the National Chamber Pordenonea, from Italy.

Brownfield industrial localities

In the process of industrial transition, previous industrial centers/towns, as local and/or regional leaders of development, have been hit the most so far. Previous industrial giants (former public enterprises), today, are mainly inflexible systems with outdated technology, unused capacities, uncompetitive products, with problems with liquidity, efficiency, redundancy etc. A greater number of these companies are undergoing restructuring; some of them have successfully been restructured, while others have filed for bankruptcy. Once they employed vast numbers of workers, while today they have reduced many times over their number of employees because of transitional recession and other factors. Their collapse during the process of transition has brought significant social tensions due to loss of jobs. There are such enterprises in all the industrial sectors, especially in the production of transportation vehicles, electronic industry, non-ferrous metallurgy, cellulose production, processing of paper, food-processing complex, sector of specific industry etc. The capacities of these enterprises are mainly located in big and medium towns (such as Belgrade, Kragujevac, Niš, Bor, Sremska Mitrovica, Loznica, Čačak, Valjevo, et al.) and they command with big, more or less neglected and dilapidated complexes and localities that have a brownfield character on very attractive populated positions. Untransformed and

neglected production, degraded business property, infrastructure and important complete and undeveloped surfaces of the complexes have a character of recessive or stagnant points in the urban structures in which they are located. As such, they still present an important development potential for a possible conversion and development of new production or service industry within their „reactivation” into models of zones and parks. Considering their character and the complexity of their re/activation, it is necessary to come up with a special methodology for their transformation into potential zones or parks. The government has started with defining the active industrial policies aimed at structural adaptation of the industrial sector in total and certain industrial fields, including solving the problems of former giants. However, the spatial-environmental aspect of the recovery and transformation of these companies has not been analyzed. Identifying the neglected localities of the former big (or smaller) industrial capacities, capacities of specific industry destroyed during the bombing in 1999, and certain military complexes is an initial step in the process of researching the possibilities for their re/activation. Setting them into function by forming new or transforming old complexes is possible by using instruments of industrial zones and parks. There are many examples of industrial brownfields in the towns of Serbia – enterprises that have gone bankrupt or on the verge of bankruptcy. Industrial brownfields in towns are very often associated with enterprises of traditional branches of production – textile industry, leather processing, metals processing industry, wood processing, food processing industry, production of building materials etc. Even in the sector of enterprises that have a propulsive character, such as the production of chemical products, metallurgy, production of machinery, production of electronic machines and electronics et al., there are brownfield locations (e.g., Fertilizer factory in Subotica et al.). In the complex of specific industries, there are a certain number of brownfield localities in several towns of Serbia, which are a consequence of the NATO bombing in 1999 (e.g. Pančevo, Novi Sad, Bor, Kragujevac, Valjevo, Čačak etc.).

The process of transition of the economic system has influenced the changes in the process of territorial development of industry and the insufficient use of „hard” and/or neglected or devastated locations in the town

fabric (Zeković, 2008). A question can be posed concerning the mechanisms for supporting the organization and 'recycling' of abandoned locations, especially industrial ones, for economic and other purposes, in the situation when it is evident that the price of land, construction, organizing and equipping the location is lower than in the peripheral, free and unconstructed areas (on the outskirts or the outer zone of town). On the other hand, the complexity of reactivating brownfields is evident in the need for the harmonization of the legitimate interests of many different parties, in the lack of mechanisms for coordinating local and other levels of competence and activity, in the need for building an adequate model of communication, information exchange, understanding certain aspects of problems, in the many different stages of the processes of planning and the realization of "reconstructing" localities. Lack of an adequate information database regarding these localities is characteristic for many municipalities in Serbia. The process of reactivating brownfields is, mainly, more complex compared to the concept of greenfield localities. The specifics of planning the reactivation of abandoned and/or dilapidated industrial locations means a synchronization of various planning and sectoral activities, sorting out/restricting competence/authority, coordinating the projected solution in implementation and a number of other measures. Their "reconstruction" is an integral part of the process of increasing competitiveness of towns and areas. At the same time, because of a strong impact of market mechanisms in the allocation of potential new economic localities on one side, and the complexity of "recycling" and expensive investment in brownfield localities on the other, the process of transition in our environment additionally complicates their reactivation. The most frequent form of their reconstruction is through the process of privatization of public enterprises, especially those with attractive urban locations, with dilapidated buildings and capacities, low value of property, small number of workers et al. Such locations have a significant potential for "self-development", and usually are attractive for private investors (primarily because of their position, accessibility, various advantages and possible business effects, changes of purpose etc). In addition to the above-mentioned "soft" brownfields, there are also localities that have significant limitations that could make them less attractive and efficient compared to the previous group. An especially significant form of "hard" brownfield localities are the

neglected and devastated spaces that have numerous locational, infrastructural, environmental, technical, ownership and other problems, and whose activation means large investments. For such localities, private investors are mainly not interested, because big investments and a longterm and complicated process of solving certain problems and the realization make them unattractive for investments. Their reactivation demands the mandatory participation of the public sector, especially regarding their decontamination, demolition of existing capacities, prospective relocation, the equipping with new infrastructure, regulating ownership relations and questions of prospective restitution etc. Due to the mentioned problems of brownfield locations in practice, the estimation is that the dominant trend in the construction of new industrial objects is on free locations in the suburbs of towns.

Greenfield industrial localities

In some big towns of Serbia (Belgrade, Novi Sad, Niš), the new economic poles – new business, commercial, industrial, entrepreneurial zones that have developed as a result of planning, or spontaneously in the suburban areas (along highways, main routes) have a priority in the spatial development and planning of the regional spatial organization.

The main spatial forms of new economic/business poles in the peripheral urban areas are industrial parks, technological parks, production complexes, shopping centers, business-commercial complexes, logistic centers, business centers et al. The tendency of "breaking up" urban structures into many specialized and fragmented localities is noticeable, through clusters of activities that are located in dispersion in the settlement and regional structure. The cumulative effects of the development of new poles lead to a new concept of growth of the urban/metropolitan suburbia (Dovenyi, 2003). The initial nuclei of development are most often shopping centers, business-commercial centers et al., which is a consequence of the transition of the industrial society into a post-industrial one, i.e., the transfer of agglomerative advantages of towns onto the regional/peripheral environment. In the typology of new economic poles of growth in the urban environment, the classification on "dynamic" and "stagnant" poles is generally accepted (Burdach, 2006, Bertaud, 2006). The former are associated with, for example, shopping centers, airport zones of

development, industrial and technological parks, zones of business and commercial activities in the urban periphery, and the latter ("stagnant") are usually relics of an earlier period (classic industrial, work zones et al.), among which the greatest number are industrial brownfields.

Market mechanisms and factors of international dimensions initiate direct foreign investment into metropolitan/urban peripheries, primarily for economic agglomeration, reduction of various costs, favorable locational economics etc. In an urban-spatial context this can be directly visible in the radical changes (even the caving in) of the current spatial organization of towns, town zonings, propositions, rules and standards of regulation for the use of urban land et al. In our towns, these processes have been initiated by inadequate measures of urban policy and policy of building land.

In accordance with the restructuring of economy towards the development of services, the stagnation and "disappearance" of classic industrial zones can be noticed in the spatial structure of urban areas. A functional conversion of these zones is evident, supported on one side by the process of privatization of public enterprises in these zones, and on the other, by the pressures of direct foreign investment. The process of change of these hardened industrial localities is often complicated and slow, expensive and uncertain; therefore, the development of new zones/economic poles in the urban matrix has greater volume and significance. In the downtown zones of big towns (Belgrade, Novi Sad and Niš), a rapid growth is evident in the investments in real estate, the financial sector (banks, insurance), shopping centers, shops, business activities, culture, education, art, luxury apartments and houses. Simultaneously, numerous shopping centers have been built in the suburbs and urban peripheries of big towns, as well as logistic-transport centers and warehouses, depots, zones etc.

The process of post-suburbanization is a consequence of the effects of market forces, and it is taking place in the metropolitan peripheries of Belgrade and Novi Sad. Foreign investments and the locations of 1/3 of the new enterprises in Belgrade illustrate a more significant role of market mechanisms in allocating new economic matters in the metropolitan area. According to new data of the Serbian investment climate assessment (2004), only in the Belgrade area, a "new wave" of building has started on some new

20.000 ha of construction land (agricultural land) in the peripheral area. A significant residential pressure on the suburbs is evident and free agricultural land of the Belgrade agglomeration (e.g., the Zemun line, zone of highway towards Surčin, Batajnica, Novi Sad, the Avala line, Borča, Ovča, Pančevo line etc.), as well as the establishment of new small enterprises. The metropolitan periphery outside the city borders of Belgrade is becoming attractive for settlements (e.g., zones along the highways Belgrade–Novi Sad, Belgrade–Zagreb, Belgrade–Niš, the Ibar line, Avala line, Zrenjanin line et al.) because of better accessibility, corridors, nature etc. An increase is evident in the concentration of economic activities along the highway from Belgrade to Batajnica, Novi Sad, airport “Nikola Tesla”, Dobanovci, Zemun, Pančevo road etc. A very important concentration of economic activities developed alongside the highways – e.g., big economic-industrial zone in Šimanovci, Pećinci, Krnješevci etc. Municipalities that have better transportation and communication links with the surrounding area and Belgrade, and have an efficient entrepreneurial oriented local government are advantages for attracting new content.

According to the Regional Spatial Plan of the administrative region of Belgrade, 2004 and the Master Urban Plan of Belgrade (2005), the most important zones for locating the industry and other economic activities are Upper Zemun, Surčin–Dobanovci, Highway and Pančevo marshes–Reva of the total surface of 2,570 ha. In the Belgrade area, a deficit of localities for economic production and other purposes is evident, that is why the localities and zones have been activated on the periphery of the metropolitan area. The current economic zones in the metropolitan area of Belgrade cover a large surface (municipality Pećinci 1,000 ha – zones Šimanovci 500 ha, Pećinci 500 ha, Krnješevci 350 ha, Indija 900 ha, Stara Pazova 1,900 ha, Pančevo), Zeković, Maričić, 2008., Zeković, Spasić, Maričić, 2007.

The localities of new economic, industrial zones are a mixture of old spatial structures and new locational-spatial models in the urban fabric (Zeković, 2008.). What should be researched are the elaborate analysis of the potential implications of the new poles on the regional environment, the manner of coexistence of the growth area and the area of stagnation and depression, the disappearance of traditional industrial production, the

expansion of the services sector, and the boom in the growth of the suburbia.

Macro-locational factors of industrial relocation

The previous theoretical and empirical starting-points in the analysis of locational and development factors have been founded on traditional theories of industrial and territorial development. However, the experiences of highly developed industrial countries, based on contemporary theoretical viewpoints regarding the role of applied scientific-technical innovations and the development of high-tech industry, point to radical deviations in the importance of locational factors. The most important factors are the scientific and expert human resources, the presence of scientific and research-development institutions, quality of living, proximity to international terminals and communications (airports, railways) and external economies of agglomeration (economy of locations and urban economies).

In the process of improving regional competitiveness and territorial development of industry, the capacity of organizing the creative resources complex of a region and their interactive relation is of key importance. According to Nijkamp P., Zwetsloot F. et al, 2007, the creative resources of a region form three groups; 1) Research and development (university, research institutes, public development institutions), 2) Entrepreneurial activities and contents (incubators, scientific parks, network of entrepreneurs), 3) System of investing (encouraging venture capital, „business angels“, regional funds) and 4) Talent (researchers, innovators etc.).

Based on the available knowledge, in the process of diversification of the branch and spatial structures of industry, the main criteria of allocation are experience, knowledge and skills of the workforce, transfer and flexibility in the movement of highly educated human resources. Allocation of high tech industry is carried out by agglomeration or diffusion of capacities along with vertical integration and spatial disaggregation. The process of vertical integration and agglomeration of industry is conditioned by a relatively small impact on the local environment, due to the export and extraterritorial character of production.

From the viewpoint of spatial/regional and urban planning, the locational factors of high tech industry can be categorized into two groups: a) regional innovative infrastructure,

which includes research-development institutions, the university, scientific and engineering staff, the market, b) urban innovative infrastructure, which make the spatial conditions, quality of dwelling, quality of living, urban equipment, public contents, greenery and recreational contents, attractive physical land of the settlement and its surroundings and local business climate. "New" development and locational factors are relevant in the establishment of modern "artificial landscapes" and spatial forms of industrial locations – high tech agglomerations, corridors, scientific and industrial parks, technological parks, industrial zones and complexes as components of urban and spatial structures.

In the research of the birth and evolution of new spatial and urban forms of high tech industry, there are many unanswered questions. Some of them refer to the impact assessment of the diffusion of technologies on the land use in urban agglomerations, to the changes of the industry's locational conduct in a regional context, to the coordination of technological, urban and regional development and to the possible impact of technologies on the area and environment.

According to the data of UNCTAD and the World Association of Investment Promotion Agencies (WAIPA), 2007, the key macro-locational factors are macro-economic and political stability. The other key factors in the selection of location are quality telecommunications, supply and costs of highly skilled workforce, corporate taxes et al. (Table 4). Locational-development factors are the main starting-point in identifying the spatial entities and towns, as points in which IZs and IPs (industrial parks) will develop. Selecting the locations for IZs and IPs will depend on the competitiveness of the locational-development potential of the area in relation to other areas, as well as on the concrete requirements of the investors from certain branches of production.

The main criteria for selecting the area (macro and micro locations) for bigger more attractive localities of IZs and IPs are: *socio-economic criteria; availability of regional heavy infrastructure; infrastructurally equipped localities; urban centers, existing developed and organized space; proximity of existing industrial localities; natural-geographical conditions for accommodation; criteria for environmental protection, and institutional-organizational criteria* (proactive approach to local home rule and regional authorities,

Table 4. Key factors in the decision-making regarding allocation of foreign investments and the proposal of factors and criteria for the selection of locations in Serbia

Key factors in decision-making regarding the macro-location of foreign investment – according to rank	Other factors in the selection of location for foreign investment
1. Political and macro-economic stability	9. Access to airports
2. Supply and costs of highly-skilled workforce	10. Quality of road infrastructure
3. Quality telecommunications	11. Prices of energy sources
4. Quality of banking and financial services	12. Presence of other investors from the same business activity
5. Labor legislation	13. Rail, road and marine infrastructure
6. Corporate taxes	14. Natural goods and resources
7. Attitude towards foreign investors	15. Costs of low-qualified workforce
8. Investment stimuli	

efficient work of local authorities, competent services and institutions, informational system regarding the area, the cadastre, real estate, infrastructure, land, informational services, the efficient organization of administrative procedures, location management, inspection offices, controls, promotional approach and local political support for the development of SMEs and IZs and IPs, management of local resources by implementing the available measures et al.).

Criteria and factors for selecting locations are different and have unequal importance for each production type. That is why it is necessary to apply a sector locational analysis. According to MERR RS, FIAS, SIEPA, IFC 2008, the common ground for all industrial sectors make the following „positive“ criteria for selecting localities (of different importance): Possibilities for expanding the location, access to highways and other important roads, access to ports, railways, airports, access to big towns, access to neighboring countries-trade partners, availability of local labor, access to materials, social conditions in the vicinity (proximity to social infrastructures), proximity to industrial areas, proximity and correlation with the previous and later phases of production, access to the infrastructure on location. The group of „negative“ criteria are: a) on the location – density of population and development in the surroundings of the location and the proximity of potentially dangerous infrastructure; b) the physical conditions for construction (problematic state of land, erosion and earth flows, problems with underground and surface waters, contaminated soil et al.); c) general ecological conditions (protected floodable areas, etc); d) social conditions (avoiding zones where political riots and weaker security can be expected, avoiding areas of cultural monuments, localities that are sensitive for their religious and social context, avoiding potential settlements in the vicinity of the location).

POSSIBLE STRUCTURAL CHANGES OF INDUSTRY IN SERBIA

Growth of competitiveness and success of industrial development is conditioned by different types and integration relations within territorial networking – clusters on the local and regional level. Cappelin R.(2005), demonstrates several types of integration that are important for the local system of production: a) *technological integration* (implies the development of production know-how, the promotion of training and knowledge of work, permanent education of workers, investment in research and development on the level of local firms and their corporation with foreign firms), b) *integration of the local labor market* (cooperation between employees and firms, mobility of employees between firms from the same sector, ability to attract employees from other sectors), c) *integration of production between firms* (gradual diversification of local/regional producers has a crucial role), d) *territorial integration on a local level* (with demand for the improvement of infrastructural networks and better spatial planning and protection of the quality of environment), e) *social and cultural integration* (achieving a consensus in the local community and earlier involvement of the community in the decision-making regarding development projects), f) *territorial integration on the interregional and international level* (leads to interregional openness and cooperation, includes the policy of attracting investments, measures of „market area/location“ that are crucial for attracting foreign investment and promoting internationalization of local firms).

The future structural changes in the industry of Serbia are conditioned by a macro-economic development frame, as well as by the solutions of industrial policy, policy of innovation, policy of development of SMEs and entrepreneurship.

The implementation of the general concept of *development phases*, which is within the

strategy of competitiveness that has already been confirmed in the practice of the countries in transition, can enable the widest prognostic frame for the territorial development of industry in Serbia. From the standpoint of spatial organization, the most general frames are enabled by the *zebra concept* that implies the existence of zones of high activity and attractiveness for investments („black zones“) and zones of low-level activity and attractiveness for investments („white“ zones). Market and investment pressures on „black“ zones due to their attractiveness enable the growth of territorial and sector competitiveness. The concept of development phases is characterized by:

1. *Development phase based on resources*, i.e., on the dominant exploitation of natural resources (ores, energy sources, wood, farming products) in industries with low value added. It is characterized by low prices of production factors, low level of wages, large investments, as well as extensive employment and low competitiveness. In Serbia, this phase was characteristic for the 1990s (food, raw materials and energy supply production).
2. *Development phase based on efficiency of resources exploitation* - this implies a significant growth of investment and productivity in the processing industry. This sector has an impact on the growth of competitiveness of export, on the increase of value added. The processing sector attracts a smaller amount of FDI, while the greater part is directed towards the banking sector, commercial activities, trade, insurance, hotel industry, logistics and storage, business services etc.
3. *Development phase based on innovation and knowledge* - it is aimed at significant investments in the development of scientific and technological research and activation of the infrastructures of knowledge (universities, research

institutions et al). Investments are directed towards the large revenue productions (ICT, biotechnologies, electronics, pharmaceuticals, automobile, airplane, measuring and optical instruments etc) along with fragmentation, dislocation or extinguishing traditional industries.

4. *Development phase based on wealth*, when the postindustrial society is developed and the industries are dislocated to other countries, and there is export of capital and the development of highly sophisticated services.

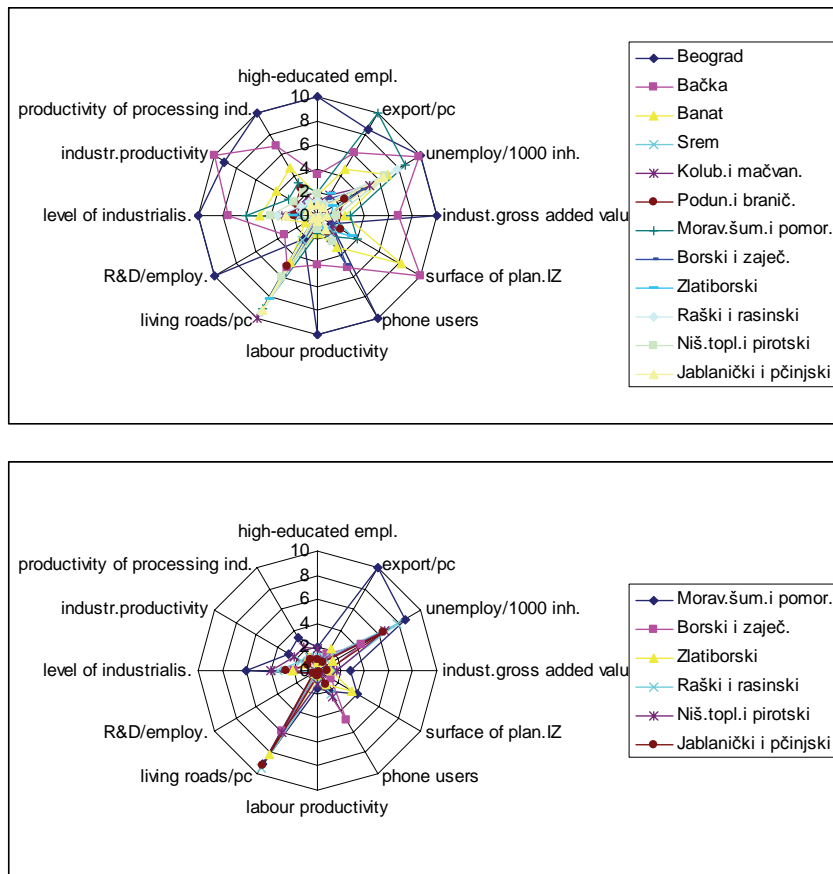
The economic and industrial structure of Serbia is characterized by a combination of the first two phases, with fragments of the third in some of the industrial sectors (the pharmaceutical industry, ICT, chemical and food processing industry). In Serbia, the development phase based on efficiency is directed by significant investments and implies not just investments into development projects, but into regional heavy infrastructure. The highlight of this development phase is on the construction of highways, modern railways, telecommunications, airports and electric energy systems, on intensifying logistic services. From the viewpoint of organization and use of space, these demands imply a huge absorption of space, increase of market pressures and the demands for building land. The demand for big investments surpasses the possibilities of the public sector and available market resources, for which new models and financial sources are being introduced for heavy infrastructural projects. This phase implies that investments are directed in the application of technical progress and knowledge, equipment, technological development, attracting strategic partners that have the necessary know-how and abilities for efficient investing. Simultaneously, there is demand for the initiation of reforms in the public sector towards deregulation and liberalization of business in order to attract FDI (foreign direct investment) and private capital, through privatization, initiation of partnerships of the public and private sector. The global economic and financial crisis has moved the limits by introducing means of public budget to reclaim the debts of private financial and other organizations. The promotion of attracting FDIs in the activities that are important for the competitiveness of Serbia is characteristic of this phase (e.g., automobile industry, oil industry, food processing, iron-and steel and non-ferrous metallurgy etc), i.e., partnerships between domestic and foreign companies.

Opting for potential reindustrialization in Serbia has its foundation in the fact that the industry is an activity that can ensure the achievement of key development aims – growth of employment, growth of competitiveness, export, attracting new investments, applying technical progress, the creation of new SMEs. The option of deepening the process of deindustrialization in Serbia implies a further weakening of the role of this activity in the economic structure with the strengthening of the services sector, and a partial qualitative change of the branch structure of production. According to the Report on the state of certain sectors of industry, 2008, the promising key sectors of the processing industry in Serbia are *the production of electronic equipment* (radio, TV and telecommunications), *production of motor vehicles and their components*, and *information technologies*.

EVALUATION OF REGIONAL COMPETITIVENESS OF AREAS FROM THE STANDPOINT OF TERRITORIAL INDUSTRIAL DEVELOPMENT IN SERBIA

Evaluation of regional competitiveness of areas from the standpoint of possibilities of industrial development in Serbia is one of the necessary steps from the standpoint of territorial/regional planning of industrial development. In the process of evaluation, different methodological approaches are used, as well as techniques and indicators. Zonneveld W. (2008), points to the significance of mapping the entire economic and territorial development with the structuring of all the activities, characteristics, priorities, functional connections et al. In the graph 2, the results of the research of industrial development and regional competitiveness are presented at the level of district groups (level NUTS 3) as part of the research-development basis in the making of the *Strategy of spatial development of Serbia, 2009*, which shows the big territorial differences and domination of the

Graph 2. Comparative demonstration of the indicators of Serbia's regional competitiveness, at the level of district groups (NUTS3), 2007-2008.



Belgrade area. In the assessment of regional competitiveness as the basis of territorial development of Serbia, a comparative analysis has been applied based on the SPIDER model or the so-called "Ameba" method or "Radar" method.

The SPIDER model is an analytical tool that is used for comparing and visualizing the relative advantages and flaws of a certain territory, or different scenarios of development, based on a multitude of factors. (Reinstra, 1998; Deakin M. et al, 2007). The model represents a powerful means of introducing bigger areas or different development options and enables the evaluation of the suggested development policies (Bruinsma et al, 2001). The model is relevant for the better understanding of the relations between factors, as well as for the development and evaluation of "hypothetical scenarios" in the planning and managing of area. The previous experience shows that the SPIDER analysis is used as an efficient instrument in the comparison of different scenarios and in the comparative studies of certain spatial entities (regions, towns). The SPIDER model is not a real model in the sense that it uses mathematical and econometric methods for the prediction of certain factors, but it is a reliable tool for visualizing the results of the analysis of certain factors and indicators. In the use of models, firstly, the numerical data about each factor/indicator is standardized, and then, they are mapped on the axis starting from the inside towards the outside end of the "spider". The lowest values are gathered closer to the point of the intersection of axis, while the higher values are closer to the outside end of the "spider". The higher values of the factors show their better performances. The data can be quantitative and qualitative, whose absolute and relative values are aggregated on a 10-point scale of values. The area size presented on both axes does not have statistical significance, and the absolute values of the data on them are converted into relative ratios. The first step in the implementation of the model is based on the standardization of quantitative data. General data are used (socio-economic data such as, surface, population, density of population, unemployment, income et. al), and the derived data on factors, indicators, parameters. The second step implies the use of standardized data values (from the first step) on a 10-point "spider" scale for every factor/indicator, and their visualization on the SPIDER model. In graph 2, the results of the evaluation of Serbia's regional competitiveness are presented, which

is important for the territorial development of Serbia's industry, based on the comparative analysis of standardized values of 12 indicators on the level of district groups (NUTS 3), which were obtained by applying the SPIDER method. They confirm the absolute and relative domination of Belgrade City in the regional competitiveness of areas in Serbia and demonstrate the significant interregional differences in the efficient exploitation of territorial capital.

PRELIMINARY SKETCH SCENARIOS FOR THE TERRITORIAL DEVELOPMENT OF INDUSTRY IN SERBIA

In accordance with the assumptions regarding the impact of key exogen and endogen risks and uncertainties in the process of industrial territorial development of Serbia, two potential scenarios have been proposed with their frames, assumptions, prospects and potential environmental-spatial effects for the spatial development of this activity (Table 5):

- *Scenario of recessive growth* (continuation of the process of deindustrialization with a negative growth),
- *Scenario of sustainable spatial development of industry.*

The process of globalization, new technologies, the global financial and economic crisis have and will have in the foreseeable future a significant impact on the territorial development of Serbia's industry, in all the scenarios of development. Spatial development of industry and total industrial activity in Serbia are under the influence of market economy policies, which, although they clearly promote regional balance, they favor the further concentration of industrial and total development in the metropolitan regions of Belgrade, Novi Sad, Niš and the highway corridors. This trend is compatible with the European trends. In accordance with the aims and principles of the Lisbon Strategy, the governments are concentrated on promoting metropolitan regions and national policies in transportation, innovation and competitiveness based on sustainability.

Contrary to the vision of the generally accepted concept of a more balanced regional development of Serbia, the scenario of recessive growth is more probable, which from the spatial standpoint, is characterized by:

1. *Further concentration in the metropolitan area* (Belgrade, Novi Sad, and Niš) and industrial and economic growth in the metropolitan cities and regions in accordance with the advantageous competitiveness of their areas, as centers of infrastructural networks and preferred locations with qualified, young, creative and mobile workers et al. The modern development discourse of the metropolitan area implies their competitiveness for investment, supported by political advisors, business consultants, researchers and town leaders.

2. *Spatial specialization and fragmentation of the regional area and towns.* The process of globalization and transitional recession is causing the mentioned trend on the national, regional, metropolitan and local level. The structural distribution of new investments and employment favors the branching of specialized production and services on selected special locations, and determining and respecting "new" locational factors on a regional and local level. These results in spatial organization produce *monostructural development-location forms, new economic poles or "islands"*, whose locations are allocated to foreign and domestic investors for various activities. These spatial-locational forms include attractive financial-commercial centers in downtown areas, gentrification of interior areas of bigger cities or agricultural suburbia and post-industrial zones of technopoles and abandoned areas of former public enterprises.

3. *Spatial polarization* (of industries, development processes, populations, resources, investments, revenues, profits, etc.) in interregional, regional, and town agglomerations, development corridors, etc. Market economy is not always an efficient mechanism for encouraging sustainable industrial and economic growth and the gradual decrease of spatial disparities. Although the economic gap between developed and undeveloped regions of Europe is slowly narrowing, and the national differences between countries are slowly disappearing, the differences between regions and towns are increasing mainly, synchronically (Glasson, 2007). Such a trend can be expected in the future spatial development of Serbia as well. The general opinion is that a market neoliberal policy, like most of the other policies, has a tendency to increase spatial differences/disparities on account of the undeveloped, "less talented"

Table 5. Probable scenarios of industrial development in Serbia – the frame, presumptions, prospects and assessment of territorial influences

Scenario for the recessive growth of industry	Scenario for the sustainable spatial development of industry
<p>Development based on resources</p> <p>Standstill in transition, privatization</p> <p>Deindustrialization intensified by the process of transitional recession with a reduced role of industry in the economic structure and the strengthening of the sector of services</p> <p>Conservation of branch structure</p> <p>Implementation of current technologies</p> <p>Decrease in employment</p> <p>Decrease in industrial production, export and competitiveness</p> <p>Further devastation of the environment</p> <p>Additional pressure on the environment due to intensive exploitation of resources</p> <p>Production planning with political support</p> <p>Maintaining the current spatial structure in industry</p> <p>Metropolitan concentration of industry</p> <p>Polarization of the effects of industrial development</p> <p>Spatial specialization and spatial fragmentation of industry</p> <p>Increase in production and transportation costs</p> <p>Little application of new knowledge and technologies</p> <p>Lack of infrastructure for the development of new productions</p> <p>Lack of information for the initiation of different production capacities</p> <p>Lack of specific research centers and innovative industrial enterprises</p> <p>Inefficient exploitation of building land, energy sources, water and raw materials</p> <p>Possible conflicts with the surrounding areas and functions</p> <p>Closing and bankruptcy of one part of industrial firms</p> <p>Further drop in work productivity in industry</p>	<p>Development based on knowledge and innovations</p> <p>Successful transitional reforms and measures of promoting industrial development</p> <p>Reindustrialization – growth of employment, competitiveness, export, attracting new investments</p> <p>Eco-restructuring of industry</p> <p>Growth of domestic and FDI and the SME sector</p> <p>Decline of the role of the sector for processing raw materials, energy sources and primary processing of resources</p> <p>Destimulating the consumption and production of industrial products</p> <p>Industrial development based on sustainability and the control of ecological capacities</p> <p>Preventive approach in the ecological management of industry as an advantage in business</p> <p>Creating competitive advantages and promoting regional and local potentials and quality of living</p> <p>Mandatory implementation of SEA for all industrial programs (ex post, ex ante)</p> <p>Promotion of new production based on local ecological capacity</p> <p>Growth of the role of institutions in the promotion of industrial competitiveness</p> <p>Ecological factors included in all the phases of industrial projects – eco-management</p> <p>Use of the advantages of network communications and quality infrastructure</p> <p>Slight growth of employment</p> <p>Polycentric industrial growth</p> <p>Industrial development as an important factor in regional spatial cohesion</p> <p>Increase of the role of ecological factors in local development policy, spatial planning and decision-making concerning industrial development</p> <p>Training programs for industrial eco-management</p> <p>Opening the national center for the promotion of cleaner production, development and the promotion of cooperation among SMEs</p>

and more neglected regions with an unintentional polarization on all spatial levels (Zeković, 2007.). Therefore, the realization of the priorities of spatial development should allow the slowing of polarization and the alleviation of the territorial disparities in the regional, urban and rural development of Serbia.

Each of the mentioned scenarios has big implications in the domain of regional and urban allocation and organization of space, in socio-economic development, in land use, in the environment, as well as in the institutional domain. Each scenario requires the determination of spatial dispositions and the elaboration of development zones, developmental and infrastructural corridors, key urban junctions/towns and

points/terminals, as regional territorial “catalysts” of development.

Draft of outlined territorial development of IZs and IPs in Serbia

The draft of the outlined future territorial development of industry (IZs and IPs) on the level of district groups (NUTS 3) on the area of Serbia is based on the leading role of the current economic-industrial centers and development corridors X and VII, and on the development of medium towns in undeveloped regions. By 2020, in the spatial organization of Serbia's industry, especially IZs and IPs, the following is expected: a) activating greenfield IZs and IPs, b) exploiting locations within the current economic-industrial zones in towns, c)

activating new localities and spatial models for locating industry, d) dispersion of production and services capacities within small localities in an urban and rural area, e) Location of IZs and IPs within the development corridors, development zones and centers, f) Development of regional industrial clusters in several key sectors of production (automobile industry, production of motor vehicles and their components, electronic equipment –radio, TV, telecommunications), ICT, food processing complex, et al.

According to data of the National Investment Plan (NIP) of Serbia, the construction or the communal organization of 64 industrial zones and parks is projected in all the regional entities of Serbia. The suggestion for these zones was made based on the analysis and the collection of municipal proposals. In the region of 50 municipalities and towns, 64 localities have been suggested for the construction and formation of new IZs and IPs, or for the infrastructural organization of the current industrial and other zones (Table 6). Half of the planned industrial zones (32 IZs) are located in the areas of developed municipalities, while only one IZ is projected for the undeveloped Jablaničko-pčinjski district.

The total surface of the planned industrial zones and industrial parks in Serbia is 5,229.13 ha. In the following medium-term period, employment for 20,385 – 47,180 workers is projected within these zones. The average surface of the suggested industrial zones and parks in Serbia is 81.7 ha, with oscillations between 14.2 –921 ha.

One of the more serious problems of territorial development of IZs and IPs is the lack of suggested industrial zones and parks in the insufficiently developed and undeveloped regions of Serbia, especially in the Jablaničko-pčinjski, Raško-rasinski, Nišavsko-toplički and Podunavsko-braničevski regions. One industrial zone of 14.2 ha in surface in the Jablaničko-Pčinjski region, as the most undeveloped part of Serbia (excluding Kosovo and Metohija), is projected, as well as one IZ in the Nišavsko-toplički region of 54 ha in surface. Zones in Kruševac and Kraljevo have been projected in the Raško-rasinski region. The completion of the highway on the corridor X would contribute to a better competitiveness of IZs, and it would open and improve the accessibility to the undeveloped part of southern Serbia. While the construction of the highway towards Montenegro would lead to the improvement of the quality of its position, and

Table 6. Planned industrial zones and industrial parks according to districts (NUTS 3) based on the data MERR and NIP, 2009. (Strategy of Spatial Development of Serbia by 2020, 2009.)

NUTS 3	Location of IZs and IPs in towns/municipalities	Number of ind. zones	Surface (ha)	Expected number of employees	Average zone surface (ha)	Density employee/ha
1. Beograd	Obrenovac	1	55.8	-	55.8	-
2. Bačka	B.Topola, B.Petrovac, Bečej, M.Idoš, Sombor, Subotica	9	658.61	7.010-7.860	73.17	11.9
3. Banat	Ada, B.Crkva, Vršac, Kanjiža, Zrenjanin, Kikinda, Kovin, N.Bečej, N.Kneževac, Čoka/ Senta	14	767.22	2,375-5,700	54.80	7.4
4. Srem	Indjija, Irig, S.Mitrovica	4	380.54	1,110-1,450	95.13	3.8
5. Kol.mačvanski	Bogatić, Valjevo, Koceljeva, Loznica, Ljubovija, Šabac, M.Zvornik	9	1,280.1	1,135-9,870	142.22	7.7
6. Podun.branič.	Smederevo, V.Plana, M.Crniče	3	370.5	1,030-5,400	123.50	14.6
7.Pom.šum.morav.	Jagodina, Kragujevac, Čačak, Lapovo, Paraćin, Svilajnac	8	323.84	3,775-9,300	40.48	28.7
8.Bor.zaječarski	Bor, Zaječar, Kljaževac, Majdanpek, Negotin, Piroć	6	320.77	2,480-4,400	53.46	13.7
9.Zlatiborski	Požega, Prijepolje, Užice	4	720.5	550-1,500	180.12	2.1
10. Raš.rasinski	Kraljevo, Kruševac	2	283.05	350-700	141.52	2.5
11.Niš.toplički	Niš	1	54.0	500	54.00	9.2
12.Jabl.pčinjski	Vranje	1	14.2	70-500	14.20	35.2
13. Kosovo and Metohija		-	-	-	-	-
Serbia in total		64	5,229.13	20,385-47,180	81.70	9.0

it would attract investments into the southwestern and western Serbia.

Out of the 64 planned IZs and IPs, only one zone refers to a brownfield locality-revitalization of the old industrial zones in Smederevo, while the others refer to greenfield IZs and IPs. For realizing the goal of territorial cohesion of Serbia, a *stimulation of new localities of IZs in the undeveloped regions is suggested, in such a way that it does not limit their further development and allocation in towns in the more developed part of Serbian territory that has greater competitive advantages*. The issue of territorial allocation of IZs and IPs, apart from being essentially determined by market principles, is an important instrument of support for territorial development of the developed and undeveloped regions, i.e., an efficient means of stimulative policy.

Starting from the need to alleviate territorial differences on the levels of total and industrial development, it is suggested to stimulate IZs and IPs in the towns of the undeveloped regions: N.Pazar, Priboj, Raška, Prokuplje, Leskovac, Surdulica, Bujanovac, Vlasotince, Ivanjica, Despotovac, Kladovo, Požarevac, Šid, Bač, Titel, et al.

CONCLUSION

Based on the analysis of territorial industrial development of Serbia, it is estimated that the strong process of deindustrialization of towns, the concentration of production in the Belgrade and Novi Sad regions and the mounting disparity in industrial development are all consequences of transitional recession and a reflection of the absence of an adequate regional policy, a policy of regional industrial innovations and spatial orientation of activity. If appropriate measures and activities are not taken in the future, further spatial concentration can be expected, as well as spatial polarization, specialization and fragmentation of industrial structure in the metropolitan areas of Belgrade and Novi Sad, in the bigger cities and along the European Corridor X, which has been analyzed within the two scenarios of potential territorial industrial development – scenario of recessive growth and scenario of sustainable spatial development.

It has been concluded that it is necessary to make a strategy of territorial development of industrial zones and parks, which should include priorities of their activation in sectors and regional entities. It is estimated that this highlights the complexity of decision-making regarding their territorial allocation between developed and undeveloped districts/regions of Serbia. It has also been concluded that the

attractive competitive localities are in the bigger or medium towns of the developed areas, along the corridor X and VII, as well as in the medium-sized towns of the insufficiently developed areas. Metropolitan areas, big towns, zones of development and highway corridors and medium-sized towns in a developed area offer more attractive, competitive, favorable, and more quality conditions of industrial development. The strategy of territorial disposition of industrial zones and parks in Serbia should be based on the group of factors of market demand, competitiveness of area and available territorial capital and the principles of territorial cohesion. It is estimated that in this, the results (obtained by the application of the SPIDER analysis) of the evaluation of regional factors and advantages could be useful in the districts of Serbia.

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SPATIAL AND ENVIRONMENTAL PLANNING OF SUSTAINABLE REGIONAL DEVELOPMENT IN SERBIA

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The paper analyses the planning framework for sustainable territorial and regional development. The spatial and environmental planning should play the key role in coordination and integration of different planning grounds in achieving the sustainable regional development. The paper discusses the spatial planning capacity to offer the integral view of the sustainable territorial development. The brief review of tendencies in new spatial planning and regional policy has been given. The focus is on the concept of balanced polycentric development of European Union. The guiding principles of spatial planning in regard of planning system reform in European countries have been pointed out. The changes in paradigm of regional policy, and the tasks of European regional spatial planning have been discussed. In Serbia problems occur in regard with the lack of coordinating sectoral planning with spatial and environmental planning. Partly the problem lies in the legal grounds, namely in non codification of laws and unregulated horizontal and vertical coordination at all levels of governance. The possibilities for the implementation of spatial planning principles and concepts of European Union sustainable territorial and regional development have been analyzed on the case of three regional spatial plans of eastern and southeastern regions in Serbia. The disadvantages in implementing the strategic environmental impact assessment as an instrument for coordination and integration of sectoral planning with spatial and environmental planning have been analyzed. The strategic environmental impact assessment has been implemented only in the spatial planning process. Through spatial planning process its feedback effect on sectoral planning has been indirectly achieved. The priority actions in Serbia for achieving the spatial and environmental planning role in coordination and integration of different planning grounds in sustainable regional development have been given.

Key words: sustainable territorial and regional development, regional spatial planning, sectoral planning, coordination and integration, strategic environmental impact assessment.

THE ROLE OF SPATIAL AND ENVIRONMENTAL PLANNING IN SUSTAINABLE TERRITORIAL AND REGIONAL DEVELOPMENT OF THE EUROPEAN UNION

The orientation towards establishing unified, integral strategic planning is currently present in all European countries with developed planning systems.

Integral strategic planning can occur solely as a consequence of an **integral** view of development and future. It can not happen simply by joining social, economic, spatial and environmental components or development aspects. In order to overcome partial planning or establish a comprehensive view and an organised direction of spatial systems and decision-making, one must make many assumptions (economic, political, regulatory etc.) which have been implemented in few countries (the Netherlands, Finland and the Scandinavian countries).

With the development of the sustainable development concept, tendencies to integrate

spatial and environmental planning and detach them into a separate block of institutions - considered able to have a coordinating and integrating role in planning and directing development - are becoming increasingly emphasised. These expectations are based on

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the necessity of integral and problem-based approaches to planning and control over general resources, and the necessity of coordination and cooperation aimed at development of the respective sub-systems, co-existing in actual space and the environment.

Along with the aforementioned, it should be kept in mind that there are significant differences between the spatial planning systems of individual European Union countries, due to differences in geographical conditions (size and density of population), historical and cultural conditioning, inherited land use patterns, the extent of urban and economic development, political and ideological aspirations. Similarities emerge in relation to the consistency in recognising the significance of setting the framework for policies and procedures in utilisation of space, environmental protection and sustainable development, and relations towards broader social and economic goals. This means that it is possible to establish common frameworks and principles to develop the system of planning and – within these limits – spatial planning, but also that the systems will develop differently and adapted to the specificities of each state. This position was also confirmed by recent surveys (UNECE 2008), which do not explicitly recommend a universal approach to strategic planning, albeit granted that the integrated strategic approach is present in all reformed systems of spatial planning in European countries.

What is expected of spatial planning today, primarily at the level of the European Union and its regions? What are the basic changes in approach, policies and principles of spatial planning, and the possibilities of their implementation in local practice?

After almost three decades, spatial planning has, starting from local and national, taken on a European dimension. At the level of the European Union and individual member states, spatial planning can still not boast sufficiently strong political and institutional support in relation to sectoral policies, primarily in relation to agrarian and transportation policies. Apart from this, the popularity of spatial planning has increased over the last decade. Why? Advocating the strengthening of the European Union's social, economic and territorial cohesion on the one hand, and various – often adverse effects of sectoral policies to the desired realisation of cohesion and competitiveness of Europe as a continent –

on the other, have both conditioned the search for the most suitable tool to integrate different aspects of general and sectoral policies and realise sustainable territorial development.

Spatial planning is being promoted as one of the instruments of sustainable development that can offer an integral view of future development of territories. The assumed capacity of spatial planning is based on its spatial dimension and capacity to coordinate and integrate various policies, from economic development, transport and environmental protection to cultural policies. The basic task of spatial planning is to plan sustainable territorial development as a general strategic framework for general and sectoral policies. Therefore, spatial planning realises a control role as well, because it enables decision makers to view the results and effectiveness of different policies in specific space, as well as to foresee their efficiency and necessary future adjustments (Adams, Alden, Harris, 2006)

A succession of the European Union developmental documents were adopted, as well as several Pan-European initiatives, representing a new generation of strategic documents. The largest contribution to promoting the role of spatial planning in the European Union was provided by the document on European Spatial Development Perspective – Towards Balanced and Sustainable Development of the Territory of the European Union (ESDP, 1999). Starting from the fundamental goal of EU integration processes to achieve sustainable and balanced development of the European territory, the most important contribution of ESDP was to establish the concept of balanced polycentric development, i.e. polycentric system of urban cores, starting with the positive experiences of Holland and Germany, where this concept has been applied for more than half a century. It is essentially an effort to restrain uncontrolled metropolisation and find a counterbalance to the market-initiated process of concentrating economic activities and population in central European regions. The concept of balanced polycentric urban and regional development has become one of the determinants of spatial planning and it exerts a large influence on strategies and policies at national and regional levels of planning and administration (Alden, 2006).

The Territorial Agenda of the European Union – Towards a More Competitive and Sustainable Europe of Diverse Regions (2007), represents a continuation and correction of ESDP in its

own right. The agenda retains all crucial elements of ESDP and introduces several newer tasks. Orientation towards improving polycentric development has been confirmed and the tasks have been defined in order to contribute towards a more balanced development, balancing quality of life across the population, sustainable use of resources and territorial capital of the region and entire EU. Strengthening regional identity and better utilisation of potentials of the regionally differentiated EU territory was stressed as one of the crucial challenges.

What is significant is that the Territorial Agenda introduced mandatory implementation of an **integrated strategic territorial approach**, i.e. implementation of integral planning and management for all actors in EU, especially local and regional actors, within limits set out at Pan-European and national levels. The establishment of the integral approach to guiding and managing development of the European Union was also supported by the revised European Union strategy for sustainable development (EU SDS, 2006).

The following were categorised as **territorial priorities** in scope of the EU development process: (i) strengthening polycentric development and innovation through networking urban regions and cities; (ii) establishing new forms of partnership and territorial management in developing urban and rural areas, predominantly at the level of functional urban areas; (iii) promoting regional competition and innovation clusters with the aim of stimulating development and specialisation of peripheral and underdeveloped European regions; (iv) strengthening and spreading trans-European transport corridors, improving technical (especially energy) infrastructure, and decentralising services of public interest; (v) promoting Trans-European risk management, including climate change impacts and new forms of managing protection of areas etc.; (vi) strengthening environmental structures and cultural resources as development potential, especially in regions which lag behind in development and in environmentally and culturally sensitive areas.

In the analysis of crucial provisions of the European documents, M. Vujošević (2008) rightfully claims that all of them are relevant for sustainable territorial development in Serbia. He particularly stressed the significance and problems in: implementing polycentric development; achieving equality in the

availability of infrastructure, knowledge and innovation; strengthening the economic base, quality of the environment and infrastructure of urban services; wise management in using natural and cultural heritage, promoting cooperation at regional, cross-border and transnational levels etc. Some of the problems and possibilities concerning implementation of provisions and concepts of European documents shall be indicated in this paper.

The implementation of strategic documents and establishment of sustainable territorial development is facing difficulties, partly because spatial planning is not among the Union's original jurisdictions, but rather falls under the jurisdiction of member states. Chief EU policies are the basic problem, primarily the Lisbon strategy/treaty, prioritizing macroeconomic competitiveness over social and environmental objectives. According to some estimates, most basic European sectoral policies are aimed at achieving economic competitiveness (from transport to urban policies) and therefore indirectly give advantage and contribute to the concentration of economic and innovative activities in a limited number of metropolitan regions (Kunzmann, 2006).

Although the implementation of documents on the Union's territorial development is not obligatory, but they rather represent a guiding, strategic framework to coordinate various policies, experiences in their implementation to date have been positive, primarily in implementing new approaches and concepts. The implementation of these documents in the EU countries is based on the principle of subsidiarity and developing horizontal (intersectoral at the same level of administration) and vertical (between the levels of administration - Union, transnational, national, regional and local levels) coordination. From the EU standpoint, most important are coordination and cooperation at transnational and regional levels, because they enable the resolution of the most important issues of developing European territory - Trans-European transport systems, environmental protection, functional and economic connections between regions, cross-border areas etc.

The ESDP document exerted a powerful influence on Europeanisation of spatial planning and planning methodology, which adapted both to realising sustainable development and territorial cohesion and competitiveness. Different from traditional

land-use planning, spatial planning was more oriented towards unifying the spatial dimension of development with economic, social, environmental and sectoral policies. In a post-industrial information society, spatial planning is expected to represent a foundation for sustainable development policies and policies that contribute to or influence sustainable territorial development. The basic reasons are as follows:

- Cultural and landscape diversity of European space shall be of crucial interest for the future economic development of the EU. The role of spatial planning and spatially relevant policies is to determine regionally differentiated values and resources and protect them from uncontrolled economic development and uncontrolled and unsustainable development of infrastructure systems.
- Spatial planning gathers solutions for problems of regional development and preserving regional identity, culture, tradition and quality of life of inhabitants. No other policy can comprehensively view and guide all dimensions of sustainable territorial development.
- High-level discussions on spatial planning in the EU shall influence the adaptation of European sectoral policies to the Pan-European spatial framework and the implementation of estimates of territorial influence, so as to enable guiding spatial implications of sectoral measures and activities on regions, urban and rural settlements (Kunzmann, 2006).

The cohesion policy of the European Union is particularly targeted at regions, regional policies and the role of regional development in reducing economic and social disparities, primarily in production, productivity and employment, which were deepened by its territorial spread. At NUTS II level in 2005, the proportion of gross national product was 8:1 between the most developed London metropolitan and the least developed European region, Lithuania (Growing Regions, Growing Europe, 2007).

Regional policy of the European Union is focused on implementing Lisbon strategy and the EU Sustainable Development Strategy & tasks to increase productivity, employment and sustainable development of European regions. The second largest support from European funds for the period 2007 - 2013 is secured for regional development policies, with a priority

for impoverished regions and overcoming regional disparities (Alden, 2007). European regional policy was designed so that its specific results in improving social and economic cohesion contribute to reducing the gap between developed and undeveloped states and regions. Special attention was paid to the scientific approach in regional policies.

Experiences from various European regions indicate that the contexts of regional planning and regional development are changing rapidly. Within the GRIDS project (Best practice guidelines for instruments of regional development and spatial planning in enlarged EU) and INTERREG IIIC program, it was perceived in several examples that traditional regional policies did not provide expected results in view of more balanced development and competitiveness of regions.

Discussions were held over the previous years about new paradigms of regional development and new approaches to resolving problems of regional disparity and competitiveness. An entire spectrum of topics arose within theoretical contemplations of regional development - on regional competitiveness, social capital, knowledge-based economy, flexible regional specialisation etc. Various theories, concepts and models are being questioned, such as the central place theory (Christaller), growth poles (Perroux), core-periphery spatial and economic development model (Myrdal and Hirschman) etc. The concepts of balanced polycentric regional development, nodal regions - functional-urban regions - daily urban systems etc. were developed on the basis of combining modified classical theories and models. New concepts and models are being researched, such as learning regions (Cooke), intelligent urban regions, regional innovation clusters etc. (ibid).

The nodal region concept came into prominence in **regional and spatial planning**. Selecting nodal regions and planned guidance of their development is one of the most important premises in the process of rational organisation of space. European functional-integration areas and multimodal corridors that shall link big city centres more intensively and contribute to the creation of an integral polystructural urban system of balanced hierarchy and powerful horizontal (spatial) and vertical (functional) connections have been determined. One of the intended models is also the model of European metropolitan regions - EMR, highly urbanized

regions the role of which in demographic, economic (production, consumption, transport), cultural and social sense is transnational in character, and simultaneously represents a factor of spatial cohesion and regional development on the continent. One form of EMRs are metropolitan development areas (Metropolitan European Growth Areas – MEGAs). The future organisation EU27+2 provides for the development of 1595 functional areas, i.e. functional urban regions, 74 of which are MEGAs. In each of the Union's states, the territorial reach of functional regions coincides with daily population migration zones, outlined on the basis of national criteria (Tošić, Maksin-Mićić, 2009).

Spatial planning is indeed one of the more recent and innovative activities of the public sectoral in the domain of regional development. This was also contributed to by the increase in spatial strategies of different scope – from European, transnational, national to regional (Adams, Alden, Harris, 2006). Among them, most attention was drawn to the regional level. The main task at regional level of planning is to prepare and coordinate the regional spatial strategy for a planning horizon of 15 to 20 years. Although European regions vary significantly in respect of spatial reach, it is customary that regional planning strategies and plans are developed for administrative or functional regions, such as functional urban areas (or daily urban systems), axes of development (or corridors), catchment areas, national park areas etc. It is recommended in spatial planning to prioritize functional areas over administrative borders.

UNECE research (2008) identified six fundamental **principles of spatial planning**:

- democraticness,
- subsidiarity,
- participation,
- integration,
- proportionality
- prevention.

The implementation of the subsidiarity principle is harmonized with the significance and spatial influence of the problems being solved, so that only some of the decisions shall be based on local community requests and initiatives. Decisions on main transport corridors, protection and regulation of environmentally or culturally sensitive areas (e.g. catchment areas, areas of natural and cultural heritage) and other matters of public

interest or significance to equate development conditions within and between regions, shall be passed at regional or national levels of planning or administration

Participation and coordination of the widest possible spectrum of regional and local stakeholders in the spatial planning process is of crucial value for the determination and verification of regional space protection priorities, improvements in infrastructure systems, projects of regional and subregional importance and assessments of their environmental impact etc. Participation in the process of formulating and adopting spatial policies and plans enables a relativization of conflicted interests, activities and actions of sectors at same or different levels of administration, local communities and the private sector

The implementation of the integration principle is significant – harmonisation, coordination and integration of sectoral policies for the planned area and integration of local policies, plans and projects of significance for several local communities in the region.

The proportionality principle relates to striking a balance between obligation/directiveness (legal protection) and flexibility (discretionary decision making) in formulating spatial policies and planning statements. Obligation, i.e. directiveness, is necessary when dealing with policies and planning statements in protection of resources, heritage and environment, and in some cases is welcomed as support for development, because of the investor's legal protection. At the same time, the spatial policy must be flexible in order to adapt to the eventualities of economic, social and technological development and stimulating innovation. Flexibility can be achieved by way of determining criteria to realise planned development, instead of defining final solutions and strict zoning of space. It is recommended to implement a lesser degree of flexibility i.e. discretionary decision-making in conditions of insufficiently developed local levels of planning and administration.

The prevention principle relates to implementing estimates of environmental impacts and risks when defining and evaluating planning policies and options. It also includes the determination to limit development in sensitive areas with an aim to minimise expected climate change impacts and preserve biodiversity, values and resources.

The regional level of spatial planning is used to interpret national policies and priorities and adapt them to regional conditions, to define interregional and intraregional functional bonds and directions of development, set apart and protect areas with critical natural capital (strategically significant and limited sources of water, minerals, natural and recreational values etc.), plan the development of regional and subregional infrastructure systems and public services, conduct environmental impact assessments of planning options and statements, provide guidance for the development of local spatial and other plans etc.

Regional spatial planning is simultaneously a verification and coordination tool for spatial/territorial impacts of all spatially relevant national and regional policies (economic development, natural resources, sustainable development, rural development, heritage protection, development of tourism and culture etc.). Support of national and regional administration levels is necessary to realise expected coordinating role of spatial planning, primarily by way of connecting funding development of sectors and local communities with regional spatial strategies and plans.

The crucial and most difficult task for the planning process is to realise sustainable development of regions by guiding general/framework spatial distribution of development and investments, coordinating the development of infrastructure, housing and public services, and preserving the environment and resources. Apart from general/framework guidelines on the designation and organisation of space, a regional spatial plan can contain boundaries of areas/zones intended for development, revitalisation and/or protection, once they have been sufficiently researched and known.

Cooperation between local levels of administration is necessary in the planning process so as to provide an overview of possible options for the problems and issues of common interest for several local communities. Spatial development options should be the subject of public consultations and strategic impact assessment.

Strategic environmental assessment presents an important tool of integration between various policies and support for the realisation of sustainable territorial development. By implementing a strategic

environmental assessment it can be determined whether plans and policies have been harmonised between themselves and with territorial sustainable development goals, provided it was integrated in the process of spatial and sectoral planning. Individual European countries have also established an environmental compensation to compensate for the impact of new development on the environment with investments into environmental protection in the same or other space (UNECE, 2008).

For the development of new, or the reform of existing spatial planning systems in European countries, and especially countries in transition, it is of significance to reform the following:

- legal basis,
- spatial planning,
- planning instruments, primarily spatial strategies and plans,
- support to implement planning decisions.

The first precondition to reform the spatial planning system is to reform the legal basis, which should secure the following: the implementation of an integrated strategic territorial approach in the process of planning and managing sustainable development, primarily mechanisms for horizontal and vertical cooperation and coordination between sectors and administration levels, and the participation from stakeholders in the decision-making process: accountability for the verification of environmental and territorial impacts of planned development; and higher flexibility of the planning process and planning instruments etc.

The second part of the paper considers the contribution by previous reforms of legal and planning basis to establishing a system of planning and managing sustainable territorial and regional development in Serbia, and primarily mechanisms of coordination between spatial, environmental and sectoral planning.

The third part of the paper analyses the implementation of basic principles of spatial planning, concepts of territorial development of the European Union and individual recommendations made by UNECE for the regional level of spatial planning on the example of new regional and spatial plans for special designation areas with a macroregional dimension in Serbia.

The fourth part of the paper analyses the role and possibilities for the implementation of strategic environmental assessments with the aim of coordinating spatial and sectoral planning and realising sustainable territorial and regional development.

PROBLEMS IN REALISING THE ROLE OF SPATIAL AND ENVIRONMENTAL PLANNING IN SUSTAINABLE TERRITORIAL AND REGIONAL DEVELOPMENT OF SERBIA

A hierarchy (both formal and informal) in the planning systems of the European countries was established for the planning basis, mechanisms and procedures of harmonising and coordinating spatial and sectoral planning. This means that the frameworks (concepts, general solutions and guidelines) for the development and regulation of space, determined at national level, are binding for sectoral planning bases at the same levels of planning and that they are being elaborated at regional and local levels of spatial and sectoral planning and corresponding technical documents. The same relation exists between regional and local planning levels. Established mechanisms and procedures also provide the reverse course of actions in the harmonisation process - from local to higher levels of planning. In this process, the regional level of planning plays a decisive role for horizontal (between local communities and sectors) and vertical (between planning levels) coordination.

Coordination and integration of spatial, environmental and sectoral planning is established by providing legal basis, and implementation is secured by institutional-organizational arrangements.

The **legal basis** in Serbia is extremely extensive and uncoded, even though it has been reformed for nearly a decade. The problematics of managing space, protecting the environment, resources and heritage, and sustainable development are directly or indirectly regulated by more than 40 laws.

The legal basis in Serbia has established the hierarchy of spatial and urban plans, but establishing relations between spatial and urban plans with sectoral planning basis, as well as mechanisms and procedures for their coordination and integration are lacking. Only the Law on Spatial Plans of the Republic of

Serbia (1996) set out the obligation to realise or elaborate this spatial plan with other spatial, urban and sectoral plans, strategies, policies and programmes.

The law which regulates spatial planning and management of space ought to be the basic law to provide a planning basis and the implementation of sustainable development of territory and settlements. The Law on Planning and Construction from 2003 specifically mentioned spatial development among principles for management of space. The problem is that this law did not deal in management and protection of space, but the focus was on building and legalisation of unplanned/illegally built buildings. This is the reason why this law did not provide efficiency in planned management and protection of space, and with it no foundation for sustainable territorial development. It seems that, from the aspect of sustainable development and management of space, the new law from 2009 offers even more unfavourable solutions. The primary focus of that law is constructible land, i.e. placing government-owned constructible land on the market, and construction of buildings, i.e. facilitating the acquisition of building permits, all with the apparent aim of attracting foreign investors. The law which does not protect public interest in use and construction of space, and therefore not all of resources in space, can not represent the legal basis for planning and realising sustainable territorial development.

The most advanced in view of establishing relations on coordinating the planning basis is the package of laws on environmental protection from 2004. The law on environmental protection, modelled after the legislation from European countries, established an integral system of environmental protection, as well as measures and instruments for sustainable management and protection of natural resources and heritage. The law stipulates that the Spatial Plan of the Republic of Serbia and the National Strategy for Sustainable Use of Natural Resources and Goods represent legal bases for sustainable use and protection of natural resources and heritage, whereas spatial planning represents planning basis for integrated protection of the environment, resources and goods. The law on strategic impact assessment provides for use of this environmental tool for plans, programs and bases in the domain of spatial and sectoral planning of transport, energetics, agriculture,

forestry, fishery, hunting, industry, waste management, water management, telecommunications, tourism etc. with the aim of avoiding or limiting negative impacts of planned decisions on the environment. The problem is that in practice it is applied only in the domain of spatial and urban planning.

The laws on planning and construction and environmental protection have not sufficiently established obligations of coordinating planning and guiding the use and protection of space and environment, especially between spatial and urban plans on the one hand, and the national environmental protection programme, local environmental protection action plans, action and sanitation plans at national, provincial and local levels on the other. Simultaneously, obligations and propositions for the coordination of sectoral with spatial and environmental planning and guiding sustainable development are lacking.

The Law on Regional Development (2009) established a new system of regional planning for NUTS II and III planning regions - the national regional development plan, regional development strategy and programs of funding regional development. It was intended that these plans be harmonised with adopted spatial plans, as well as to represent one of starting bases to develop new spatial plans and programmes for their implementation. In other words, there is formal talk on harmonising but not coordination of regional plans/strategies with spatial planning. The manner in which the obligation for spatial plans was formulated indicates that there will be no verification of spatial impacts of regional plans/strategies, i.e. that coordinating and integration of this planning basis into the spatial planning process and the realisation of sustainable regional development will be disabled in practice. As this law does not mention the obligation of implementing instruments of strategic environmental impact assessment, it becomes clear that environmental impact of regional planning basis will not be checked. Owing to this, the environmental policy control tool - strategic environmental impact assessment - will not be able to play its part in establishing coordination and integration of planning basis at regional planning level.

A similar constatation can be made for the new set of laws on tourism. The 2005 Law on Tourism declaratively mentioned sustainable development and integral planning of tourism development among tourism development principles. That law only established the

obligation to harmonise national sectoral strategy with the Spatial Plan of the Republic of Serbia. The new Law on Tourism (2009) is retrograde in relation to its predecessor, because it does not mention integral planning, but planning the development of tourism is reduced only to sectoral planning which was not adequately connected to other forms of planning. The provisions of the new law make no mention of coordination with spatial and environmental planning, as well as with other sectoral planning bases. The following system of sectoral plans and programs is established under the title "integral planning": Tourism Development Strategy of the Republic of Serbia, Strategic Marketing Plan of the Republic of Serbia, Strategic Master Plan for Prioritised Tourist Spaces, Tourist Product Development Programme, Tourism Development Programme and Promotional Activities Programme. Only the Tourism Development Strategy of the Republic of Serbia is intended to contain an analysis of impact on cultural heritage and natural resources, but not on space and the environment. The strategic master plan was in no way connected with the protection of space, environment, resources and heritage, but with the economic evaluation of the tourist infrastructure, tourist superstructure, transport network and utility infrastructure, as well as the estimate of economic justification of individual and total investments. It was intended that the strategic master plan represents a starting ground for spatial and urban plans, which indicates, and is verified in practice, that there will not be any verification into spatial impacts of the sectoral strategy, i.e. that coordination and integration of this planning framework into the spatial planning process will be disabled in practice. This law was also not connected with the set of environmental protection laws from 2004, and there is no mention of the obligation to implement strategic environmental impact assessment, so that - apart from declarative, no factual protection of the environment and resources - including tourist resources - is provided. In other words, the new Law on Tourism does not provide for even the basic preconditions to manage and guide sustainable development of tourism and sustainable territorial development.

In the local **planning system**, sectoral planning basis is comprised of general and sectoral/trade plans, strategies, policies and programmes which exert major influence on realisation of management of space, protection of the environment, resources and heritage,

and sustainable development. The impacts of sectoral planning are manifested directly or indirectly, in a coordinated or uncoordinated manner in relation to general strategies, spatial and urban plans and environmental plans and programs. A large portion of the sectoral planning basis has not been connected with space and environment in Serbia, so that the guiding role from the aspect of use and management of space and protection of the environment, resources and heritage, i.e. sustainable development, is realised indirectly or not realised at all.

Formal and informal types of **coordination** have been established in the planning practice for the process of spatial and sectoral planning in the domains of agriculture, water power engineering, forestry and protection of natural resources. An informal type of coordination has been established with several other sectors (transport, energetic and telecommunications infrastructure), but is undergoing difficulties due to the underdevelopment of certain sectoral planning basis, which have mostly been reduced to short-term building programmes (reconstruction, modernisation etc.) and technical documents.

The problem has been aggravated over the previous years by adopting or developing a multitude of general and sectoral strategies and master plans (with various purposes), which are in most cases not in accordance with the legal basis, so their contents, development methodology, procedure of consideration and public inclusion, obligations of harmonisation with spatial and environmental or other sectoral planning bases remain unknown, as well as jurisdictions in respect to how they were adopted and implemented.

After the European Union model, Serbia has adopted a set of general strategies in the first decade of the 21st century which have direct or indirect influence over management and guidance of sustainable development. These are primarily the following long-term and mid-term strategies: The National Sustainable Development Strategy, Poverty Reduction Strategy, National Employment Strategy for the period from 2005 to 2010, National Youth Strategy, Birth Incentive Strategy, Regional Development Strategy of Serbia for the period from 2007 to 2012, National Economic Development Strategy of the Republic of Serbia from 2006 to 2012, Strategy for the Development of Competitive Small and Medium Enterprises for the period from 2008

to 2013, National Environmental Protection Programme and other strategies and programs.

The legal basis for developing and adopting the National Sustainable Development Strategy remains unknown. It is based on generally accepted principles defined in the Johannesburg Declaration on Sustainable Development, UN Millennium Development Goals and EU Sustainable Development Strategy, but the conception of sustainable development of Serbia remained too general and without the spatial dimension. Although adopted general and sectoral strategies were used when developing this strategy, it remained unclear who and how provides their coordination and how to elaborate and implement the National Sustainable Development Strategy. One thing is certain, sustainable development can not be achieved by partially implementing various strategies and policies.

One can make a similar statement for the Regional Development Strategy of Serbia for the period from 2007 to 2012, which primarily deals with the problem of regional disparities, but does not offer a concept of polycentric and balanced regional development of Serbia, or represents a basis for spatial and functional differentiation, specialisation and networking of regions, preservation and improvement of regional identity, as well as sustainable regional development of Serbia.

The concept of polycentric and balanced regional development and network of urban centres in our regional planning and regional development practice has not been achieved so far. It was only during the development of the Spatial Plan of the Republic of Serbia that an exact analysis of all elements and factors of regional development was conducted and strategies for the de-metropolitanization of Serbia and a functional balancing of the system of centres and settlements were defined. The problem is that political and legal frameworks for resolving issues of legislative-functional subsidiarity, i.e. vertical and horizontal distribution of competences, obligations and responsibilities among levels of administration and planning, have not been established yet. This is why the questions of functional homogeneity, transport connectivity and regional networking of urban centres in Serbia remain open (Tošić, Maksin-Mićić, 2009).

The problem of coordinating spatial and environmental with sectoral planning basis is most pronounced in the tourism sector in

current practice. Tourism Development Strategy of the Republic of Serbia (2006) has definitely been linked to the Spatial Plan of the Republic of Serbia, but not with the adopted sectoral strategies. The largest problem arises due to the implementation of certain new sectoral planning tools – such as the 'master' plans (visit the website: www.merr.gov.rs/dokumenti), which were not in accordance with the legal basis for tourism until recently. Over the past three years, 12 strategies and master plans have been developed for tourist areas. It can generally be stated that a sectoral approach is predominant in these strategies and master plans, without analysing the impact of planned tourism development to the surroundings and without assessing environmental, spatial, social and cultural effects of these impacts. The overall structure of master plans for tourist areas, as a rule, consists of the following: 'as-is' analysis (analysis of resources, capacities and infrastructure, locational analyses), analysis of supply and demand, SWOT and PESTLE analyses, benchmark analysis, competitiveness analysis, marketing, directions for development, tourist products, management, investments and impacts of investments. Due to sectoral approach and partial overview of developing tourist areas, substantial negative effects of tourism impacts on natural heritage, resources and environment, as well as local community development can manifest themselves in the realisation of certain master plans, especially for macro- and mezzo-regional tourist areas and natural resources of Stara Planina, Golija and Kopaonik.

Reforms of the planning system and the processes of spatial, environmental and sectoral planning to date have not secured their harmonisation with the approach, policies, concepts and principles of planning and managing sustainable and competitive territorial development of the European Union. The process of developing and implementing the planning grounds in Serbia is unsuitable for guiding and managing sustainable territorial development of Serbia and its approximation to the European Union. The integrative role of spatial and environmental planning can not be realised due to poor coordination and absence of integration between various forms of planning.

REGIONAL SPATIAL PLANNING AND SUSTAINABLE TERRITORIAL AND REGIONAL DEVELOPMENT IN SERBIA

Due to the undeveloped regional policy, absence of regional administration level and slowness in selecting some form of regionalisation, Serbia does not have a developed practice of developing regional spatial plans. Two were adopted in the previous decade, and several regional spatial plans are currently being developed. On the other side, there was a continuous development of the practice of developing spatial plans for special use areas of macro- and mezzo-regional scope. This is the reason the paper analyses the implementation of basic principles of spatial planning, the concept of territorial development of the European Union and individual UNECE recommendations for the regional level of spatial planning, at the example of regional and spatial plans for special use areas with a macro-regional dimension for the Eastern and South-Eastern parts of Serbia – Regional Spatial Plan for Southern Pomoravlje, Regional Spatial Plan for Timočka krajina and the Spatial Plan for the Stara Planina Nature Park and Tourist Region area (hereinafter: regional plans).

Developing and passing these plans is part of the elaboration and implementation of the Spatial Plan of the Republic of Serbia, as well as the implementation of general and sectoral strategies, plans and programmes and their adaptation to regional and local specificities. The possibility to implement concepts and priorities of the territorial development of the European Union was checked simultaneously with the development of regional plans, and primarily the following:

- concepts of balanced polycentric development, i.e. polycentric system of urban centres,
- establishing new forms of developing urban and rural areas at the level of functional urban areas;
- strengthening and widening the network of traffic corridors, improved technical infrastructure – energy in particular – and decentralising services of public interest;
- conserving and using natural capital (forests, waters, minerals etc.), strengthening ecological structures and cultural resources as development potentials in areas which lag behind in

development and are classified as ecologically and culturally sensitive areas.

Regional plans for areas of Jablanica and Pčinj, Zaječar and Bor counties and Stara planina tourist region (part of Zaječar and Pirot counties) encompasses the territory of 5 counties and 23 municipalities with the total surface of approximately 14,200 km² (representing approximately 16% of the territory of Serbia), with about 1000 settlements and about 800 thousand citizens (Image 1). Physically and geographically, this area covers most of the Basins of Južna Morava and Timok rivers, a part of lower Podunavlje region and the highland dominated by the high altitude Stara planina and Krajište with Vlasina massives.

The following characteristics of the area were decisive to implement the concept and select the vision and planning solutions for sustainable territorial and regional development:

- It is categorised as undeveloped and both economically and demographically depressive regions;
- It is peripheral to developmental axes and the largest urban centres in Serbia, with unevenly developed and functionally insufficiently networked system of settlements, predominated by medium and small urban centres;
- potential cross-border area (with the state border in approximate length of 500 km) between Pan-European transport corridors X to the West, IV to the East and VII to the North, with natural and cultural areas of international significance and regions with similar development problems in Bulgaria, Romania (EU) and Macedonia;
- possesses significant natural capital - exceptional hydroenergetic potentials of "Đerdap 1" and "Đerdap 2" hydroelectric plants, agricultural, cattle breeding and forestry area, minerals, natural and tourist values with exceptional potential for the development of tourism on Stara planina, Danube, Krajište with Vlasina, spas etc., water springs of national and regional significance with 8 existing and 7 planned accumulation basins, a potential waterway corridor, substantial reserves of mineral resources and developed mining industry;
- chief transport corridors in the areas are a section and leg of corridor X (including partly built infrastructure systems) and a

section of corridor VII (Danube with partly utilised waterway and unused nautical potentials) etc.

Regional plans set the vision, basic concepts and planning solutions to achieve more balanced regional and subregional development, increase competitiveness and integrate the area in its surroundings (neighbouring functional areas of Southern Serbia and autonomous provinces, as well as with neighbouring border municipalities and regions in Bulgaria, Romania and Macedonia). Special attention has been paid to increasing attractiveness of the area for investment by defining planning solutions for: activating and mobilising territorial capital, sustainable use of natural and man-made resources, long-term reconstruction and development of human resources, increasing transport availability to Pan-European corridors, infrastructure installations and energy efficiency, development of the economy and institutions, protection of natural and cultural heritage as factors for the development of the area, sanitation and protection of the environment (Image 1).

territorial development, similarities can be perceived among general sustainable development goals for the area in question and regional plans as follows:

- responsible administration of the development, management and protection of space in accordance with realistic potentials and limitations of natural and man-made resources, as well as the value and long-term requirements of economic and social development and protection of the environment;
- more balanced development at intraregional and interregional levels, stimulation for the development of agriculture, tourism, energy, mining and infrastructure, improvements on the infrastructure corridor X and waterway/nautical corridor of the Danube, significant improvement in accessibility of mountainous and remote parts of the area, initiating cross-border programmes for border areas;
- quality of life improvements and creating conditions for demographic renewal, retention and stimulation of settling and

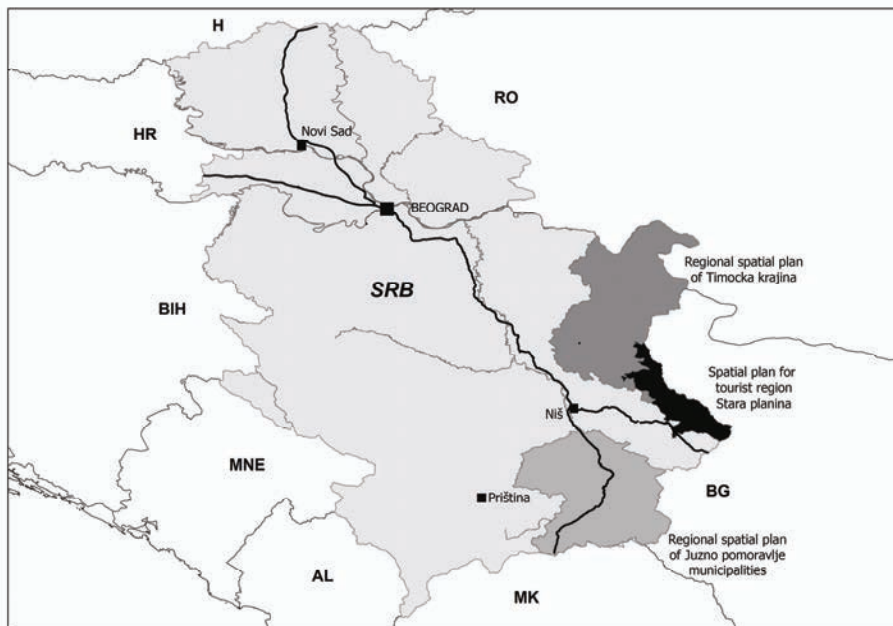


Image 1. Area of regional spatial plans for Southern Pomoravlje region, Timočka krajina and Stara planina tourist region.

Source: Spatial plan for the area of Stara planina nature park and tourist region (2008), Regional spatial plan of the Southern Pomoravlje municipalities, Spatial Plan Strategy - Concept (2009), Institute of Architecture and Urban & Spatial Planning of Serbia; Regional Spatial Plan for Timočka krajina - Spatial Plan Concept (2009), Institute of Architecture and Urban & Spatial Planning of Serbia

Starting from propositions for the national spatial plan and taking into consideration conceptions and priorities of the Union's

return of the population, especially into economically disadvantaged rural areas or centres by way of investment into

construction, reconstruction and maintenance of infrastructure, public services, preservation and advancement of the natural and cultural heritage, development of economically viable and status-appealing activities.

The paper indicates only several key regional plan solutions to achieve general goals, conceptions and principles of sustainable territorial and regional development.

It was intended to realise twofold achievement of a greater degree of **functional integration of areas** by regional plans Intraregionally, within the space of Jablanica and Pčinj, Zaječar, Bor and Pirot counties, planned qualitative changes in spatial, transport, economic and social structure shall enable harmonisation of development and networking between subregional entities, especially highlands and border areas with pronounced dysfunctions of social and economic development. Interregionally, functional integration with neighbouring functional areas and Republic of Serbia shall enable the realisation of prioritised planning solutions significant for several municipalities and regions, primarily for transport linking with corridors X and VII, the development of other infrastructure systems and regional cluster (economy, tourism, education etc.) formation. Connecting and cooperating with international surroundings, neighbouring border municipalities and regions in Bulgaria, Romania and Macedonia implies preparation and realisation of cross-border programmes for which certain planning solutions have been proposed in the domains of infrastructure, energy, tourism, ecology, urban centre cooperation etc.

The support to realising integration, more balanced and polycentric development of the area is planned by improving **transport availability and infrastructure installation of the space**. This particularly relates to planning solutions for completing the construction, equipping and arranging the infrastructure corridor for E-75 highway and connecting the area with E-75 highway

new sections in the following areas: E75-Bor/Zaječar; E75-Stara planina; E75-Trgovište-Bosilegrad; E75-Kriva Feja-Bosilegrad etc; completion of equipping and regulating the section of the Danube waterway/naval corridor; reconstruction of existing railroad tracks (Niš-Zaječar-Prahovo, Niš-Makedonija etc.) with legs into Romania and Bulgaria and building E-85 high-speed railroad;

development of energy and telecommunications infrastructure. Planned transport infrastructure construction ought to contribute to improving transit and mediatory connections of Eastern and Southern Serbia along corridor X and on roadways to Pan-European infrastructure corridors X to the West and IV in the East, improving spatial and functional positioning, increasing competitiveness of the region and quicker development of regional centres. The realisation of internal integration, development of small towns, micro-developmental rural centres, activation of highland and border areas has been supported by planning solutions for the improvement in the capillary, regional and local road network, especially transverse roadways, and their connection with trunk roads and highways in Pan-European corridors.

In the application of the **balanced polycentric regional development** concept, model of dispersed-concentrated development and allocation of population, economic and other activities was used to slow down the rate of population concentration and activities in primary development axes (infrastructure corridor X) and stimulation for the dispersion of development in areas with significant territorial capital and potential. Planning solutions were intended to resolve the following issues:

- Development of functional urbanised regions in single and dual urban centres (directions Bor-Zaječar, Leskovac-Niš, Vranje-Vladičin Han), strengthening regional functions in Bor, Zaječar, Leskovac, Vranje and Pirot and decentralisation of remaining functions to municipal and sub-municipal and micro-developmental centres in rural areas as exponents of socio-economic development of rural communities and their functional integration with urban centres;
- Development of spatially functional links (in Vlasotince, Lebane, Bojnik, Bosilegrad, Trgovište, Dimitrovgrad, etc.), mutually and with regional centres in immediate and cross-border surroundings (Vlasotince, Bojnik, Lebane in the functional region of Leskovac; Surdulica, Vladičin Han, Bujanovac, Bosilegrad, Preševo in the functional region of Vranje; Dimitrovgrad in the functional region of Pirot and Sofia, etc.);
- Continuing work on the formation of the secondary development axis in Timok (directions Niš-Knjaževac-Zaječar-

Negotin-Kladovo, to be joined by Bor) and regulation of the primary South Morava development axis (directions Preševo/Bujanovac-Vranje-Vladičin Han-Leskovac/Vlasotince-Niš) and regional functional urban systems that link the macro-region of Niš with East Podunavlje, South Serbia and immediate international surroundings;

- Development of existing successful small and mid-sized enterprises that shall, apart from modernising and specialising in production and environmental restructuring, become leaders in economic connections into regional production and service clusters that compete with companies within the region and companies from Niš, Belgrade and other industrial centres. Development of economic activities and structures will be based on an increased level of investment, technical-technological equipment, improvement of competitiveness, advancing of the knowledge pool through education and development of professional expertise, rational and efficient use of natural resources and spatial and environmental plausibility with priorities in the fields of energy, mining, transport services, storage and logistics activities, tourism, etc.

- One of the main strongholds of planning solutions to establish **new forms of development and partnerships between rural and urban areas** are substantial natural resources and environmental structures in rural areas on the one hand, and economy, scientific research, innovative, informative, developmental, administrative, cultural and other functions of urban centres on the other.

The implementation of new forms of development and partnership in rural and urban areas will be achieved by establishing a nucleus of socio-economic transformation of rural and poorly urbanised areas in the region (in accordance with principles of sustainable territorial development, particularly pertaining to rational use of space, resources, energy and transportation) and development of daily urban systems (formation of functional urban regions). Daily urban systems in Leskovac, Vranje, Zaječar and Bor, Negotin, Knjaževac and Pirot include fifteen municipal and sub-municipal centres, and approximately one hundred village community centres and

settlements with specific functions. It is necessary to support job creation policies investment and other measures for intensifying specific regional, economic, public and social functions in small centres, so as to slow down the concentration of economic and other activities in large urban centres and stimulate economic and social development of other centres in the urban network.

Part of planning solutions for more even regional development is based on economic prosperity, development and improving living conditions in rural areas, maintaining and promoting rural values, strengthening the economic position of agriculture and agricultural producers, developing infrastructure and raising utility and public standard in villages. Agriculture, depending on the availability of agricultural funds, traditional dependency of local population on agriculture as an economic branch and development of agri-industrial capacities, represents one of the most important developmental resources. The intensification of agricultural development and villages as a whole shall be based on increased market competitiveness of local agri-environmental assets, in accordance with specific conditions in rural areas, as well as on improvement of agricultural structure within the scope of implementing integrated rural development programs in accordance with the new model of Common Agriculture Policy of the European Union.

What is of particular importance for future development, especially pertaining to peripheral and rural areas, are tourism and complementary activities based on preserved environment and tourist resources of national and international significance. Planning solutions are aimed at: (i) completion and integration of the existing tourist offer across the region (littoral of the Danube with Đerdap lake/„Đerdap National Park“, Stara planina Nature Park, Vlasina Lake, Sokobanja, Vranje spas, Bujanovac, Sijarina and Gamzigrad, archeological sites Felix Romuliana, Lepenski Vir, etc); (ii) construction and arrangement of new contents to generate year-round exploitation of the regional tourist offer (nautical and tourist infrastructure at the Danube, tourist centres and ski resort in Stara Planina and Besna Kobila, variety of tourism options pertaining to lakes, mountains, immovable cultural goods, Negotin breweries, tourist centres-towns and localities/traditional events, spas, villages and hunting grounds, transitory waterways and roadways etc.); (iii) functional integration and

diversification/specialisation of the tourist offer in accordance with regional plans and regional surrounding in Serbia, Bulgaria, Romania and Macedonia. The development of tourism will provide one of the mechanisms for compensating the local population for limitations of the regime for the preservation and protection of natural resources and heritage.

A portion of regional plans will base their development on sustainable use of water resources and energy, metallic and non-metallic minerals. Planning solutions provide for integrated protection and use of water resources within the scope of regional water power engineering systems as a basis for rural areas to collect substantial revenue from renting resource. The planned solutions further stipulate utilising actual reserves in developmental function and continuing research related to potential copper reserves (with offside elements of gold, coal, lead and zinc, architectural stone, limestone, quartz sand, sandstone and rare minerals); completing the privatisation process, restructuring Radio and Television Station Bor and active coal mines with ground exploitation; implementing measures for sanitation of degraded environmental areas and reduction of emission of pollutants to an acceptable level in all phases of exploitation, processing and disposal of mineral products.

The spatial planning process utilises an **integrated approach** to sustainable territorial and regional development. On the basis of available potential, limitations and recognised tendencies and requirements pertaining to regional development, a vision of integrated development has been offered, and concepts and planned solutions for sustainable and balanced regional development have been determined. However, the process of regional spatial planning did not incorporate its coordinating and integrative function pertaining to the planning basis in terms of general and sectoral strategy, plans and programs. In the process of developing spatial plans, principles and concepts of general strategies were implemented and adapted to regional and local specificities, although they mostly do not possess a spatial dimension, which complicates their implementation. Sectoral strategies, plans and programs in the field of water economy, forestry, transport, economy, communal waste management were used and harmonised in the same manner. Perceived problems, planning concepts and regional

spatial planning solutions as a rule did not have a corrective impact on sectoral planning basis, due to unresolved issues pertaining to responsibilities and mechanisms for coordinating sectoral with spatial planning basis.

The principle of subsidiarity was implemented in the process of regional spatial planning. Furthermore, all recommendations and initiatives of local communities, concepts, solutions and local strategy priorities (sustainable development, economic development, etc), plans (municipal spatial plans, local environmental protection plans, etc), programmes and other developmental documents in local communities were taken into consideration.

Participativeness in the process of regional planning was only partially implemented due to insufficient training and education of professional planners and local management, insufficient knowledge and lack of motivation on the part of local stakeholders and underdevelopment of institutions at the level of regional administration. Notwithstanding above limitations, cooperation with the National Spatial Planning Agency resulted in consultations and assessment of respective phases of developing regional plans. Cooperation with competent municipal administration authorities and services and certain regional institutions (Jablanica and Pčinj County Development Centre, Regional Agency for the Development of East Serbia, regional chambers of commerce, etc.) was important in preparing and developing concepts/strategies of the plan, and resulted in improved quality and attainability of planned solutions. Local stakeholders expressed dissatisfaction with the amount of funds allocated by the Republic of Serbia for development of areas covered by regional plans. Local stakeholders in Timočka Krajina further expressed lack of trust and resistance towards cross-border programs initiated in the domain of economic cooperation and infrastructure development, including joint approach of local communities from Serbia and neighbouring countries in applying for EU funds and assistance by relevant international associations. Initiative at the level of local communities pertaining to forming and engaging of regional development agencies is of high importance for planning and managing sustainable regional development. The core task of such agencies is to initiate and coordinate development programs and projects

of interest for several municipalities. Problems emerged in the cooperation between agencies and the national administration, while cooperation with international institutions was more successful. Due to above reasons, development of regional plans prioritised measures for cooperation between national, (sub)regional and local administration, including activities pertaining the construction of institutional framework for managing sustainable regional development, headed by regional development agencies.

The principle of **prevention** was implemented in the process of regional spatial planning by incorporating the aspect of environmental protection and preservation of resources and heritage in planning concepts and solutions. This primarily relates to concepts and solutions pertaining to: prevention of degradation of natural resources and assets and irrational use of space (especially high-mountain areas of Stare Planine and Krajište, littoral of the Danube and water accumulation basins); air protection, recultivation and revitalisation of soil in areas for exploitation of minerals (particularly in Bor and Majdanpek); protection of agricultural and forest land from building not included in spatial plans in valleys and border urban zones and infrastructure corridors, etc. The effects of planned conceptions and solutions were evaluated in the process of strategic environmental impact assessment of regional spatial plans.

Proportionality in planning statements has been achieved successfully. The only planned solutions, principles, regimes and protective measures with direct/binding effect are those that impacted more balanced regional development, protection and sustainable use of sensitive areas and areas with critical natural capital, development of regional and subregional infrastructure systems, development of industrial zones, tourist complexes, etc. Statements included in remaining planned solutions and proposals have streamlining capacity on the level of deliberations, regulations, criteria and recommendations, and are thus open/flexible to be harmonised with developmental requirements, changes and innovations.

ENVIRONMENTAL IMPACT ASSESSMENT AND SUSTAINABLE TERRITORIAL AND REGIONAL DEVELOPMENT IN SERBIA

Strategic environmental assessment is a relatively new tool in the planning process, both in Serbia and across the European Union. EU Directive on Strategic environmental Assessment (Directive 2001/42/EC of the European parliament and the Council of 27th June 2002 on the assessment of the effects of certain plans and programmes on the environment), including the Protocol on Strategic Environmental Assessment, constitute European legal basis for the implementation of sustainable development and planning ideas. The above documents constituted the basis for defining the set of environmental protection laws in the Republic of Serbia that included the environmental protection component in the planning and decision making processes.

Accordingly, the process of spatial planning is drifting further from the previously implemented determinative towards the participative principle, given that strategic environmental impact assessment ideas introduced new methodological recommendations, bringing substantial changes to previous decision making processes (Healey, 1997).

Strategic environmental assessment is an environmental planning tool that possesses a controlling, coordinating and integrative role in the planning process. Strategic environmental impact assessment is a **process** that integrates objectives and principles of sustainable development in spatial and sectoral planning (of transport, energy, water power, agriculture, forestry, tourism, etc.). The importance of strategic environmental assessment is reflected in the following aspects:

- preventive role due to involvement with causes of environmental problems at the source, i.e. on the strategic level of planning – plans, strategies, policies, programs and respective projects;
- processing of issues and impacts of wider significance that can not be assessed at the level of respective projects – synergy, cumulative and social effects;
- enabling assessment and evaluation of impacts, risks and consequences of various alternative and varying environmental development options;

- setting forth an adequate context for analysis of the impact of concrete projects, including prior identification of problems and impacts worthy of detailed research, etc.

Depending on the level of hierarchy of the planning document and specificities of the area, it is necessary to determine different strategic impact analysis goals that shall be used to conduct an evaluation of the planning solutions in relation to specific planning segments (environmental protection, tourism, infrastructure, economy etc.). The results of the analysis shall enable the provision of recommendations for adopting or rejecting certain planning solutions which are not in accordance with the goals of environmental protection, immovable cultural goods, health and quality of life of the population.

The role of the strategic environmental assessment is primarily to create a cause-and-effect connection between protecting the environment and planning development, regulation and construction in a given space, by way of determining measures to neutralise impacts certain activities and interventions on location might cause. Owing to this, strategic environmental assessment must have clear and realistic goals and indicators based on which it shall adequately assess variants of planning options and solutions.

Apart from this, representatives of all stakeholders take part in the decision-making and strategic environmental assessment processes in the countries of the European Union (i.e. local government, citizens, private and non-profit sectors). This provides the planning process with a participative dimension which also contributes to improving the quality of the planning solutions, strengthening environmental and social dimensions of planning, and confirms the legitimacy of planning decisions (Bedford, Clark, Harrison, 2002).

According to local practice, public scrutiny is mandatory concerning all affairs pertaining to strategic environmental assessment – i.e. informing the public and its participation in the strategic environmental assessment report. Such responsibility and practice should be introduced for strategic sectoral documents, both with an aim to inform and include the public, and reduce manipulation in passing sectoral planning decisions. As this is a minimalist approach to exercising citizens' fundamental rights, it should be set as widely as possible; also, the participative approach

has to be developed in our system and planning practices.

Establishing spatial planning coordination with environmental planning tools is a planning challenge in Serbia. Although recommendations for developing strategic environmental assessment are a legal requirement (Law on Strategic Environmental Assessment, Official Gazette of the Republic of Serbia No 135/04), a common methodology for development of such studies has not been officially established. Owing to this, problems occur pertaining to the implementation of multiple criteria analyses, drawing results and defining recommendations based on strategic assessment. In that respect, some authors (Stojanović, Maričić, 2008) provided methodology guidelines for the development of strategic environmental impact assessment studies that currently – notwithstanding their usefulness – do not have legal force.

Although the spatial planning practice in Serbia has in the previous five years included the responsibility to develop strategic environmental impact assessment as an integral part of spatial and general plans (in accordance with the Law on Strategic Environmental Assessment and the Law on Planning and Construction), such documents are most commonly declarative due to the insufficient systematisation and coordination of laws, since strategic environmental assessment is undertaken after the development of strategies/concepts for development, protection and regulation of planning area. Therefore, verification of planning solutions is undertaken after defining them, and is occasionally reduced to a mere confirmation of already adopted solutions, without detailed analysis of the impact.

Notwithstanding the above issues, the integration of the strategic environmental assessment into spatial and urban plans in Serbia gets good results in evaluating different territorial development solutions and contributing to the improvement of quality of life and the environment.

Non-implementation of legal requirements pertaining to the development of strategic environmental assessments for sectoral plans represents a limitation in the implementation of coordinating and integrative roles of strategic impact assessments in our planning system. Simultaneously this jeopardises the realisation of the integrative role played by spatial and environmental planning in guiding and

managing sustainable territorial and regional development in Serbia.

This will be illustrated by the example of implementing strategic environmental assessment on spatial and, indirectly, sectoral planning of the macro-regional tourist areas in Serbia.

The overall conclusion can be that the sectoral approach is predominant in the new generation of sectoral tourism plans – strategies and master plans. This is discrepant with the World Tourist Organisation guidelines that emphasise the importance of harmonising sectoral planning in tourism with spatial planning and benefits of early inclusion of tourism in the process of spatial planning – identification of most suitable areas for sustainable development of tourism, prevention of any negative impacts of tourism on the environment and negative impacts of the environment on tourism (UN WTO, UNEP, 2005).

Collision between environmental and sectoral interests in tourism development strategies and master plans will increase with the implementation of the new Law on Tourism, due to the legal obligation to include sectoral plans in spatial plans.

In these conditions, the implementation of strategic environmental assessment represents the only control mechanism that enables coordination of sector-oriented strategies and master plans pertaining to the tourism development with spatial and environmental planning. The control role of the strategic environmental assessment of sectoral strategies and plans is implemented through identifying negative spatial, environmental and social effects that may cause their uncriticised incorporation in spatial and urban plans. The coordinating role of strategic assessment relates to reducing or neutralising negative impacts of sectoral and spatial planning and coordinating planning decisions to achieve sustainable territorial development.

After the adoption of tourism development master plans for the priority tourist areas in Serbia, a significant problem occurred in developing spatial plans for areas of special use and regional spatial plans. The problem relates to the obligation (which has in the meantime evolved into a legal requirement) for the planning concepts and solutions from sectoral documents to be incorporated directly into spatial plans. Without previous verification and achieving spatial and environmental

sustainability, concepts and solutions based exclusively on the sectoral approach cannot be incorporated in planning concepts and solutions based on the integrated approach. Although strategies and master plans pertaining to tourism development do not require strategic environmental assessment, its implementation in spatial plans may contribute to striking a balance between sectoral and sustainable development.

The role of strategic environmental assessment can be explained on the example of spatial and sectoral plans for the Stara Planina tourist region and nature park.

The Report on Strategic Environmental environmental Assessment of the Spatial Plan for Stara Planina Tourist Region and Nature Park (in further text: SEA Report) concludes that significant positive effects of the implementation of Stara Planina Spatial Plan will be particularly effective in the following: protection and improvement of the condition of nature and environment; preservation, presentation and adequate utilisation of natural and cultural heritage; overall economic effects and balanced improvement of the employment rate in the local population (in the domain of tourism, agriculture and other complementary activities); improvement and protection of public health and creation of conditions for rest and recreation. It was concluded that according to the concept for dispersed development and construction, implemented in the major part of the territory covered by Stara Planina Spatial Plan (approximately 88% of the territory), none of the planning solutions will generate substantial long-term negative environmental impact that cannot be controlled.

Due to existing Master Plan solutions for the Tourist Resort of Jabučko Ravnište-Leskova, there was a doubling in accommodation capacities in the mountain zone and in the sub-mountain zone. This brought the accommodation capacity of the tourist region of Stara Planina near the maximum capacity for all skiing tracks. SEA Report concludes that a concept of concentrated building was implemented on a minor portion of the territory covered by Stara Planina Spatial plan (approximately 12% of the territory) in the tourist resort of Jabučko Ravnište, resulting in negative long-term impacts on the nature and environment, particularly in the domain of water supply, waste water treatment, incoming and internal traffic, solid waste management, electric energy supply and accommodation of employees, quality of life in adjacent local

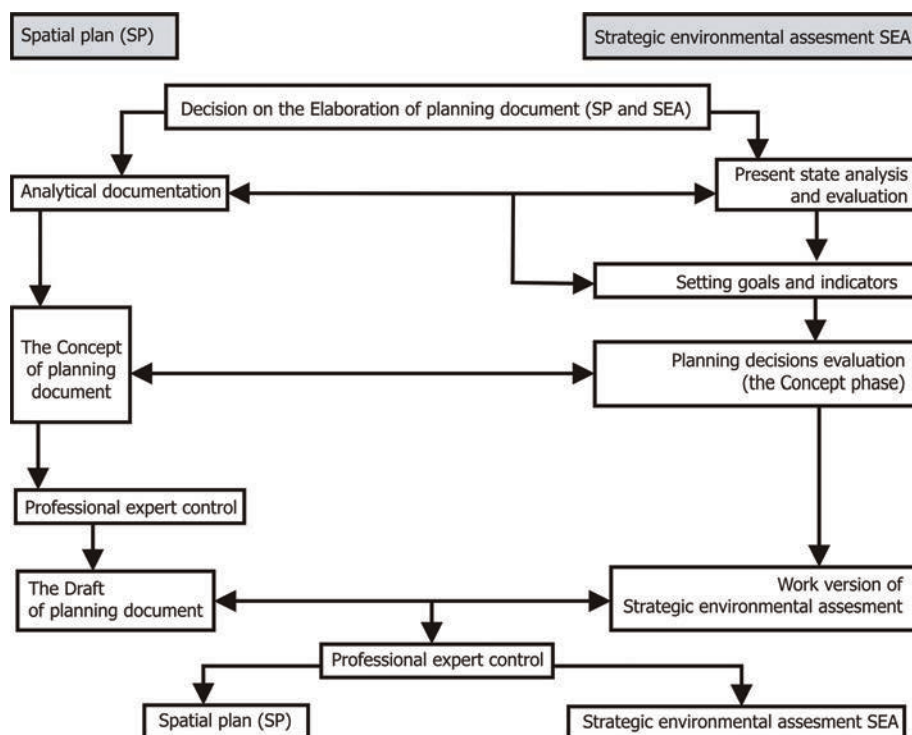


Image 2. Coordination of spatial planning and strategic environmental assessment

communities (due to heterogeneous allocation of jobs, predominant employment of employees from the vicinity, etc.) that are more difficult to control than would be the case with the concept of dispersed development that would be more suitable for the protected area of Stara Planina.

Strategic environmental assessment provided recommendations to reduce established capacities in Jabučko Ravnište to a level that will not endanger the environment, and defined measures to reduce and neutralise the negative impact brought on by the implementation of planned solutions. By introducing strategic environmental assessment instruments in the resolution of planning conflicts, a certain level of compromise was achieved to reduce the concept of sectoral plan, limit planned development and its negative impact on the most vulnerable area of the Natural Park, at least in the initial phase of developing the tourist resort.

On the basis of the above example we can conclude that collision between sectoral interests and sustainable territorial development can be prevented by stricter implementation of the legal requirement to develop a strategic impact assessment for sectoral plans and programs, which would help achieve sustainability of sectoral planning concepts and solutions.

The above example also indicated the necessity to integrate strategic impact assessments into the planning process – from preparation to implementation, monitoring and auditing of planning documentation. A proposal for the integration of strategic environmental impact assessment into the spatial planning process can be seen on Image 2.

CONCLUSION

Notwithstanding the insufficiently developed regional spatial planning in Serbia, implementation of the basic EU territorial development concepts related to this level of planning does exist – concepts of balanced polycentric development and establishment of functional urban areas; developing the network of transport corridors, technical infrastructure and decentralisation services of public interest; preservation and use of natural resources, improvements in environmental structures and cultural resources, etc. The strategic environmental assessment applies exclusively to spatial and urban plans, but it is insufficiently integrated into the planning process. Local practices partial implement fundamental principles of the new EU spatial planning concepts. Most problems are encountered in realising the roles of control, coordination and integration for spatial and environmental planning within the framework of

sectoral planning, as well as in relation to the shift from determinative to participative planning.

Reforms to the systems of spatial, environmental and sectoral planning in Serbia undertaken so far do not enable it to be harmonised with the EU approach, policies, concepts and principles of planning and managing sustainable and competitive territorial development. Processes pertaining to the development and implementation of the planning framework in Serbia are insufficient for guiding and managing sustainable territorial and regional development in Serbia, as well as its approximation to the European Union.

What is also important for the reform of the planning system, including spatial planning, is an adequate reform of the legal framework, planning processes, planning tools and support to the implementation of planned decisions.

The principal precondition for the reform of the planning system and improvement of spatial planning is the reform of corresponding legal basis that should ensure the following:

- implementation of integrated strategic territorial approach to planning and management of sustainable development;
- establishing mechanisms for horizontal and vertical cooperation and coordination between sectors and administration levels, as well as responsibilities of all stakeholders in the assessment of environmental and territorial impact of planned development to achieve the controlling and integration role of spatial and environmental planning;
- increased participation of stakeholders and transparency of decision-making processes in all forms of planning, and especially sectoral planning;
- increased flexibility of the planning process and planning instruments, etc.

In terms of implementing the strategic environmental assessment role, harmonisation of sectoral legal basis with the set of environmental protection laws is sufficient for the implementation of legal requirements related to implement above assessment to the sectoral planning framework.

The precondition to ensure participativeness of spatial and other forms of planning is training and enabling professional planners and personnel at all levels of administration;

informing, motivating and including the citizens and other stakeholders in the process of decision-making and implementation of planned decisions.

Reform of the planning system should be focused in the upcoming period on development, coordination and integration of spatial and environmental planning with regional and sectoral planning to achieve management and guidance of sustainable development of planning regions (functional urban areas in Serbia) at NUTS II and III levels.

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MANAGING SPATIAL DEVELOPMENT IN ZONES UNDERGOING MAJOR STRUCTURAL CHANGES

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Paper considers different aspects of spatial development management in the zones characterised by significant spatial interventions, whose consequences are structural changes in usage of space, social and economic development, environmental and ambient quality. Those are, above all, big mining regions, zones of big water accumulations and main infrastructure corridors. Paper deals with normative, institutional and organisational assumptions for managing spatial development, planning approaches, construction and spatial arrangement, searching and structuring data basis and development of information system, system of indicators and monitoring system. Special attention is given to balance and synchronisation of activities during compilation of study, planning and technical documentation, as well as procedures of considering and enacting appropriate decisions by competent authorities on national, regional and local level.

Key words: spatial development, management, structural changes, production system, conflicts, planning, indicators

INTRODUCTION REMARKS

Major structural changes in spatial development, excluding the zones with large urban concentrations, i.e. metropolitan areas of big cities, result from the development of big production and infrastructural systems in zones with substantial exploitation of energy, metallic and non-metallic mineral raw materials (mining-energy, mining-metallurgical and oil and gas exploitation systems, etc.) as well as processing and transformation of mineral raw materials (gasification, refineries, steel plants, smelters, etc.), large water accumulations, main infrastructural systems, etc. Large production systems also exist and are developed in cities and zones with high urban concentration, but their production programmes tend towards final products, with lower energy and raw-material consumption, much smaller spatial coverage and different effects on regional development and the environment (Spasić, 1994). This paper will focus more on the first group of production-

technological systems, especially in major mining basins, wherein structural changes in spatial development are the most pronounced.

The above-mentioned industrial and infrastructure systems are not a homogenous group, and display certain differences with respect to the structure and scope of their respective production programmes, technologies applied, spatial coverage and the use of the space they occupy, as well as the effects they have on their immediate and wider surroundings. Structural changes resulting from environmental effects of these production and infrastructure systems may be classified into several groups:

- Regional development: concentration of investments, activities and jobs in a relatively small area; population movements oriented towards job supply; development of infrastructure systems in immediate and wider surroundings; small possibility for the dispersion of the production system's plants; transformation of the settlements' network;
- Socio-economic transformations: influence on the process of urbanization and change in the socio-economic

structure of the (predominantly rural) population in the immediate vicinity of a production system; change of occupation and (frequently) place of residence; addressing of existential problems of families moving out of zones of production systems' expansion (open pits, accumulations, etc.);

- Economic effects: "positive" and "negative" external effects in immediate and wider surroundings as a result of the development and operation of production and infrastructure systems; positive and/or negative effects in terms of land value changes – influence of location rent, share of social, public utility, ecological and other overhead expenses in the structure of investments and operational costs;
- Arrangement and use of space: lasting or temporary change of land use (especially pronounced in cases of mines with surface

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exploitation and water accumulations); changes in the size and functions of settlements in immediate surroundings; changes in the provision of infrastructure and public utility services to settlements and areas outside settlements: construction of production facilities and the required territorial arrangement;

- Environment: lasting or temporary degradation of natural resources (land, forests, waters, etc.) in the immediate surroundings of production systems; changes in eco-systems, landscape and overall natural ambience; changes in the regime of surface and sub-surface waters, especially in the case of open cast mines, water and other accumulations; soil, water and air pollution, destruction and degradation of vegetation, etc.

The above-mentioned influences on immediate and wider surroundings are typical for zones with substantial exploitation of mineral raw materials, while only some of them are displayed in zones with medium and large water accumulations or main corridors.

Spatial development management in these "special purpose areas" requires specific normative, institutional and organizational solutions, as well as continual research, planning, programming and designing (Spasić, 1988).

STRUCTURAL CHANGES, CONFLICTS AND LIMITATIONS OF SPATIAL DEVELOPMENT

Environmental effects of large economic and infrastructure systems may also be viewed through the prism of identification and relativization of developmental conflicts and the reconciliation of different or opposing interests in the arrangement and use of space:

- Developmental conflicts: opposing national and local, general and special (sectoral), common and individual or group interests, etc.; uneven regional development (conflict between the developed and undeveloped); conflicts between strategic (long-term) and operational (short-term) development objectives (rational-irrational use of resources, etc.); conflicts between positive external effects (materialized in a wider area) and negative external effects (manifested in a relatively smaller area); problems of the social costs of natural resources' exploitation; structure and

allocation of capital investments, uneven development, social standards, etc.

- Conflicts of production functions: production function conflicts are essentially the conflicts of interest between mining, manufacturing or energy industry with other economic activities in the environment, such as agriculture, forestry, water management, etc.

- Spatial conflicts (conditionally speaking, since all conflicts unfold in space): changes in land use (temporary or lasting); changes in settlements' network and functions of centres; changes in transportation and other technical infrastructure networks, as well as in the regime and position of water sources; processes of urbanization, socio-economic transformation, etc.

- Use of natural resources and environmental degradation: depletion of non-renewable resources, degradation of other resources in the course of raw-material exploitation; degradation of the natural ambience (landscape); air, water and soil pollution, destruction and degradation of vegetation, etc.

The reconciliation (relativization) of so important and numerous developmental conflicts is difficult to achieve without the institution of planning. First, the planning process allows a comprehensive study of the nature, importance, causes and consequences of individual conflicts as well as their forms, duration and spheres of their manifestation, their intensity and possibilities (means) for their neutralization. Second, the process of (especially spatial) planning gathers numerous social actors, proponents of development and users of space and, within the preparation of planning documents, enables the expression and confrontation of individual interests and their adjustment on the basis of the established wider social priorities, systems of indicators, standards and criteria derived from the research and analytical work and alternative scenarios for the future, including the identification of possible effects related to specific alternatives (Spasić, 1997).

With respect to developmental conflicts, two specific cases may be identified: a) the conflicts already exist, or b) their manifestation is expected some time in the future. This points to a time-wise "distribution" of developmental conflicts, and thereby also of the conflicting (opposed) objectives.

Neutralization of certain conflicts is possible by shifting them in time, and by the effects of appropriate spatial arrangements. However, in a situation when developmental conflicts happen in the same time and place, which is not at all infrequent, their reconciliation may be achieved by either a compromise or a selection of priorities. The selection of priorities may be conditioned by "higher" social interests or come as a result of future development optimization, which is a task of the planning (analytical) procedure.

Conflicts arising in the use of space may be the outcome of the limitations (of a specific location) in view of a large number of requirements, or the conflicting (non-cooperative) functions aspiring to that same space.

Conflicting objectives, for the most part, have spatial repercussions, and especially those related to the use of natural resources, environmental degradation, use of space, etc. That is why spatial planning (and planning as a whole) is often referred to as a "precondition for the equalization of opposing objectives" (Spasić, 1988).

Large production systems, addressed in this paper, are zones with relatively high capital investments. The principles of rationality and technological requirements have, at least so far, influenced the concentration of production plants, and thereby also concentration of investments into the construction of such facilities. Relatively large investments in a relatively small space result in the concentration of jobs and thus also of the population. On the other hand, investments into the exploitation and primary processing of raw materials produce a mono-functional economy and its territorialization in a relatively small area (Bor, Majdanpek, Prahovo, Lazarevac, Obrenovac, Obilić, Smederevo, etc.). Only limited possibilities exist for the dispersion of large systems' production plants in the primary transformation of raw materials. Possibilities for the dispersion and diversification of production activities do exist and may be realized through the introduction of higher stages of raw-material processing, and the development of complementary production activities and services (tertiary sector). Monostructural nature of the economy sustained over a longer period of time may, in these areas, produce social irrationalities and diminish the positive economic effects of the production systems concerned.

Although with these capital investments into major production systems only a minor part of overall economic effects is materialized locally, they increase the social productivity and create a more favourable material basis for the growth of the social and living standard, first in a smaller and then also wider area. The development of these systems enables the employment of a relatively large portion of the hitherto agrarian population, changing the economic and social structure of the population, their way of life and social habits.

Several analyses done in Serbia over the past 10-15 years indicate that a larger part of positive external effects of these production systems is materialized extraterritorially, in the process of "production consumption", and that the predominant share of negative external effects is manifested in the production system zone and its immediate surroundings.

Uneven development and arrangement of territory, monostructural nature of economic activities and a relatively high level of conflicting space functions and uses basically characterize the regional development of areas that constitute wider surroundings of large production systems.

Overall degradation of the natural and created environment in zones of influence of large economic and technological systems has already become the limiting factor for their future development. The boundary capacity of the environment, as well as the limited availability of natural resources strengthen the belief in the necessity to harmonize the future development of these systems and the overall economic and social development with environmental protection standards, available natural resources and the criteria for their rational exploitation. That also implies an appropriate concept of organization, arrangement and use of space, as well as revitalization (restoration) of the degraded areas.

Technological, ecological, spatial, social and economic factors are mutually conditioned in the development of large production systems, and in the arrangement and revitalization of space in their surroundings. These factors may be conflicting as well as complementary. Their conflictiveness is to a higher degree manifested in the perception of short-term effects, while a long-term view of overall effects increases their complementarity. Well-being and the quality of life, as the ultimate planning objectives are based on the following

basic assumptions: the reaching and maintaining of the desirable economic effects and environmental quality standards, which implies an appropriate social ambience. The protection and promotion of the environment, i.e. revitalization and arrangement of the degraded space may, in a short term, conflict with the attainment of maximum economic effects, but the disregard of negative external effects may in the long run produce substantial irrationalities in overall development.

NORMATIVE, INSTITUTIONAL, METHODOLOGICAL AND ORGANIZATIONAL ASPECTS OF SPATIAL DEVELOPMENT MANAGEMENT

Spatial development management depends on normative and institutional solutions, the quality of planning, investment and technical documentation, existence of appropriate data bases and possibilities for their operationalization, as well as organizational and professional capabilities of the competent state and local bodies and professional institutions to efficiently implement the plan and investment decisions. In zones undergoing large structural changes additional efforts are needed in view of numerous limitations and conflicting interests.

The sphere of spatial (and urban) development, i.e. spatial arrangement and construction in the Republic of Serbia is regulated by the most recent Planning and Construction Law (Official Gazette of the RS, no. 72/09), as well as numerous by-laws, norms and standards. Other spheres and sectors related to spatial development are also legally regulated by specific laws and by-laws. On the whole, there is a substantial degree of disharmony between specific legal regulations in such spheres as development planning, spatial arrangement

and construction, environmental protection, infrastructural systems, socio-economic development, etc. In addition to that, numerous legal provisions are insufficiently clear or precise, which leads to ambiguous interpretations and inconsistent implementation of regulations.

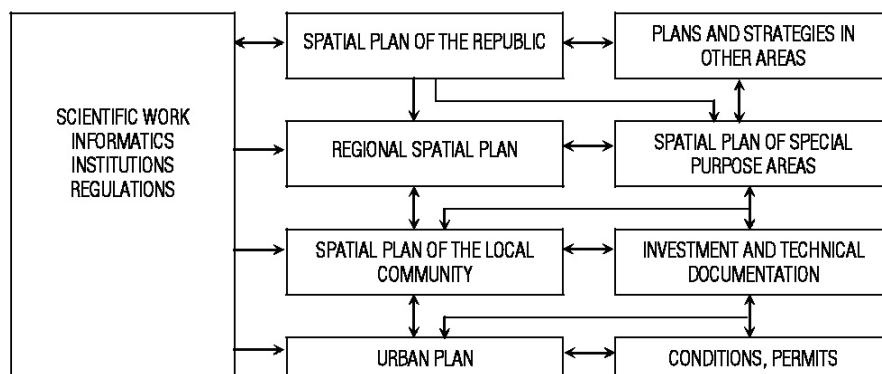
In institutional terms, many departments in the state administration concerned with specific areas and sectors act as small fiefs displaying no initiative to establish cooperation with other departments or institutions.

Attempt to synchronize activities and competences for spatial development in all spheres through the institution of spatial planning has limited results. One of the reasons for this outcome is the fact that spatial planning is in many sectors viewed as a "physical" rather than integral development planning.

Under these circumstances, a major advance in institutional support to planning would be the establishment of an inter-ministerial (professional) body attached to the Serbian Government to coordinate and harmonize the process of planning and the adoption of planning and development decisions in different areas and sectors.

Large economic and infrastructural systems in special-purpose areas are particularly important for the state and the adoption of planning, investment and development decisions concerning these systems falls within the competences of the Republic. That is also why institutional support to development is for the most part within the competence of the Republic. A smaller part of competences has been vested in local communities (adoption of urban plans, expropriation of real estate, municipal utility systems, etc.). The management of large economic and infrastructural systems has been

Chart 1: Planning system in Serbia



entrusted to appropriate public enterprises of the republic (power utilities, transportation, water management, etc.).

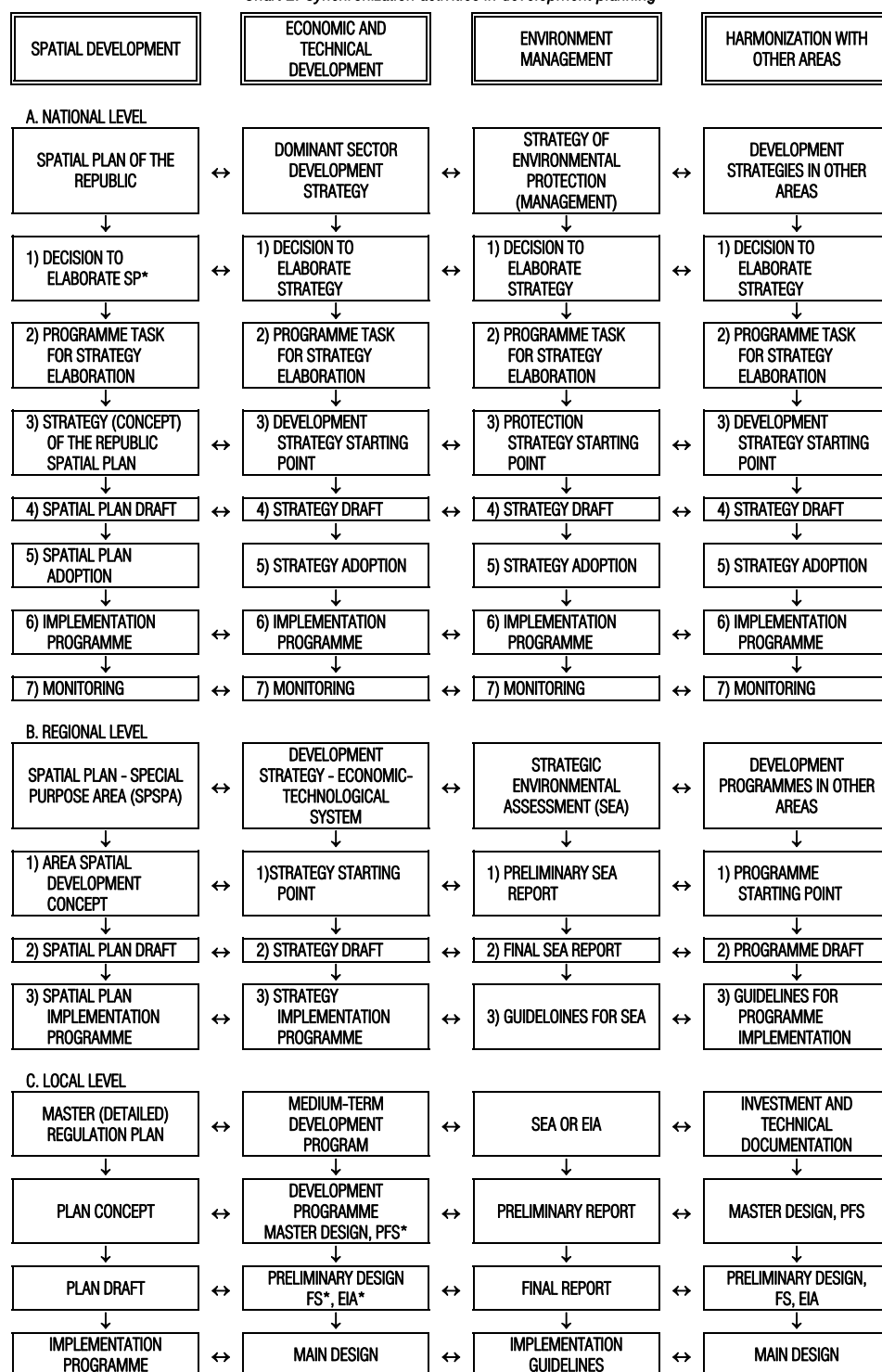
For the time being, economic and infrastructural systems in these areas are state owned, although this state of affairs will not be necessarily retained. However, in the event of change of ownership relations in the forthcoming period, it will be necessary for the Republic to retain the control mechanisms for the management of spatial and overall development in these areas. That is particularly important for the efficient resolution of problems such as harmonisation of opposing interests, conflict resolution, protection of the environment, relaxation of social tensions, etc.

Key instruments acting as the control mechanism for spatial development management in these areas must be within the sphere of activity of institutions concerned with spatial planning, construction and arrangement.

Legal regulations and institutional support to spatial development in these areas may be improved either by supplementing and harmonizing the existing regulations and/or adopting a special law ("lex specialis") to comprehensively regulate the issues of development, construction, protection, etc. in special purpose areas, e.g. in large mining and especially lignite basins with open cast exploitation (Spasić, Maričić, Džunić, 2009).

The development of open cast mining and plants for lignite transformation in a mining basin, dynamic changes in space and the large scope of natural and created environment degradation give overall development and spatial arrangement and revitalization quite specific features - physical interventions are extensive and dynamic, socio-economic changes are delicate, and intensity and diversity of environmental degradation is great. That is why the activity involving development planning, arrangement and revitalization of space in large lignite basins is quite specific and requires an appropriate adjustment of institutional organization and normative-legal regulations, as well as of the approach, methods, contents, dynamics and other aspects of planning. The specific characteristics of planning in lignite basins are related to the orientation of the overall future development (economic, social, spatial, technological, ecological and other aspects), spatial arrangement and revitalization unfolding

Chart 2: Synchronization activities in development planning



* SP – Spatial plan; PFS – pre-feasibility study; FS – feasibility study; EIA – Environmental Impact Assessment; SEA – Strategic Environmental Assessment

at a pace dictated by the development of surface lignite mining.

The planning system is established on the national, regional and local levels. In addition to spatial and urban planning, there are also other forms of planning related to socio-

economic development, management of the environment and sustainable development, as well as planning within specific sectors (agriculture, water management, energy, transportation, etc.) and production systems. Synchronisation of all these forms of planning

is necessary primarily on the national, and then also other levels.

The Spatial plan of the Republic is a planning document that may represent a platform for the synchronization and harmonization of other planning and development documents on the national level. Ideally, all planning documents should be developed simultaneously, which is practically unfeasible. The planning practice could realistically use the following approach: in the elaboration of the spatial plan all the existing planning documents serve as a research and information basis for the establishment of spatial plan's concepts. Once a spatial plan is adopted, other planning and development documents are harmonized with its positions. A similar approach may also be used for regional level planning, i.e. harmonization of plans for special purpose areas and other planning documents.

Harmonization of planning, investment and technical documentation

Special purpose areas are places where major investments into economic and infrastructural systems are made and where complex technological and engineering systems are formed. The experience acquired so far indicates the need for simultaneous and synchronized elaboration of planning, investment and technical documentation.

Planning, investment and technical documentation has a very important role in the management of spatial, socio-economic and technological development in special purpose areas wherein development triggers extensive degradation of the environment and important structural changes.

Elaboration of a spatial plan for a special purpose area as an important strategic planning document must be harmonized with the elaboration of the master design and preliminary feasibility studies for industrial, technological and infrastructural systems and vice versa. Elaboration of the regulation plan is harmonized with those of the preliminary design and the feasibility study. A component part of the spatial plan (and possibly regulation plan) is a strategic environmental assessment (SEA)³, while the environmental impact analysis (EIA) is a part of the preliminary

design. Regulation plan also includes the programme for relocation of the population and infrastructural, economic, utility and public function facilities (if required for the development of an economic or infrastructural system).

The research and analytical stage in the elaboration of the spatial plan corresponds with those of "preliminary activities" for the master design and status analysis for the strategic environmental assessment.

The provision of conditions, views and agreements of competent bodies and organizations should be integrated by stages in the elaboration of planning and technical documentation. Stages and documents of the planning and project elaboration processes are subject to professional and social verification. Participation of local communities and citizens and their influence on decision-making should be ensured both in the elaboration stage of spatial-planning documentation as well as in the development of project documentation for individual production and infrastructure systems and their environmental impact analyses.

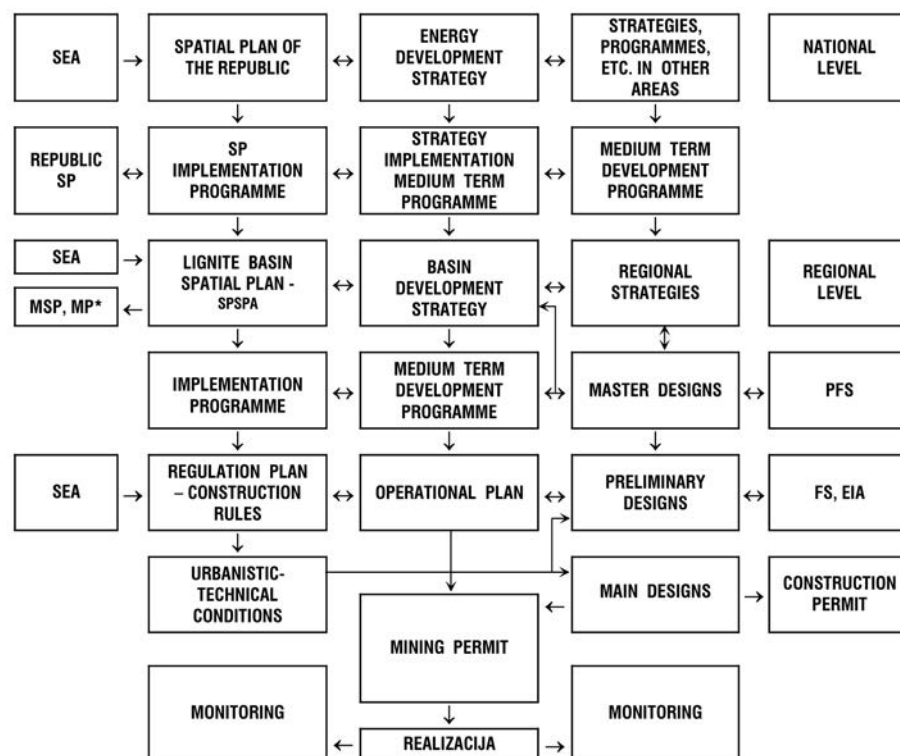
Main instruments for the implementation of planning, investment and technical documents are the use permits and post-project analyses

of the environmental impact of infrastructural systems, as well as monitoring and post-plan evaluation of the application planning documents (Spasić, Maksin-Mičić, 2003). The stage of monitoring necessitates a more efficient institutional control system and the establishment of a spatial information system.

Comparing the content of individual stages of planning and designing one could easily note similarities in both the contents and methods of work. The formation of joint teams and time-wise adjustment of complementary stages may save a lot of time and assets and simultaneously improve the reliability of planning and designing, i.e. the adoption of planning and investment decisions. Contrary to planning on the national level (where simultaneous elaboration of different plans, programmes and strategies is not realistic) simultaneous and synchronized elaboration of planning, investment and technical documentation with different degrees of detail may, in this case, be possible subject to good organization and timely preparations.

Elaboration of planning, investment and technical documentation is largely based on the results of synchronised scientific research and professional analyses with appropriate institutional and informatic support and respect

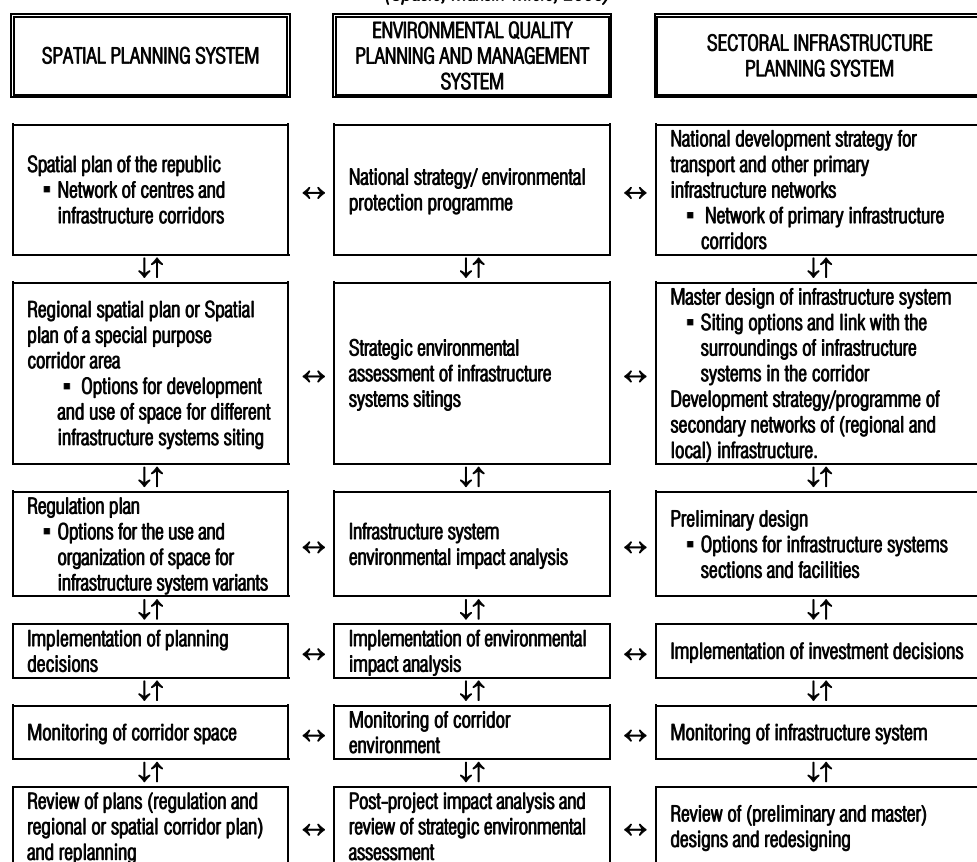
Chart 3: Harmonization of the planning process – the case of a large lignite basin



MP – Master Plan; MSP – Municipality Spatial Plan; SPSPA – Spatial Plan of Special Purpose Area

³ For more details on EIA/SEA application in Serbian land use planning see: Stojanović (2005), and especially for lignite basin see eg. Maričić (2006)

Chart 4. Model system for the planning of primary/main (trans-European and national) infrastructure corridors
(Spasić, Maksin-Mičić, 2003)



of existing regulations, technical and other standards. Despite the fact that numerous scientific papers and recommendations for the improvement of legal regulations in Serbia have repeatedly indicated that the successful realization of major projects necessitates synchronised elaboration of planning, investment and technical documents, that problem has not been resolved in a satisfactory manner by the existing legal regulations.

INFORMATION SYSTEM, SYSTEM OF INDICATORS AND MONITORING

Modern planning cannot be envisaged without appropriate background material and information organized in a manner suitable for the process of research, planning and implementation. The global challenge of sustainable development and operationalization of economic, social and environmental components implies an integrated approach to the use, arrangement and protection of space through development plans, programmes and projects, multisectoral coordination, appropriate institutional and organizational arrangements, information and partnership of all participants. Agenda 21 emphasizes the importance of developing and strengthening

information systems to support the decision making, assessment of future changes and development management and points to the need to undertake the relevant changes conducive to an improved collection and use of data, methods for their assessment and analysis and increased availability and exchange of information. The Bathurst Declaration on Land Administration for Sustainable Development (1999) indicates the importance of providing access to quality spatial information as a condition for improved land management and use. In brief, efficient spatial management, implementation of development programs and planning of all spatial undertakings require the adjustment, arrangement and modernization of spatial records and data bases, i.e. the establishment of spatial data infrastructure.

The concept of National Spatial Data Infrastructure – NSDI, started to develop in the last two decades of the 20th century. The advancement and development of spatial data information infrastructure include the policies, basic data sets, technical standards, network access (technologies) and human resources (beneficiaries and providers) required for effective collection, management,

accessibility, delivery and use of spatial data at different administrative levels. The establishment of spatial data infrastructure is not only a matter of technology, but also of the institutional setup, adoption of regulatory framework and promotion of cooperation (Nedovic-Budic et al, 2007). Namely, the establishment and development of NSDI is a highly complex and time-consuming process and implies the updating of topographic and cadastral sources, digital data bases, creation of numerous administrative and thematic data sets, and a very important segment related to the establishment of institutional arrangements/agreements – norms for the exchange and distribution of spatial data, norms concerning metadata, procedures for data use and maintenance, etc.

Spatial planning is the largest single user of diverse sets of spatial data and has a dual role in spatial data infrastructure and information management in terms of a) providing access to spatial data and their use for planning purposes and b) producing its own sets of spatial data (plans) for incorporation into the spatial data infrastructure (local, regional, national). A formally established NSDI still does not exist in Serbia.⁴

The matter of establishment of a spatial information system, i.e. information basis for the needs of spatial planning and arrangement was brought up on several occasions and various preliminary outlines of appropriate information projects have been developed.⁵ These projects address various aspects – review and evaluation of the existing information basis for the needs of planning at all levels, guidelines for the definition of information system's concept, indications concerning institutional and organizational forms, elements for the concept and assumptions for the implementation of the

⁴ The Republic Geodetic Institute in cooperation with the Norwegian state mapping and cadastre authority Statens Kartverk drew up a questionnaire for potential partners in the establishment of Serbia's national spatial data infrastructure. In May 2009, a Draft NSDI strategy was presented. See <http://www.personalmag.rs/tag/republicki-geodetski-zavod/>.

⁵ "Preliminary report on the possibilities to develop information systems for the purposes of spatial planning in the SR of Serbia", IAUS, 1989; "Adjustment and use of information systems for the needs of the Republic of Serbia's Spatial Plan", JUGINUS, Planning Institute of the SR of Serbia, IAUS, Beograd, 1990.; "Spatial development management", Faculty of Civil Engineering and IAUS, 1999-2000.

geographic information system, etc. However, a wholly complete project of this kind still does not exist. Informatic support and establishment of information systems are regulated by a specific law.⁶ But the information system, as

⁶ The Law on the Information System of the Republic of Serbia (Official Gazette of the RS, no. 12/96) promotes the establishment of a single information system in the Republic, in the sphere of state functions. This law obliges all public institutions to create digital records in their respective fields and exchange them with others. Information sub-systems are linked to form the republic information system through a joint data base, computer and telecommunications network and the use of single standards for the collection, processing, exchange and use of data and information. However, this law has not been fully applied in practice.

The recently adopted Strategy for the development of information society in the Republic of Serbia (Official Gazette of the RS, no. 87/06) defines the "information system" as a concept denoting social ability based on information, which, as such, includes not only technology, hardware, software and contents, or data, but also organization, initiatives, procedures and people involved in all that.

A series of planning and construction laws adopted since 1995, define the information system differently. The new Planning and Construction Law (OG of the RS 72/09) states that all planning documents are published in electronic form and are accessible on the Internet, and are also entered into the Central registry of planning documents kept by the ministry competent for spatial planning and urbanism, through the Republic Geodetic Institute, within the National infrastructure of geo-spatial data. For the purpose of monitoring the competent body of the local self-administration unit forms a local information system covering planning documents and spatial situation. All planning documents entered into the local information system are available to all concerned in electronic form, via the Internet.

The 2003 Planning and Construction Law (OG of the RS 47/03) defines the competences of the Agency to establish a single information system on the spatial situation in the Republic of Serbia and keep the registry of spatial-planning documents for the territory of the republic. The 1995 Law on the planning and arrangement of space and settlements in the Republic (OG of the RS 44/95) prescribes the formation of an information system for this sphere for the "collection, processing and keeping of data on the use and arrangement of space and settlements on the territory of the Republic, adoption and implementation of spatial and urban plans and other spatial data and information of interest for the exercise of the Republic's rights and duties in the planning and arrangement of space and settlements". It specifies that this information system is incorporated into the single information system of the Republic. It also stresses that special regulations govern the cooperation of the then Republic Spatial Planning Institute (competent for the establishment, organization, maintenance and management of the information system) with the authorized republic state and other bodies, organizations, institutions and public enterprises collecting the spatial data in their respective spheres, on the basis of a special law, i.e. regulation passed on the basis of a law.

one of the most important preconditions for spatial development management has not been adequately developed so far.

An information system for the needs of spatial planning and arrangement should, as Zakrajšek proposes, be understood as a Super Large Scale Information System, or as "information systems in the sphere of spatial planning and arrangement" (Bazik, 1996, p. 46). Namely, it is a highly complex system essentially intended to create an information base for a whole "complex" of procedures in the sphere of planning, arrangement and protection of space, natural and created resources. This complex system represents: 1) an integral part of the social system of information – simultaneously receiving and conveying information to other components (it is guided by and dependent on external information), 2) it is spatially oriented (geographic information system) – its bases contain entities either indirectly or directly related to locations in space (complex information bases); it creates information relevant for decision making – in addition to a complex information basis it also includes a complex base of procedures/methods with the main purpose to translate the data into a system of indicators most appropriate to assist decision-making, and 4) it is directly intended for and linked with the conduct of specific administrative-clerical procedures.

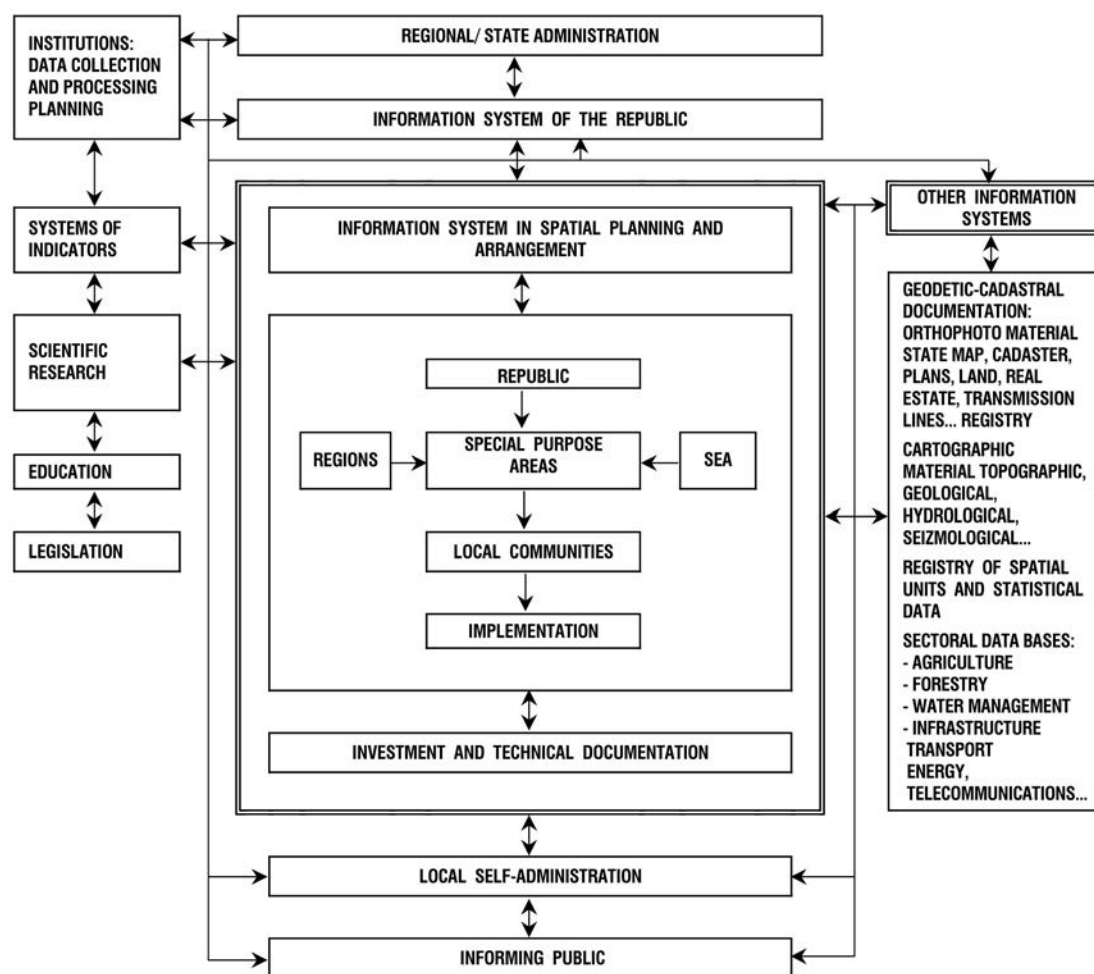
Over the past few years the use of GIS (geographic information systems) technologies has clearly become increasingly widespread, and they represent a powerful tool in the collection, processing, analysis and synthesis of a large number of data as well as support the process of spatial development planning and management. In addition, an increasing number of digital data bases is coming into circulation. But the main deficiency is still the inferior quality of data, especially in terms of their updatedness, accessibility and level of processing, as well as insufficient coordination of all services from the point of view of their methodology, contents of work, technical equipment and compatibility. This matter has been gaining importance in recent years. Namely, Serbia lags substantially behind the EU countries in the development of an information basis on its territorial development. In view of the country's option to join the EU and its development courses one of its basic priorities is precisely the development of information bases and systems supportive of spatial management at all levels. The relevant

activities are not limited to the creation of statistically homogenous data, but include the creation of data bases for spatial monitoring at all levels (national, regional and local).

In that sense the development of informatics background and information system of the Republic, as well as information systems at new management levels requires institutional and organizational changes and adjustments. Modern courses of development necessitate an increasing exchange of good quality information with the collection, processing, systematization and organization of a large number of data and a continuing information process. The development of the information system as the indispensable instrument for continuing monitoring, channelling and management of spatial development requires joint action of administrative, scientific-research, statistical and other relevant institutions engaged in the collection and processing of data, institutions concerned with planning and public participation (Chart 5). Generally speaking, a continuing information process requires a highly organized institutional system, legal support, defined methodology, integration and cooperation. In practical terms this means the establishment of a strong coordinating body on the national level and defined competences in the sphere of information activities at all levels (local, regional and national); establishment of coordination between all relevant institutions; standardization of data collecting and processing procedures and the defining of data and information exchange protocols. A special segment combines matters related to the creation of conditions with respect to equipment, programme environment and human resources (education).

An information system concerned with space, i.e. spatial planning and arrangement is a segment of a single information system established on the state level and an indispensable instrument for the monitoring and promotion of spatial development at all levels – national, regional and local. This system must be linked with other information systems and data bases in the Republic, as well as information systems developed on regional and local levels, which implies the support of modern information technologies. "The relevance, accessibility and transferability of data and information from automated data bases represent the foundation for the development of the information process in the

Chart 5. Concept of information system model in the sphere of spatial development



sphere of spatial planning and arrangement” (Spasić, Dželebdžić, 2004).

The establishment and development of a reliable system of indicators is the most important segment of the information system. Using the system of indicators is obligatory for all planning and implementation levels and forms the basis for the standardization of approaches and methods for the drawing of spatial plans, comparability of planning documents and monitoring of plans’ implementation. Namely, the methodology of elaboration of spatial and urban plans requires mutual conformity of information bases from plans of higher to those of lower order and vice versa. This implies that the information system – data bases and systems of indicators – is structured by areas and hierarchical planning levels. The defining of indicators and their mutual links at different levels are attained through a two-way coordination: upward

coordination is important for the collection of data, and downward coordination for the analysis of these data and identification of parameters for classification and comparisons (Dželebdžić, Petovar, 2000).

The system of indicators is highly complex and multidimensional and is used to present the state of development and potentials on the basis of which real and attainable development objectives are established, and to formulate the policies for the attainment of these objectives, development scenarios and strategies, as well as for the control of implementation, efficiency of planning measures, monitoring and assessment of the quality of life.

The indicators take a numerical and/or graphical or descriptive form. According to the structure (complexity) there are *source data*, which result from basic measurements and are as such taken over from the conventional data bases (number, surface, length, capacity, etc.);

derived indicators stemming from empirical generalizations (density, growth rate, proportional share, construction index, land use balance, etc.), and *complex indicators* which include a more general level of interpretation (classification, valuation. Process trends, etc.). Modern information technologies offer the possibility to aggregate the indicators by complexity (Dželebdžić, 1994).

Scientific research is a component part of the planning process. Spatial planning relies on research findings obtained in a number of scientific areas (economy, sociology, demography, environment, ecology, etc.), as well as specific research aimed at the promotion of activities for the planning, arrangement and use of space (research projects financed by the Ministry of Science

and Technology of the Republic of Serbia and applied research conducted during elaboration of strategic and specific spatial plans⁷). Furthermore, the promotion of planning activities also necessitates research related to the development of indicator systems for different levels of planning.

Information system for zones undergoing large structural changes – case of lignite basins

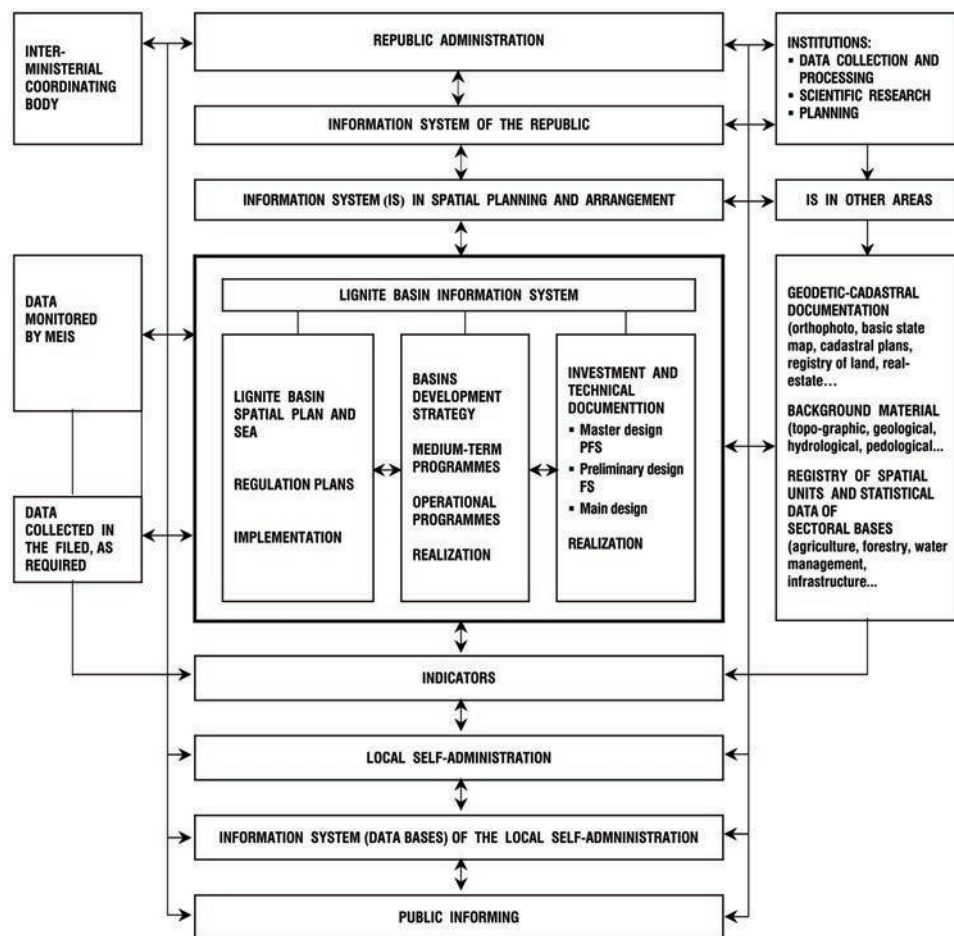
Areas of development of large production and infrastructure systems (extensive exploitation of energy and mineral raw materials – mining-energy and mining-metallurgical systems, large water accumulations, main infrastructural systems, etc.) are characterized by substantial structural changes in spatial development manifested in land use (lasting of temporary change of purpose), socio-economic transformations, concentration of activities and jobs, transformations in settlements network, effects on the environment (degradation of natural resources, changed ecosystems, pollution of air, water, soil, etc.) The scope, forms and dynamics of changes are different, and are the most conspicuous in mining basins.

Dynamic changes in lignite basins caused by the opening of excavation sites and production functions can be channelled through a dynamic and continuous process of planning and research. In that sense, the information system for the purposes of planning and channelling of development must be adjusted to the pace of changes in the basin, i.e. to the dynamic of planning, research, programming, designing and control of spatial arrangement and revitalization.

The creation of the information system for a lignite basin provides a joint framework for the elaboration, implementation and monitoring of spatial and urban plans and implementation of developmental mining-energy plans and programmes and investment-technical documentation (Chart 6). The basis of the system comprises joint data bases and systems of indicators adjusted to relevant specific features, i.e. dynamics. Namely,

⁷ Preparatory work on plans for lignite basins (Mining-energy and Industrial System (MEIS) in Kosovo and Metohija and in Kolubara) included the completion of numerous research activities (studies, surveys and polls).

Chart 6. Concept of the lignite basin information system



MP – Master Plan; MSP – Municipality Spatial Plan; SPSPA – Spatial Plan of Special Purpose Area

changes in lignite basins must be monitored in a relatively short period of time (year, month) and the use of data commonly collected by statistical and other services has limited possibilities (the problem of updating, level of processing), which is why the joint data base incorporates: a) data from information systems in other areas and b) data specific for lignite basins monitored by MEIS (geodetic, mining-geological, hydro-geological, property-legal, services for the revitalization and recultivation of land, etc.) as well as data collected as required, either by “field” services or organized teams of researchers.

a) Data from information systems in other areas include:

Geodetic-cadastral documentation – background material (digital orthophoto, basic state map 1:5000, cadastral plans 1:2 500, 1:1 000...), land registry (data on surfaces, land uses, cadastral classes and ownership) real-estate registry (buildings, public spaces...) registry of transmission

lines (traffic lines and underground installations);

Cartographic material: topographic maps (1:25 000, 1:50 000, 1:100 000), set of maps of natural conditions – a clear geological map, hydro-geological, engineering-geological, hypsometric, pedological and fertility maps, seismological map, etc.

Registry of spatial units (municipalities, cadastral municipalities, settlements, cities, statistical and census circles, local communities)⁸ and data processed by

⁸ Propositions set by the Decree on the Establishment of Specific Statistical Surveys (OG of the RS, no. 117/08) within developmental activities refer to work related to the use of GIS technologies – graphical presentation of all spatial units in digital form linked with bases (tables) <http://webzrzs.statserb.rs.gov.yu/axd/dokumenti/razno/Pregled%20statistickih%20istrazivanja4.pdf>

Table 1. List of basic indicators related to lignite basin's spatial development

Thematic areas	Source of data
1. Natural characteristics/conditions	
Morphological characteristics	Sectoral bases, MEIS
Physical-geographical characteristics (relief, inclination, exposition)	Sectoral bases, MEIS
Engineering-geological zoning (stability, strength...)	Sectoral bases, MEIS
Hydro-geological characteristics of the terrain	Sectoral bases, MEIS
Seismic characteristics	Sectoral bases
2. Natural resources	
Lignite – characteristics, degree of exploration, reserves, conditions for exploitation, quality, and sulphur content...	Strategy, research, MEIS
Other mineral resources (metallic and non-metallic) – locations, conditions for exploitation	Sectoral bases, MEIS
Agricultural land –pedological characteristics, fertility class, conditions for use	Sectoral bases; research
Water resources – quantity and quality of water; sources: underground, surface – capacity and abundance; conditions for use	Sectoral bases; research
- water courses – quality, flood risk, relocation	Sectoral bases, projects
- accumulations – locations, dam characteristics, quantity of water in the accumulation...	Sectoral bases, projects
Forests – distribution, types, conditions for exploitation	Sectoral bases research
3. Land use	
Structure by cadastral municipalities: agricultural, forests, construction (areas intended for construction in settlements), mining (excavations, dumps), recultivated, other (arid...)	Geodetic-cadastral documentation MEIS services
Agricultural land by use (fields, orchards, vineyards, meadows, pastures...), by ownership	Geodetic-cadastral documentation
Forrest land (economically exploitable forests, forestation...)	Sectoral bases; research
Construction land (areas intended for construction in settlements, land under structures – economic, non-economic, service; surface area of streets, public built up and non-built up land...)	Planning documents, local self-administration decisions and sectoral bases
Recultivated (by years, surfaces, types – agricultural, forestry, water)	MEIS, research
4. Population	
Demographic characteristics - number of population, natural increment, migrations, age structure, aging index, functional contingents, educational structure, professional structure, sources of income, employment; households - number, size/structure; type of families...	Statistical bureau (census) vital statistics (annual), population registry (municipality); surveys, MEIS professional services
5. Space build-up	
Infrastructure systems:	
Roads – highways, regional, local – quality and characteristics - relocation, new routes, recategorization	Sectoral bases, projects
Railways – passenger, industrial gauge	Sectoral bases, projects
Water supply (reservoirs, pumping stations, drinking and technical water supply, drainage and purification of waste waters)	Sectoral bases, projects
Energy infrastructure – sub-stations and long distance transmission lines (by voltage)	Sectoral bases, projects
Heating pipelines (heating plant)	Sectoral bases, projects
Telecommunications (optical cables, exchanges)	Sectoral bases, projects
Public utility facilities in settlements – sewerage, water supply network...	Sectoral bases, local self-administrations
Housing: number of apartments, surface, year of construction, equipment	Statistics, surveys
Public services:	
Health care: facilities (types of hospitals, health centres, health stations, out-patients clinics); net surface, plot surface, year of construction, number of employees, professional staff	Competent municipal services, statistics
Social welfare: facilities, net surface, plot surface, year of construction, number of employees, professional staff; number of beneficiaries (type of aid), welfare programmes...	
Pre-school: facilities, net surface, plot surface, year of construction, number of children, number of employees...	
Elementary schools: facilities, net surface, plot surface, year of construction, number of pupils, classes, employees, equipment	
Secondary schools: facilities, net surface, plot surface, year of construction, number of pupils, classes, employees, equipment, pupils' boarding homes – number of beneficiaries, surface of building...	
Culture: facilities, purpose, net surface, plot surface, year of construction, number of employees	
Physical culture: facilities, purpose net surface, plot surface, year of construction, number of employees	Municipal services, statistics
6. Economy	
By spheres of activities (construction, transportation, trade, SMEs...), social sector, private sector; number, surface, employees, operation...	Registry – municipal services, statistics

Thematic areas	Source of data
7. Cultural heritage and natural values	
Cultural heritage: facilities, category of protection, regime of protection	Spatial plan, Institute for the protection of cultural monuments
Protected natural values	Institute for the protection of nature
8. Quality of the environment	
Registry of pollutants, locations	Republic and local institutions
List of polluters (thermal electric power plants and accompanying industries, other industries, excavation sites)	MEIS
Air: standard pollutants (SO ₂ , soot, aero sediments)	Measurements of competent services
Specific pollutants (NOx, CO, Pb...	Special research
Water: categories of water courses according to monitored indicators	Measurements of the Hydro-Meteorological Bureau
Situation of waste waters	MEIS services, research
Land (pollution – chemical, biological...)	Research
Secondary influence on health, flora and fauna...	Research
Noise sources and influence	Research
9. MEIS activities	
- development plans and programmes	Strategies, plans, programmes, projects, MEIS area research
- economic indicators of production	
- technological processes – data of importance for the quality of the environment	
- energy facilities (thermal electric power plants)	
Specific indicators – related to narrower spatial units and intermediary development stages (5 years, 1 year, 1 month)	
- data by excavation sites – dynamics of land occupation by years/stages	Strategy, programmes, MEIS services
- changes in water regime	Research
- influence on the stability of terrain	Research
- influence of ash dumps and thermo-electric power facilities on waters (underground and surface – quality)	Research
- regimes of use and construction of land above lignite deposits	Planning documentation, local - administration
- recultivation – preparations, dynamics, type (agriculture, forest, water)	Planning documentation, research
- number of households/population living in settlements in zones of excavation expansion (by five-year periods)	Planning documentation
- population to be moved (number, structure – age, educational, professional...)	Planning documentation, statistics, surveys, programmes
- economic facilities, infrastructure systems, facilities of public services in the excavation expansion zones	Planning documentation
- relocation of settlements/parts of settlements – time of relocation, costs, data on resettling locations	Planning documentation, programmes, MEIS,
- relocation of infrastructure systems – dynamics, costs, technical solutions	Planning documentation, MEIS, local administration

statistical services: Republic Statistical Bureau – population census data (number of permanent residents, migrations, age, economic, professional, educational and national structure...), households (number, size/structure by number of members, sources of income, type of family...), housing units (total number, structure by manner of use, age, existing installations...); vital statistics data (number of births and deaths by years); annual statistical surveys (statistics for industry and mining, agriculture, forestry and water management, transportation, education, culture...); population and households registry (automated data bases at local level); registry of activities – enterprises and organizations (state and private);

Sectoral data bases (formed by competent institutions, bureaus, public enterprises, services, etc.) – agriculture (agricultural zoning, data on soil degradation and pollution...); water management (water management facilities, zones of surface and underground waters, sources of waters – capacity and quality...); infrastructure systems – facilities and networks (transport, energy, telecommunications) in databases on the republic and local levels; data on the climate and state of the environment (quality of air, waters...); natural areas and facilities (protected and proposed for protection); data on the population's health, etc.

b) Data specific for lignite basins include the results of exploration of lignite deposits – level of exploration – explored reserves by categories (geological, balance, exploitable), quality of coal

(calorific value, moisture, ashes, sulphur content...), overburden and footwall characteristics, conditions of exploitation which, in line with the planned energy needs, serve to establish the pace of exploitation by years and exploitation fields – long term (rough) for complete exploitation of the lignite basin and the standard long-term horizon (15–20 years). Data continuously monitored by specialized services within the MEIS include: dynamics of land occupation, change in the regime of surface and underground waters; damaged land recultivation, relocation of settlements, economic, transport and other facilities, environmental degradation, etc. The MEIS services are also obliged to keep updated topographic maps and geodetic plans of specified scales, covering the area of exploitation. Certain data are collected by services in the field, while a part of the research is done through a survey of households in the

zone of mining expansion or relocation of infrastructure systems.

The system of indicators must be adjusted to different levels of planning and includes:

indicators at regional level formed according to thematic areas (natural conditions and resources, land use, build-up of space, population and social development, economic activities, MEIS activities, protection...),

indicators for smaller spatial and production units (groups of excavation sites or individual pits, energy-industrial complex), settlement level and level of part of a settlement or energy-industrial complex),

indicators required by research in different spheres of planning, designing, construction, revitalization and arrangement of space and dynamics, i.e. time cycles (viewed at the level of intermediate stages of development, programs for time intervals of less than a year in zones of open pit mining). This is also the condition for continuous and dynamic planning (the Spatial plan for the lignite basin offers a concept of future development, arrangement and revitalization of space, in line with the dynamics of expansion and opening of new open pits defined in the Development strategy for the basin for a standard long-term period of 15–20 years, while the intermediate development stages cover a period of five years. This level of planning is operationalized through plans for smaller territorial units – regulation plans for settlements/parts of settlements in the zone of mining expansion, relocation of infrastructure systems and operational plans and programs adopted within MEIS production plans.

A review of the list of basic indicators and data bases related to lignite basin spatial development is given in Table 1.

According to the proposed concept, the information system for the needs of planning in the area of the lignite basin would be within the competence of the republic. In other words, the republic would undertake the responsibility for planning in mining/lignite basins at all levels, which implies the establishment of institutional coordination and regulation of organization and functioning of the information system.

Namely, ensuring the continuation of planning, revitalization and arrangement of space in accordance with the dynamic of ongoing changes requires a single procedure for monitoring the indicators of these changes. In that sense, it would be necessary to precisely define the institutional frameworks for the collection, exchange and processing of indicators. Within the republic administration body an information centre will be established wherein all relevant data will converge to form an aggregated data base. At the same time, promotion of informatic support to development planning and channelling implies the reinforcement of information activities (technical equipment and human resources capabilities) on the local level (modernization of locally kept records – registries and data bases), in view of the fact that local self-administrations, by definition, collect and keep the bulk of the data. MEIS services update the entries in their data bases, which are directly integrated into a single base.

Furthermore, access to sets of indicators must be provided to different groups of authorized users whose activities or interests are linked to the space covered by the plan (local communities, citizens, research teams, etc.).

CONCLUSION

Large production systems are created either in large towns and along development axes, or in zones wherein natural resources, i.e. raw materials that serve as the basis for their production are located. From the point of view of a policy for a more balanced regional development systems located outside the zones of high urban concentration are more important. Relatively big capital investments accompanying the construction and development of these systems enable the appropriation of some funds for the provision of infrastructure and public utilities required for settlements, development of service activities, employment of the population, i.e. increase in the standard of living both in cities and in the rural environment. In addition to positive effects the development of these production systems also has some negative consequences. Numerous production systems, especially those in the spheres of mining, metallurgy, energy and basic chemistry, cause numerous (spatial, ecological, social, etc.) conflicts with their environment during exploitation and processing of raw materials. A relatively high concentration of investments into the development of large production

systems results in the movement of the population from the regional towards a more narrowly limited environment of production systems (offer of jobs and improved conditions of life), causing the imbalance in the distribution of activities and population on the regional level. Spatial planning in such circumstances has an irreplaceable role in the identification and relativization of these conflicts, reconciliation of opposing interests and arrangement and use of space, as well as relaxation of regionally uneven development and other adverse influences of large production systems on the environment.

Processes of spatial and sectoral planning of economic and infrastructure systems, preparation of technical documentation for certain facilities or systems and assessment of their influence on environment should be mutually linked and integrated by means of: ensuring mutually comparable and complementary stages of planning, design and impact assessment; forming and using joint data bases, background materials and basic indicators and criteria; coordinating and synchronizing the planning, design and assessment activities, adoption and implementation of planning and investment decisions etc. Adjustment and synchronization of all activities in the process of adoption and implementation of planning and investment decisions have numerous positive effects. The main assumptions for the harmonization of planning activities and the attainment of the expected results include: provision of appropriate legal solutions for spatial development management, construction and protection and the relevant institutional-organisational support in the preparation, adoption, implementation and monitoring of planning and investment decisions related to economic and infrastructure systems in special purpose areas.

The establishment of a single information system – joint data base and systems of indicators, and taking the advantages of modern information technologies, offer substantial support to the integration and synchronization of planning activities in special purpose areas. Areas of large lignite basins are characterized by the dynamic changes in space and large-scope of natural and created environment degradation stemming from the development of open cast exploitation and lignite transformation plants. Dynamic changes in lignite basins may be channelled through the development of a dynamic and continuing

process of planning and research. The information system of a lignite basin must be adjusted to the dynamics of change therein, i.e. to the dynamics of planning, research, programming, designing and control of space arrangement and revitalization, which requires appropriate monitoring and updating of data bases. In that sense the information system needed for the planning and channelling of development in a lignite basin is quite specific. The system of indicators is conceived in line with the needs of planning at all levels: a) regional level, b) smaller spatial and production entities (groups of excavations/individual excavation sites, energy-industrial systems), settlements and parts of settlements or energy-industrial systems and c) needs of research by different spheres of planning, designing, construction, revitalization and arrangement of space and the dynamic, i.e. time cycles (level of intermediate development stages). The data base should incorporate: a) data from information systems in other areas (geodetic-cadastral documentation, statistical data, sectoral data bases formed by numerous institutions, public enterprises, etc.); b) specific data monitored by MEIS services (geodetic, mining-geological, hydrological, property-legal, etc.), related to the dynamics of land occupation, change of regime of surface and underground waters, development of damaged land recultivation, relocation of settlements, economic, transport and other facilities, environmental degradation, etc.

Furthermore, informatic support and the use of the established system of indicators may substantially improve and increase the efficiency of plan implementation in segments related to replanning, i.e. continuation of research and planning at all levels, formulation and implementation of different policies for sustainable spatial development, monitoring and control in the application of the plans' premises.

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INFLUENCES OF GENTRIFICATION ON IDENTITY SHIFT OF AN URBAN FRAGMENT - A CASE STUDY

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This paper discusses the process of gentrification, researched through a perspective of its positive and negative aspects. It underlines the importance of reasonable proportioning, sensible structuring and long-term planning of transformation of urban spaces, which contributes to an upgrade of living conditions and qualitative advancement of social consciousness and development of needs of the local inhabitants, regardless of their socio-economic profile. Despite not perceiving gentrification as an a priori negative process, influences of alterations of urban tissue carried out through radical and narrowly interpreted modifications of their character may cause undesired changes in the perception and use of the space and were analyzed as well. A case study of the gentrification of Grbavica, an urban fragment in Novi Sad, Serbia, is presented. The goal of this research was to critically valorize the over-all transformation of the aforementioned fragment, taking into account architectural, urban, social, cultural, economic and other facets.

Key words: gentrification, urban transformation, socio-economic impact, identity

INTRODUCTION

Dynamic changes in contemporary urban tissue under the controversial name of 'gentrification' have been a vexed topic among international circle of scholars for more than two decades now. However, the process started spreading its tentacles in urban society almost half a century ago.

Today, the vast term of gentrification is a subject to numerous interpretations and presents a process highly dependent on an entire spectrum of aspects, such as the spatial, social, political, economic, contextual, historic, cultural, etc. After numerous alterations along the course of years since it was initially noted, gentrification today may be defined as a process by which economically declined inner-city neighborhoods encounter a "reversal, reinvestment, and the in-migration of

a relatively well-off, middle- and upper middle-class population" (Smith, 1998, p.199) and experience a comprehensive identity change.

Formally derelict neighborhoods are "rediscovered" and either refurbished or by erecting new structures in attempt to "recapture the value of place" (Zukin, 1991, p.191), the real-estate value is increased. Rather than identifying gentrification as an "inner-city phenomenon" (Badcock, 2001, p.1559), in this paper gentrification is viewed as a long lasting process or a continuum which enables it to be comprehended in all its complexity, especially concerning those aspects referring to its immediate context in terms of space and time.

All analyzed aspects of gentrification are elaborated and critically valorized through a case study of Grbavica, a gentrified district of Novi Sad, Serbia.

GENTRIFICATION AS A PROCESS

Complexity of Perception

The term gentrification was initially coined in 1964 by Ruth Glass, a British pioneer of urban sociology in Europe, who tried to depict changes of central London neighborhoods formally inhabited by the working class. By gentrification, Glass entails a process by which local lower class residents are displaced by developers and higher class home buyers, while the area in question is rehabilitated from the spatial and economic aspects (Glass, 1964). She refers exclusively to transformation of the existing dilapidated structures in

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residential areas. Such a view is today known as 'classical gentrification' (Lees *et al.*, 2008).

Up until the mid 1980s, while trying to comprehend what was causing the process to start, as well as its consequences, the international circle of scholars was tightly sticking to Glass' original definition which, despite the effort of the media to promote the process as positive, still had mostly negative connotations. The displacement of the working class was in the limelight as well as 'gentrification', the word itself, implying class-based segregation which was not sounding too politically correct.

Nevertheless, in 1985, the discussion on this topic was spurred and the perception of the process changed. Beginning with now legendary Real Estate Board of New York advert with a catchy name: "Is Gentrification a Dirty Word?", published in *The New York Times* (New York Times, 1985), gentrification was stoutly defended, at least for the time being. In the advert mentioned above, social consequences were cleverly by-passed by emphasizing economic benefits of the neighborhood change.

For the next few years, radical resistance to the process was almost silenced and gentrified neighborhoods, scintillating with prosperity, were eagerly greeting their new residents. Shedding lurid light on positive effects that the change brings and even partially romanticizing the process with effusive propaganda, the economically driven gentrifiers deflected negative aspects into the closet. However, the complexity of the process and inability to be one-sided to its results and consequences was already back then sporadically spotted: "gentrification [is] complex and multifaceted, being simultaneously a physical, economic, social and cultural process" (Hamnett, 1984, p.284). The critical discussion on gentrification intensified again in the 1990s, continuing to the present day.

Though few emotionally colored and extreme perceptions of gentrification still exist, today every segment of the process is being revalorized separately and in relation to gentrification as a whole, taking into account both negative and positive aspects, no matter whether the process is being perceived with support or opposition. The complexity of the process has been fully realized and no sensible black and white conclusion is possible.

Most of the authors emphasize negative consequences of gentrification, primarily in

relation to the local lower class residents, although a number of them agree on the fact that the process also has certain positive effects, primarily from the economic point of view. Namely, gentrification has a potential to induce revitalization and reinvestment in depressed inner-city neighborhoods (Shaw, 2008; Freeman, 2005), as well as to increase property value and reduce vacancy rates (Atkinson and Bridge, 2005). While some of these views of gentrification were subjective and thus extreme, one thing that most agreed on was the need for a broader definition, what Neil Smith already recognized in 1986: "Gentrification is a highly dynamic process ... not amenable to overly restrictive definitions" (Smith, 1986, p.17).

Nature of Physical Changes

The other topic of disputes was the nature of physical changes that the neighborhoods were experiencing and whether these changes could be described as gentrification. The classical definition was referring only to renovation and restoration of older housing stock, while neighborhoods around the world were transforming their physical structure and, thus, their characters in many diverse manners. By tightly sticking to early interpretations of the process' invariables that comprise solely of renovation and upgrading of the existing residential buildings, change of urban tissue that encompasses demolition and replacement would not be considered as gentrification (Redfern, 1997), as that would mean, according to some, "stretching the term and what it set out to describe too far" (Lambert and Boddy, 2002, p.20).

On the other hand, taking the initial definition of gentrification verbatim would exclude comprehension of the fact that the process mutated over time. The narrow perception of gentrification would omit all previously considered under-populated inner-city neighborhoods with low construction density and mostly sporadically positioned single-family homes that have undergone restructuring process in the sense of erection of new town houses and high-rise apartment buildings. However, as gentrification has evolved to be understood in all its complexity, nowadays it includes demolition of existing houses and new-built structures as well (Shaw, 2008).

Being that gentrification also questions the outcomes of the transformation, from the social, cultural, economic and the aspect of

overall identity shift, and being that these neighborhoods over time accumulated similar if not the same characteristics and suffered consequences as the ones that had faced only renovation, one should not fail to advert to such neighborhoods, including the non-residential ones, as gentrified.

Beyond Just Housing

While before there was a genuine agreement that gentrification was "the residential component of urban redevelopment" (Deutsche, 1996, p.IV) and thus affecting only such central city quarters, as the process was further spreading regardless to the land use, location within a city or even character of the built environment, it became apparent that non-residential areas may also be a subject of gentrification (Ley, 1996). Gentrification evolved in more ways than one: rural gentrification, new-built gentrification, super-gentrification, and other descriptive variations of the process are increasingly being accepted (Lees *et al.*, 2008). However, for a process when housing replaces other non-residential land uses within the city centre, a term 'residentialization' was proposed (Lambert and Boddy, 2002).

Economic Aspect

When discussing gentrification, the economic aspect asserts itself as an initiator and, perhaps the most influential component of the process, and can be viewed through the models of supply and demand. From this point of view, according to some, urban centers are more and more financially gaining power due to demand rather than supply (Zukin, 1995). Then again, it was the developers, property owners, banks and real-estate agencies who paved the way for gentrification (Smith, 1986). The process today cannot be fully comprehended without analyzing both of these perspectives (Lees and Ley, 2008) and the economic aspect as a whole, as the process presents a "movement of capital rather than people" (Smith, 1987, p.165).

If gentrification were to be solely observed through the lens of influx of investments and their influence on the physical improvements of the neighborhood and increasing of the property value, it could have been considered as a solely positive urban change. Yet it is also the economic feature that triggers socially related problems in the gentrifying neighborhoods and the complexity of the process does not permit its simple evaluations.

Social Aspect

On the mention of gentrification, the first thing that comes to mind is usually displacement of the lower income residents of a neighborhood by higher income households and, thus, was frequently in the focus of public attention. Even explicit renaming of the process into 'yuppification' (Van Criekingen and Decroly, 2003, p.2452) is clearly pointing out class distinctions. Although the existence of displacement is commonly acknowledged, some argue that "measuring displacement is like measuring the invisible" (Atkinson, 2000, p.154) and that the reason why it has been so closely related to gentrification, or even considered as its synonym, is not the empirically unconfirmed high quantity of the displaced, but rather the trauma that these residents experience (Freeman, 2005).

Gentrification is often promoted to the public as a process that stimulates social mixing and diversification of neighborhood population, which creates more livable communities. On the other hand, social mixing is sometimes presented as a "social wallpaper" (Butler and Robson, 2003, p.18) that might lead to covering up of displacement, socio-spatial segregation and polarization among local inhabitants. Little analytical evidence which directly connects gentrification with greater levels of social blend at the neighborhood scale is present (Walks and Maaranen, 2008).

While social mixing is trying to be induced into transforming areas, perhaps one should not yearn to implement such a practice, but rather leave the choice of mixing open to the residents themselves (Lees, 2008). Social mix is frequently being tightly linked to the displacement process, since, if interpreted through the classical definition, it is the lower class residents that are being displaced to make room for the new more affluent groups, to whom social mix is usually referring to. Even if the local inhabitants are not displaced, the percentage of those who stay in the transformed and newly formed community is so insignificant that it does not contribute to diversification and social mixing among different classes on a larger scale. To summarize, social mix is something that cannot be developed if the residents are no longer feeling at home in such neighborhoods, even if they have received certain benefits which would financially enable them to further reside in the same area.

The Term Issue

Authorities and planners use a set of various expressions to depict improvements of cultural, economic, physical, social and other appearances of neighborhoods that go through gentrification. The reason for this is that the process and the word itself accumulated much negative attention by the public over the course of years and that the perception of its definition is somewhat heterogeneous. To illustrate, in the book called "Houses in Transformation", prepared by prestigious NAI Publishers in 2008 (Berg *et al.*, 2008), almost every author uses a different term to describe similar processes that gentrification may enclose. In order to avoid eventual controversy, alternative terms such as: 'urban regeneration', 'urban renewal', 'urban renovation', 'urban revitalization' or 'urban renaissance', are being used in some international academic circles, city planning documentation and urban policies (Lees *et al.*, 2008). These expressions do not all implicate the same process, some of them may qualitatively be differentiated (Nikezić, 2006, p.12), yet gentrification is the most inclusive term.

Sometimes labeled as "cappuccino urban politics, with plenty of froth" (Peck, 2005, p.760), gentrification, displaced as a word and renamed to 'urban regeneration', somewhat narrower term, has worked its way through to become what "is now not only the policy of various European states but also the official urban policy of the European Union" (Smith, 2008, p.17). As an illustration to this, through the European Urban Charter adopted by the Council of Europe in 1992, the 'urban renaissance' was recognized as a guideline for future urban development (Stojkov, 1996). Even further, gentrification beginning as a minor urban process in some western cities during the 1960s is now gaining in both prevalence and popularity and turning into a "global urban strategy" (Smith, 2002, p.440). Governments of the First World countries are nowadays encouraging gentrification through urban regeneration projects with the aim to solve the problems of aged infrastructure and evident poverty (Atkinson, 2004).

On a local scale, in order to avoid class connotations and be accepted by the public, ruling structures were simplifying the word 'gentrification' and depending on the city, different more easily understood and remembered terms were used. Labels such as: 'back-to-the-city movement', 'neighborhood revitalization', 'brownstoning', 'homesteading',

'whitepainting', 'whitewalling' and 'red-brick-chic' (Williams, 1986, p.65; Lees *et al.*, 2008, p.6) were introduced by the media.

Heterogeneity and Complexity

Gentrification as a highly complex and contextually inclusive does not insinuate that all neighborhoods on a global map or within a single city will go through all stages of the process or "that they will reach the same end state, nor, indeed, that they can only travel in one direction" (Shaw, 2008, p.1714). Characteristics of each stage of gentrification of a certain site may significantly vary when compared to the process happening on another location. Also, differences regarding temporal and spatial context in the sense of various political, cultural, economic, social and other backgrounds influencing the process, can contribute to two global gentrified sites to be delicate for comparative analyzing when put side by side.

Critical Standpoint

A propos the term-dispute, although the name-disguising of the process may be noted, it can be concluded that, in relation to architectural and urban planning modes of action, the process of transformation may be differentiated according to what it entails into a few specific terms, such as those mentioned in Chapter 2.6. Some of them also include aspects other than those narrowly collocated with engineering disciplines. However, gentrification presents a most inclusive term in sense of impacts of external forces on the construction-wise form of operation. Concerning that the aim of this paper was also to emphasize the significance of interdisciplinary approach, i.e. to stress the importance of correlation, coordination, cohesion and consistency between all the other dimensions affecting urban transformations, the term 'gentrification' was adopted.

Gentrification, as argued here, includes transformations of both residential and non-residential depressed areas that previously suffered disinvestment which, when their physical structure has improved or was demolished and re-built, experience an inflow of a more well-off group of inhabitants or users. It represents a highly complex, multifaceted and long-lasting process by which neighborhoods change their characteristics and flavors on the course of time due to a large number of influences.

GENTRIFICATION OF GRBAVICA, NOVI SAD, SERBIA – A CASE STUDY

General Background

Grbavica, a part of Novi Sad, Serbia, presents a neighborhood that has experienced rapid changes in character of its tissue, conditioned by the fast pace of development of the city.

Located on the former outskirts of Novi Sad which, due to urban growth during last sixty years, found itself in the city's geographical centre, Grbavica today represents a district which is in the process of gentrification. The first renewal after the Second World War back in the 1960s was forth-shadowing the beginning of the process. Nevertheless, the analyzed area went through a hibernation period, until, influenced by post-socialist economic revolution in the 1990s, the conditions altered in a way that its transformation was made possible. Ever since then, Grbavica has been, first subtly and during the last decade more and more intensely gentrified.

Boundaries of the Analyzed Area

Grbavica is understood as the area bound by: Futoška Street to the north; Oslobođenje Boulevard to the east; Cara Lazara Boulevard to the south and Vojvode Kričevića and Kolo srpskih sestara streets to the west. Part of Grbavica between: Braće Ribnikara and Futoška streets on the north; Oslobođenje Boulevard, EPS' complex and Limanska Market on the east; part of Puškinova and Alekse Šantića streets to the south and Krilova Street and Jewish and Catholic cemeteries to the west, has been researched and critically revalorized in this paper and from this moment on will be referred to as 'Grbavica'. This fragment was chosen for analyses due to the fact that it contains, all for this area typical, characteristics of a gentrifying neighborhood.

Wider Context

Novi Sad, a city on the river Danube and on the borders between Pannonian Plain and the hills of Fruška Gora, was continually developing since it was established. Not intending to further elaborate the complete history of its origin and development, one should emphasize that Novi Sad has been undoubtedly experiencing a highly intensive period of urban sprawl, especially in the last decade of the

twentieth and the first decade of the twenty-first century.

Forth-Shadowing Gentrification

Background

As a consequence of its predominantly agricultural character after the Second World War, Novi Sad had small residential density and represented a unique "combination of a city and a village" (Technical Report on the Master Plan of the City of Novi Sad from 1950, 1950, p.44). Distribution of the construction land within its boundaries was inconsistent, transportation system was not adjusted to the growing needs of the city and the housing conditions in majority of residential areas were inadequate. Due to irregular disposition of parcels and their diluted layouts, it was difficult to provide necessary infrastructure for all city districts.

For those reasons, as well as due to constant migrations from the rural parts of Vojvodina, recommendations listed in the Master Plan for the City of Novi Sad from 1950 included an

increasement of residential density of the existing neighborhoods by making use of their disposable construction land through a process of "reconstruction" instead of developing greenfield areas (Technical Report on the Master Plan of the City of Novi Sad from 1950, 1950, p.45). Hereby, the city turned to the policy of intensifying construction of housing, densification and creation of compact urban fabric. This was also an initiation for the gentrification process to start in the decades to follow.

Local Context - a Reflection

Grbavica as a conveniently located district on the outskirts of the city's core, predominantly consisting of ground-floor single-family and complex housing of diverse quality (Novi Sad – Master Plan from 1963, 1963) became an attractive location for the construction of multi-family buildings in a regime of reconstruction, thus forth-shadowing that the area could be gentrified in the future.

The most important alteration within the urban fabric originating from this period was the



Pictures 1, 2 and 3: the former rural character of Grbavica.



Pictures 4 and 6: tour-de-force Oslobođenje Boulevard was thrust through the organically structured urban tissue; Picture 5: Intersection of Oslobođenje Boulevard and the new Vojvodanska Street.



Pictures 7, 8 and 9: the new residential slab blocks and towers erected in Oslobođenje Boulevard and Vojvodanska Street.

construction of the 23rd October Boulevard (Oslobođenje Boulevard today), with the intention to connect previously relocated railway station on its northern end with planned stadium on the south. This had a strong effect both on the upcoming city development and the urban character of Grbavica.

Before this intense change, Grbavica, especially on its outskirts, was comprised of town houses with spacious individual yards. However, in the incipient stage of gentrification, so to say, which followed, the identity of small, placid streets with hawthorn trees planted along their sides was starting to modify under the impact of great aspirations of the Modern urban planning ambitions carried out when the aforementioned *tour-de-force* Boulevard was stroke through the existing, organically structured urban tissue. Formerly interwoven into the old city *nucleus*, from this moment on, Grbavica was completely cut-off, forced to adjust its socio-spatial character and its communicational spines to the city's new physical organization. Consequently, radial streets in the Boulevard contact area were converted into an orthogonal network, while one of the strongest transportation veins of Novi Sad, the Željeznička Street, was mutilated and left dead-ended on both sides.

The creation of the new transportation artery gave the impulse to pre-war concepts of urban development which were inspired by competition entries for the Regulation Plan for Novi Sad from 1937 and thus the area surrounding the Boulevard was intended to mark the beginning of an era of extensive construction of housing. Unfortunately, this verve was short-breathed, starting and ending with erection of two (of which one was in Grbavica) out of six residential towers with fourteen floors that represented urban landmarks, city gates of that time.

As the city's population was rapidly increasing, reaching 110,798 inhabitants (by the census from 1961; previously documented was the one from 1953, according to which Novi Sad had population of 83,180; Novi Sad – the Master Plan from 1963, 1963), construction of housing became an urge. In order to accelerate the process, in the beginning of 1960s city officials adopted general designs for multi-storey residential buildings in Grbavica, a district in Sarajevo, Bosnia and Herzegovina. Working title of these designs was accepted by the locals, and therefore the area in which they were implemented in 1961 was territorially defined for the first time and, as an urban

entity, named 'Grbavica'. Construction of residential slab blocks and towers in the spirit of the Modern Movement, with hundreds of apartments, began almost synchronously in a number of different parts of the neighborhood.

Hibernation

In the beginning of 1970s, the conditions for the city's sprawl were acquired and the conquering of vacant urban land (Liman and Novo Naselje) and stretching the city limits towards the west and the Danube had begun. This resulted in a hiatus of reconstructing the existing built environment and, thus, Grbavica as well. Still fashionable designing and planning based on the Corbusierian principles were soon to encounter their zenith.

According to the Master Plan from 1973, Grbavica had around 7,400 inhabitants in 1971. Level of intervention within its tissue defined by the Plan implied that residential blocks may be restructured but that inherited street network must be preserved (Master Plan for the City of Novi Sad 2000, 1973). Politics of reconstruction of neighborhoods that was favored by the authorities in previous decades was prolonged, but in much lesser extent. Grbavica was in the state of hibernation up until the end of 1980s, when it entered the phase of its 'renaissance'.

Gentrification Analyzed – Grbavica Reexamined

Background

In the late 1980s and early 1990s, capacities of the available construction land were depleting. Due to great migrations and a further population increase, it was an imperative to turn to extensive transformations of the already inhabited areas, especially in relation to a modification of residential types, from single-family or complex into multi-family housing of middle and high densities. Namely, the development of residential quarters could also contribute to the evolution of more compact cities by recycling derelict land and buildings (Bromley *et al.*, 2005).

The essential novelty deriving from this period was, primarily from the perspective of architectural designing and urban planning (although it could also be analyzed through a number of other parameters), was the introduction of the term 'permanent reconstruction' into the city's planning documentation (Master Plan of the City of Novi Sad until 2005, 1985). It mustered all,

perhaps, most radical transformations of the urban tissue – replacement of the existing buildings, characterized as deprived, with new structures in order to improve the quality of housing conditions and organize dwelling spaces in a more rational manner. Gentrification asserted itself as a solution.

Strong demand for living in the city, i.e. for an urban lifestyle, led to mass-production of housing stock in already urbanized areas owing to their attractive location in vicinity of the old city *nucleus*. The concept of permanent reconstruction (which partially overlaps with the term 'gentrification') was introduced to the newer urban terminology no sooner than in 1985. Yet, already back then it was recorded that certain parts of the city have been "dehumanized", but that this form of transformation still "offers a possibility to increase the quality of the city as a whole" (Master Plan of the City of Novi Sad until 2005, 1985, p.11/60). Despite noting potential problems on account of alterations of the existing or entirely new-built housing that lacked additional amenities, the reins on dynamic 'densification' of the area in or close to the city centre were not tightened.

Local Context – A Reflection

In spite of random construction of residential towers and blocks in the 1960s, Grbavica in the late 1980s still possessed an almost intact character. Back then, complex and a certain percentage of single-family housing was most prevalent in the area. Blocks defined by a slightly modified street network had a range of typologies: complex housing in directions of the city core; complex housing on the area outskirts, enriched with new-built multi-family buildings; multi-family housing in the new street network; single-family housing which included the city's oldest houses of this type and somewhat newer villa-type assemblies (Plan of Detailed Regulation for the Complex Housing of the Miše Dimitrijevića Block in Novi Sad, 1988). Most of these structures were located on clearly defined parcels and had only few floors. The area surrounding the Braće Ribnikara Street was comprising of a few distinct ambiances with kindred characteristics.

Nevertheless, during the 1990s, multi-family residential buildings were subtly 'creeping into' Grbavica, gradually forcing single-family or complex housing off of their parcels. In the late 1990s, gentrification took off and began to spread on a larger scale than the analyzed area could handle. By the turn of the century, the



Pictures 10, 11 and 12: Braće Ribnikara Street: "My favorite buildings are all falling down, Seems like I dwell in a different town ..." (part of a song by Robyn Hitchcock called "My Favorite Buildings").

number of newly erected residential buildings and, *ergo*, the population started increasing, albeit the vital supplementary infrastructure works were for the most part omitted. Some parts of Grbavica, among which also the Braće Ribnikara Street mentioned above, began to lose their former features.

Structure of Investment in Residential Construction

In order to truly comprehend the stimulus that the economy shift gave to the gentrification of Grbavica, it is necessary to explain the changes of the structure of investments in the residential construction on a national level.

In the decade following the Second World War, construction of housing was strictly state sponsored. After 1956, numerous collective residential funds were established and housing construction was financed from their budgets that were obtained through the mandatory contribution of 5.8 percent of the gross labor income. They acted as investors and were responsible for distribution of apartments (Pajović, 1996). The law concerning the management of residential construction funds in state and collective ownership, brought in 1965, marked the beginning of transformation to the market economy with the aim of encouraging private investments in housing construction (Popov, 2005). However, there were few initiatives from the private sector. The state authorities still held the monopoly over housing construction, thus controlling city planning as well. They were also in charge of the allotment of housing units which remained in collective ownership, i.e., residents were only given the right of use. From the perspective of development of Grbavica, in order to fulfill extended residential needs during this period, massive blocks and towers in the *Moderna* style that were erected, were viable only through this method of financing.

Late 1980s brought great revisions of the economy which manifested through a general decrease in investments. Given that under

these circumstances the state founded collective residential funds were no longer capable of funding construction of housing alone, residential construction became market-orientated and to a great extent sponsored by the private sector. By the beginning of 1990s, housing in communal ownership was almost completely privatized and all further construction of residential buildings was subjected to preconditioning by the market.

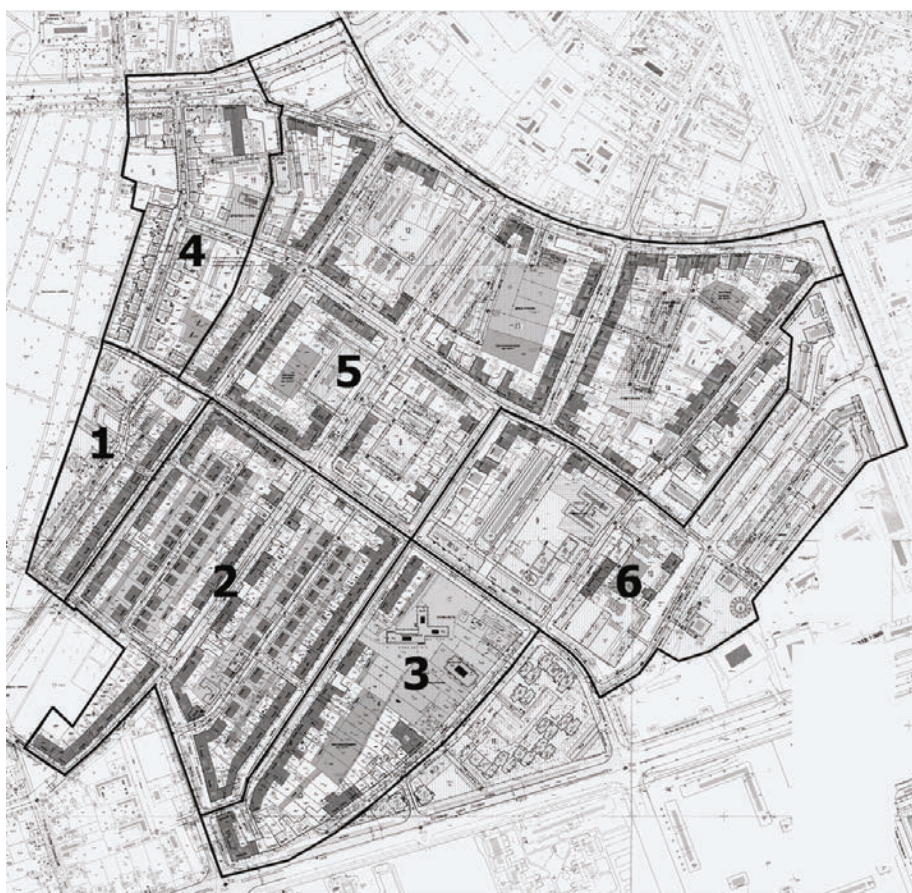
Permanent reconstruction as such suited individual initiatives of the new wave of private investors who did not have enough capital to join several parcels and undertake a residential project of a larger scale, but were constructing

buildings on single, narrow parcels that were previously occupied by single-family or complex housing. Being that this regime was allowing demolition of the neglected buildings, the investors were given the opportunity to buy them off and thus obtain construction land for multi-family housing. This was also beneficial for the previous landlords according to the 'rent-gap theory' (Hamnett, 1991), since most of them let the property deteriorate even further as it became apparent that their houses, more specifically the land they were on, would attract new capital either way and that it did not pay off to invest in their maintenance.

From all the above mentioned, it may be concluded that the changes that occur in the built environment also depend on who invests in its housing stock, and that economic rather than other forces are of greater significance to the initiation of the gentrification process (Smith, 1996).

Aspect of Physical Structure

With the aim to understand changes of physical structure which greatly contributed in modifying the existing or gaining a completely



Picture 13: Plan of the analyzed part of Grbavica, divided into 6 segments.

new identity of some parts of Grbavica, the researched area is divided into four fragments: I – between Futoška, Braće Ribnikara, Dože Đerđa streets and the Catholic and Jewish cemeteries; II – between Braće Ribnikara, Dože Đerđa, Puškinova and Lasla Gala streets and Oslobođenje Boulevard; III – between Puškinova, Alekse Šantića, Krilova streets, the Jewish cemetery and Dože Đerđa Street, IV – between Puškinova, Lasla Gala streets, Oslobođenje Boulevard and both sides of Vojvođanska Street.

I – Groups of buildings, comprising of slab blocks and free-standing structures, erected in the 1960s (parts of segments 1, 5 and 6)

Past: During the 1960s, there was a need to swiftly construct new multi-family housing, positioned in a way that it could easily be connected to the existing infrastructure. Hence, these structures were located either on vacant outskirts of Grbavica (segments 1 and 6) or on expropriated parts of gardens of single-family or complex housing parcels within the blocks (segment 5). The two residential types, single-family or complex and multi-family housing, were shape- and function-wise incompatible and “inadequate to respond to the urban matrix” (Plan of Detailed Regulation for the Complex Housing of the Miše Dimitrijevića Block in Novi Sad, 1988, p.6). These instant solutions disabled further rational development of the adjacent blocks and structures in the immediate vicinity of the slab blocks. If the reconstruction were to be continued in the same manner, hefty demolition and restructuring of the street network would be necessary.

Present: Gentrification of this part of Grbavica, beginning in the late 1990s and up to this day, has had mostly negative effects. Despite the fact that the rehabilitation of the buildings mentioned above was carried out, main principles of Modernism, which constitute their core, were not respected. By further increase of the construction density, only few of them are still surrounded by greenery (segments 1 and 6), while the others have been shrouded by multi-storey buildings erected on the parcels framing the blocks (segment 5). While structures built in groups still possess a certain sense of identity, randomly located slab blocks have been ‘islands’ in the urban tissue ever since they were erected.

II – Oldest single-family housing (parts of segments 2 and 3)

Past: The oldest single-family housing in Novi Sad was structured along three linear strokes that evolved on what used to be outskirts of the city. These traditional rural linear houses were typical for the periphery.

Present: The planning documentation from 1988 enabled future gentrification of the area by permitting demolition of this single-family and complex housing stock to supply land for construction of three- and five-storey buildings (Plan of Detailed Regulation for the Complex Housing of the Miše Dimitrijevića Block in Novi Sad, 1988). It also provided a modified street network for Grbavica by introducing dead-ended access streets inside the blocks. Further densification of physical structure was

suggested by the documentation from 2003 through planning construction of terraced “family housing” (Regulation Plan for Blocks surrounding the Danila Kiša Street in Novi Sad, 2003, p. 251), while omitting to define whether that term refers to single- or multi-family structures. This terminology gap was taken advantage of by the private investors and, instead of public spaces and greenery, construction of terraced multi-family buildings and garages within already condensed blocks had begun. In parts of segments 2 and 3, strong polarity between the old and the new urban fabric was detected. In sporadic groups of single-family houses which were left intact, rural identity timidly still exists, but the



Pictures 14 and 15: three typical blocks as they were in the 1970s and as they are planned to be by the Regulation Plan from 2003.



Pictures 16, 17 and 18: architecture in today's Grbavica – a potpourri of shapes, colors and styles.



Pictures 19, 20 and 21: Old urban tissue juxtaposed with the new-built multi-family housing.



Picture 22: the serene Antona Čehova Street; Pictures 23 and 24: two now deprived structures declared as cultural heritage.

question is for how long.

III – Heterogeneous area (segment 5)

It can be noted that the most prevalent characteristic of Grbavica is heterogeneity of its housing construction, and thus the segment 5, as a typical sample, has been singled out and analyzed.

Past: With a variety of housing typologies, from single-family to complex and later multi-family, this area has been representing a unique combination of a typical rural and a typical urban dwelling.

Present: Even though the most recent city planning guidelines stated that “recent reconstructions that have been carried out frequently cause great contrasts in height and architectural design, and therefore ... should be discouraged” (Master Plan of the City of Novi Sad until 2021, 1999, p.53), this has seldom been followed and the area is nowadays abundant in disparities. The extent of today’s heterogeneity of Grbavica, especially that of the here analyzed segment 5, illustrates negative influences of gentrification. Old urban fabric has been juxtaposed with the new-built multi-family housing, making it difficult for most of them to co-exist and establish a joint identity.

Enabling dense construction of housing, without having a coherent vision of its impact on the immediate surroundings and the area as a whole, led to creation of narrow streets, framed by multi-story buildings, thus, making them physically canyon-like, burdening the old tissue and generating contrasts which are visually difficult to bear.

IV – Resisting houses (segment 4)

Past: Segment 4 was and still is characterized by detached single-family or double-family housing on small parcels. Originating from different periods and owing their features to a variety of styles, these houses are different in height and volume, but together they compose an ambiental entity of high physical and visual quality.

Present: This area is the only part of Grbavica that has resisted the temptation of gentrification. By “vary[ing] in age and condition [of its buildings and] including a good proportion of old ones,” this fragment is one of few in Grbavica which is managing to generate “exuberant diversity” (Jacobs, J., 1993, p.196) and still possesses a unique and coherent sense of identity. Some structures have also been declared as cultural heritage

and put under special protection (Plan of Detailed Regulation for the Complex Housing of the Miše Dimitrijevića Block in Novi Sad, 1988, p.14).

Social Aspect

Population structure of Grbavica comprises of a number of layers that clarify its developmental origins. From its foundation, until the instigation of the gentrification process, this area, having mainly rural character, had been inhabited by residents of predominantly Hungarian nationality engaged in agriculture. Due to constant migrations from rural Vojvodina into the city, the multi-family housing erected during the 1960s was mostly occupied by the new working class. In accordance to subtle transformations of the analyzed area that followed in the next 30 years, social mix of rural and urban dwellers did not significantly change.

Political changes and economic decline in Serbia during the last decade of the twentieth century reflected on the population structure of Grbavica. Frequent and uncontrolled alterations of the urban fabric in the sense of replacement of the single-family and complex housing by multi-story residential buildings containing *petite* units (mostly studios and single-room apartments) provided sufficient conditions for settling of small households. In return for their parcel, indigenous inhabitants were receiving apartments in this or other parts of the city. However, even if they decided to reside in Grbavica, unprecedented changes of its structure caused by gentrification would make their dwelling unpleasant. Compared to current practice in which inhabitants are given an opportunity to choose, during the construction of multi-family housing back in 1960s, property-owners of nationalized parcels were forced to move to apartments allotted to them in various parts of the city.

Social composition of Grbavica is nowadays mostly made of students, young professionals and married couples. Along with mutations within the area caused by gentrification, which

primarily affected its physical structure, its flavor has changed. Given that identity of a neighborhood does not constitute solely buildings but its residents as well, social relations also control the process of urban transformation (Pušić, 2004) as sudden changes of the social composition lead to displacement of the people that once created its ambiental character. In order to avoid them, beside the necessity of having a clear vision of urban development of a city as an entity, the transformation of its neighborhoods cannot be successfully conducted without active or passive involvement of the local residents (Vaništa-Lazarević and Đukić, 2006).

Pros and Cons of Gentrification

Grbavica was analyzed through Freeman’s guideline for defining the state of a residential neighborhood in relation to its gentrification potential or its involvement within a process (Freeman, 2005). Since Grbavica is a central city district that was populated by lower to middle income households and was not being significantly invested into during previous decades, it may be concluded that, during the 1980s, it did have a potential to be gentrified. Other criteria determining whether the neighborhood is already going through the process of gentrification include the aforementioned and further refer to the arrival of relatively affluent newcomers and increased investments in the area. Beginning with the socio-political changes and intensified construction in the 1990s, Grbavica was completely fulfilling Freeman’s model, and starting representing a truly gentrified neighborhood.

Gentrification, as an inevitable byproduct of city development and as a “double-edged sword,” can have either clearly positive or negative, or both positive and negative impacts (Kennedy and Leonard, 2001, p.14). Being that all transformations in Grbavica have been carried out without a strict, clear and tangible long-term plan, today’s gentrification of this



Pictures 25 and 26: Grbavica’s courtyards rapidly becoming shrouded with garages;
Picture 27: Novi Sad’s district of Nova Detelinara – eventual future of Grbavica’s inner-block open spaces?

area, despite displaying some good sides, has mostly had negative consequences.

Positive aspects of gentrification on Grbavica can primarily be observed through its input in the urban sprawl of Novi Sad. In spite of being conveniently positioned, this district previously had rural character, and the process brought re-connecting of this area with the city *nucleus* into being. By increasing the construction density, more housing stock was provided, which also commenced additional investing in the renewal and modernization of the infrastructure. With this, Grbavica gained popularity and became a very attractive for residing of young, educated inhabitants.

Following the above mentioned, a few negative aspects of gentrification can be remarked as well. Namely, construction in the last decade has been insufficiently regulated by the planning documentation and, directed almost exclusively by profit, investor-oriented urban planning disregarded the volumes of residential buildings defined by the latest Regulation Plan (Regulation Plan for Blocks surrounding the Danila Kiša Street in Novi Sad, 2003). The construction density raised to an extent much larger than that that could be borne by the existing street network. Moreover, the adequacy of maintaining same street sections inside the frames of the old transportation scheme within which mostly single-family and complex housing was formerly located and positioning multi-storey buildings in their place is being questioned.

Architecture in the gentrified parts of Grbavica is appearing as a mere by-product of 'one-square-meter-more' motto and depends almost entirely on the private investor's affinities, which completely marginalizes the influence of an architect. Narrow street frontages variously colored, enriched with a wide spectrum of randomly organized elements originating from a variety of historical styles prompted the loss of visual aspects which could be easily recognized and remembered. Landmarks easing orientation in the analyzed area are nowadays mostly few old(er) buildings or ambiental entities, which possibly could, under the next wave of investor-oriented construction, soon be wiped out as well.

Absence of high-quality public spaces within the residential blocks was observed. Excluding few examples such as those surrounding the structures built during the 1960s, greenery and open spaces intended for socialization of inhabitants of all ages, as their value could

hardly be charged by the square meter, have been neglected. Residents of the analyzed area dwell almost exclusively inside their apartments, while streets and inner-block courtyards serve merely as communications. Today, people do not spend time on the streets of Grbavica anymore; rather, they are just passing through.

To conclude, one must again turn to the fact that careful structuring of the identity of each residential quarter, can be essential in establishing a successful long-term strategy of city-branding. But, if done tactlessly, it could become an "urban bomb that has the potential to destroy the whole city" (Pušić, 1984, p.121). This is exactly what gentrification is turning Grbavica into.

CONCLUSION

Even though gentrification continues to be a subject of theoretical disputes due to heterogeneous visions of its definition and its comprehensiveness, in this paper the term was put into limelight in attempt to demystify it and to draw attention to the importance of its holistic concept for urban transformations. In order to avoid manifestations of its negative consequences which would shroud its positive sides, continual, active, controlled and not simply *pro formae* interdisciplinary teamwork is of utmost importance.

Public and private sectors may be sufficiently co-ordinated, however the civil initiative should give its contribution to every process of urban transformation in a greater extent. Despite the fact that the local residents of the gentrifying neighborhoods may not be able to be involved in the decision-making, interactive civil programs could guide them to widen their horizons and more enthusiastically experience their immediate surroundings. As today's "human being is not a man of action anymore, but a player" (Flusser, 1999, p.89), some more drastic methods of gaining their interest for participation could, perhaps, be required. Nevertheless, in the purpose of reaching synergy between the three sectors, it is the acme of significance for the inhabitants to get engaged in any process that would change the character of their neighborhood.

Through gentrification of residential areas in form of a total makeover, *ad hoc* generated identities of the new physical structure can bring the feeling of selflessness, alienation and other modes of urban pathology about. Neighborhoods are not simply containers of

buildings, representing settings such as those from a theatre play, in which urban life 'happens'; they embody an invaluable component of the identity of every human being dwelling within its frames. By actively participating as users of space, rather than consuming it and taking everything 'served' to them for granted, i.e., by changing the appearance of their neighborhoods in accordance with their needs, desires and abilities, residents may contribute to the creation of their urban space, enriched with meaning. And that's precisely what it's all about.

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Picture sources

- Pictures 1-9 and 13 - Archives of the J.P. "Urbanizam" - Zavod za urbanizam Novi Sad, Novi Sad
- Pictures 10-12 and 16-27 - by the authors' team (D. Nedućin, O. Carić and V. Kubet)
- Picture 13 - from the *Regulation Plan for Blocks surrounding the Danila Kiša Street in Novi Sad* (2003)
- Pictures 14 and 15 - by the authors' team (D. Nedućin, O. Carić and V. Kubet)

EMERGENCE OF PROBLEM AREAS IN THE URBAN STRUCTURE OF POST-SOCIALIST ZAGREB

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The period of economic transition has resulted in complex social, functional and morphological transformations which have left their mark in the urban structure of Zagreb. At the beginning of 2000^{} fundamental planning acts have been passed – Zagreb spatial plan and the City Master Plan – to serve as concrete strategies and guidelines in developing the city area. However, none of the regulatory rules and acts have been completely successful in managing the city development.*

Significant changes and problems the city is facing in the post-socialist era serve as a research framework and are discussed in this paper. The main goal is to register and explain crucial causes of these spatial transformations. Based on the research of cartographic sources and conducted fieldwork four representative types of problem areas of the city are recognized. According to their functional and morphological characteristics, they are: converted urban land areas, derelict areas, newly built areas and densified areas. Each of these four types of problem areas is individually analyzed in the context of possible negative consequences on the urban environment.

Keywords: Zagreb, problem areas, urbanization, spatial planning, post-socialist city

INTRODUCTION

Zagreb is the capital and with almost 700.000² inhabitants the largest city in Croatia. Split, the second largest city is four times smaller than Zagreb while Rijeka, ranked third in Croatia has almost five times less inhabitants than the capital. Zagreb is economic, transport, cultural and political hub of the country. Its functions, above all services (tertiary sector), made it one of the largest and the most prominent metropolitan areas in Central Europe. Zagreb has a long urban tradition dating back to Roman times (3rd century A.D.), but only in the last 100 years it has been fully valorized thanks to the city's strong economic development and demographic expansion. Zagreb grew because

of its strong production and service functions changing its inner core as well as surrounding environment, and finally in the second half of 20th century forming a large urban region.

The process of economic and political transition during the 1990s and at the beginning of the 21st century had a great impact on the transformation of functional, social and morphological components of the urban structure. In the process of urbanization a state no longer plays a leading role due to an appearance of new actors (private investors, NGOs, experts, public) in urban space. These new and old actors work in conjunction, transforming and confronting each other within urban space (Seferagić, 2008; Svirčić Gotovac, Zlatar, 2008). Modifications in the system of spatial (physical) planning had a significant impact on urban space as well. Socialist planning has renounced its place to a new paradigm of spatial planning. In the first half of the 1990s it still depended much on the ideas established in the period of socialism. Only in mid 1990s the spatial planning started to integrate into a new socio-economic framework.

Dominant processes which take place in urban-spatial transformation of post-socialist cities are well documented in scientific literature (Dimitrovska Andrews et al., 2007; Stanilov, 2007a, 2007b, 2007e; Makhrova i Molodikova, 2007; Rebernik, 2007; Andrusz et al., 1996; Cavrić, Nedović-Budić, 2007; Blau, Rupnik, 2007). The processes taking place in Zagreb are very similar to those in other post-socialist cities in Europe.

Economic factors have played a key role in changing the urban structure. Their main spatial characteristic are commercialisation of the inner city and the expansion of traditional central business district (CBD), formation of new business districts, revitalisation of a derelict land, densification and infiltration of new elements into an existing urban fabric, residential and commercial suburbanisation, erosion of public space and automobilisation (Bašić, 2003, 2005; Čaldarović, Šarinić, 2008; Jakovčić, Rebernik, 2008). Besides functional and morphological changes, there is a significant increase in socio-spatial differentiation (Prelogović, 2004). The outcome of these changes has both positive

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² Statistical data refers to a compact urban area or formal city. Administrative-territorial unit of City of Zagreb has around 780,000, while urban region has nearly 1,000,000 inhabitants.

and negative impact on a daily life of the citizens as well as on the urban space itself.

The aforementioned changes and problems the city is facing in the post-socialist era serve as a research framework and are discussed in this paper. Based on the research of cartographic sources and conducted fieldwork four representative types of problem areas of the city are recognized. According to their functional and morphological characteristics, they are:

- Converted urban land areas
- Derelict areas
- Newly built areas
- Densified areas

Each of these four types of problem areas is individually analysed in the context of possible negative consequences on the urban environment. Therefore the main goal of this paper is to register and explain crucial causes of these spatial transformations, mostly their functional and morphological components.

The paper has four main parts. The introduction remarks are followed by a short note on planning system, emphasizing the role of particular spatial (physical) plans in urban transformation of Zagreb. The third and the main part of the article brings detailed analysis of problem areas in Zagreb. In the final part concluding remarks are given.

POST-SOCIALIST TRANSFORMATION OF URBAN SPACE – A NOTE ON THE PLANNING FRAMEWORK

Croatia and Zagreb have a long tradition of institutionalised planning system dating back to times of different socio-economic and political relations. Through all of that time planning practice was clearly defined with hierarchical organization of both institutes and spatial plans (Mrak-Taritaš, 2008). After the Croatian independence significant changes occurred in the planning system. New legal acts were introduced and relations between actors who participate in the planning process were considerably modified. Unfortunately the whole planning process didn't adapt efficiently to the new economic and societal circumstances at the beginning of the 1990's (Cavrić, 2009; Magaš, 2007). As a consequence, for a period of time an inappropriate and outdated planning policy was

in practice, reflecting negatively within the urban space.

Only in 1994 the first Act on spatial planning was passed (Zakon o prostornom uređenju NN 30/94). This Act reinforced the structure and hierarchy of different kinds of spatial plans, and established integral system of planning. In light of Croatian accession to EU, after 2000 entire legislation and planning system had to be accommodated according to EU standards. It took several years to introduce a new Act on spatial planning in October of 2007 (Zakon o prostornom uređenju i gradnji, NN 76/07).³ On the basis of this Act all of the planning documents are divided in two groups: strategic and implementation plans.

The City of Zagreb as a political, economic and cultural hub of the country is the strongest engine of all the major activities and processes in the space. Plans that are reinforced for the City are strategic.^{4 5} It is important to emphasize that City of Zagreb didn't have any new spatial plans, neither strategic nor implementation for an entire decade. First Master plan was reinforced in 2000 and its content has been a subject of change for several times. It is very indicative that precisely the changes and supplements of the Master Plan have contributed to significant changes in the urban fabric.

PROBLEM AREAS IN THE URBAN STRUCTURE OF POST-SOCIALIST ZAGREB

In this chapter four aforementioned problem areas are discussed. Their spatial distribution is showed on Figure 1.

Converted land use areas in Zagreb include Preradović square (Cvjetni trg/Flower Square), business and shopping centres of "Ban

centar" (currently in construction), "Importanne Galleria" and "Prebendarski vrtovi", parts of industrial zone Žitnjak, Vukovarska street-east, Heinzelova street-south, Radnička road, Zavrtnica, city quarters and neighbourhoods of Sopnica, RIS and Špansko-Oranice. Newly built areas include city quarters and housing estates of Lanište, Središće, Borovje and Buzin as well as shopping centres "Avenue Mall" and a cluster of shopping centres and specialized hypermarkets in the western part of the city. Densified areas encompass city quarters and neighbourhoods of Vrbik, Trešnjevka, Kajzerica, Dubrava, Podsljeme area, and Vukovarska street-west. Derelict areas include the former textile and haberdashery factory "Nada Dimić", steam mills of Paromlin, liquor factory "Badel", cement factory "Sloboda" and the Tobacco Factory Zagreb.

Converted land use areas

A number of city areas have been functionally and morphologically transformed in the last fifteen years due to significant social, economic and political changes. One of the most notable processes is converting urban land with previous industrial or military function into residential and business areas, as well as converting residential areas into business and retail districts. Processes mentioned above are often accompanied by transformation of public spaces into private land.

After the 1990s there was a rapid growth in the service sector of countries in transition, which led to a greater need for new office and retail areas (Stanilov, 2007c). Most of the required land has been found in former industrial zones, neglected after the production has been halted or moved to another place (usually to the city periphery). The expansion of the tertiary sector was the most influential factor in transforming such city spaces.

Today, in the area east of what is traditionally referred to as Zagreb city centre, a new business centre is being formed. This is the area approximately enclosed by the streets Vukovarska-east, Heinzelova-south, Zavrtnica and Radnička road, where industrial facilities, warehouses and low-quality housing once stood (Sić, 2007). Functional changes led to a noticeable morphological transformation of the space in question. Building new, mostly business facilities in the form of tall and modern high-rises characteristic of CBDs in western countries has significantly changed the

³This Act regulates the system of planning and construction, jurisdiction (authority) of local (regional) government in an administrative and other procedures, and an administrative supervision.

⁴Since the City of Zagreb has a status of a county, consequently a spatial plan has all the elements of a county spatial plan.

⁵Master plan of the City of Zagreb is spatial planning document and a part of urban development strategy of the city. It defines spatial organisation, protection of natural, cultural and historical sites, land use, standards and definitions of urban rules for particular parts and for the entire City.

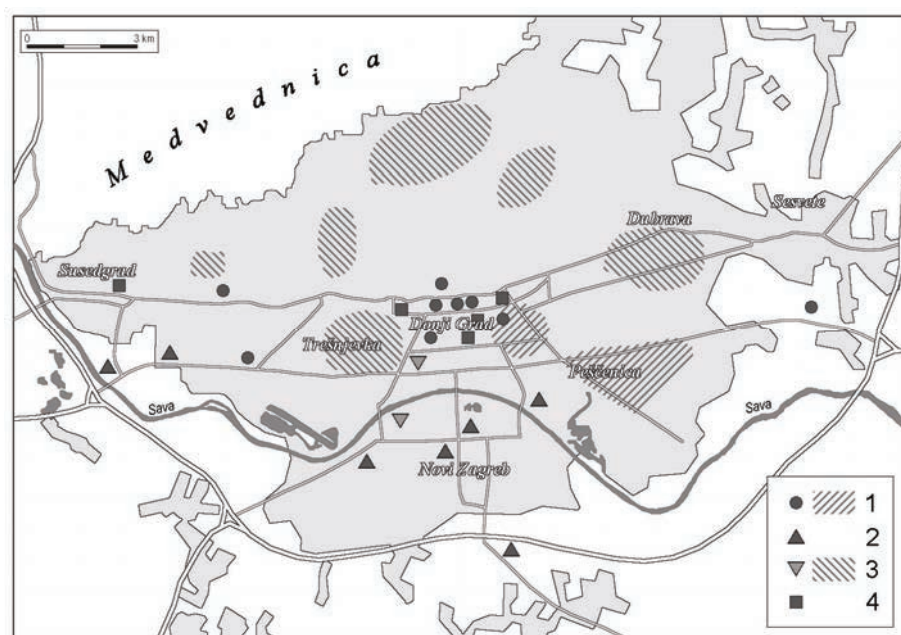


Figure 1: Spatial distribution of problem areas in Zagreb (1-converted land use areas, 2- newly built areas, 3-densified areas, 4-derelict areas)



Figure 2: Development of the new CBD on Radnička Street (photo by: Lana Slavuj)

symbolic landscape of that part of the city, thus "emphasizing private and foreign investment" (Sýkora, 2007:138). Development of new office spaces has resulted in physical and economic revitalisation of the industrial land and gradual formation of the polycentric structure of the city.

The greatest interest for private investors lies in business and residential facilities, but their interests is not always in accordance with the existing regulations and city planning

documents. Thus, some of the facilities in the newly established CBD are oversized and the access infrastructure, due to a large number of vehicles, does not completely fit their needs. The formation of the new CBD has generated more traffic and has caused additional traffic congestion. Former industrial areas have been remodelled not only for business purposes, but also for residential or at least partly residential purposes. A typical example of this is the new residential area under construction, named

Sopnica-Jelkovec, situated in the eastern outskirts of the city called Sesvete. The residential area was built on a land previously used as a pig farm, and is a part of the so-called Zagreb model of housing construction for the low-income families. It is spread across 39.54 hectares with 2 722 apartments (Source 1). The project was heavily criticized by the experts as well as residents (Source 2). There are several major flaws in the new residential area: great housing density, absence of large green areas, additional facilities (although planned, they haven't been constructed yet, so dwellers are left without some basic services), lack of communal and parking spaces (Source 3, 4).

In the buildings' ground-floor area there are lots of unsold office spaces. Empty or dilapidated office spaces within business-residential buildings are fairly common in other parts of the city as well, reflecting badly on the aesthetics of the whole residential area (Source 5).

Former military areas within the city have also undergone through a gradual functional and morphological transformation. One of the best known examples of such converted military area is found in the eastern part of the city where a former military camp has been transformed into a university campus. Another example is the new residential area called Špansko-Oranice in the western part of the city.

Furthermore, transforming public spaces such as city squares, pedestrian zones or housing estates into private places is another well known process in the post-socialist city (Engel, 2007; Ioan, 2007; Stanilov, 2007d). Due to the privatization of urban land in the transition period, public space is drastically shrinking. Little attention is given to its prior functions and its importance for the general public (Stanilov, 2007d). Privatization of public spaces prevents access to certain areas of the city to its inhabitants, thus changing their well established routines. A great deal of responsibility for this lies with the political elite which (with their actions and disregard for the public opinion) grants access to public resources to private investors. There are many examples of this in Zagreb, but the best known ones are the privatization of city courtyards, squares and street sections, as well as the devastation of cultural symbols in the historical city centre of Donji grad. Investors often do not follow regulations and disregard the contextual character of the surrounding buildings, thus creating new buildings that do not fit in the

existing urban structures. Shopping mall "Importanne Galleria" was built on an inadequately small plot and it is a lot taller than the surrounding buildings (the same stands for the business and trade centre "Prebendarski vrtovi"). "Ban centre" is another business-residential centre that is awaiting construction in the very heart of the city, on a plot that was formerly used as a public parking lot.

By far the most famous example of transforming public space into private place is that of Preradović Square (Cvjetni trg/Flower Square). At a place where the former cinema "Zagreb", an old printing house, and a few residential blocks once stood, a private investor is building a new business and housing complex. The fact that the Zagreb's City Master Plan has been changed several times in the period between 2007 and 2008 to favour the private investor, led to public protests and debates. The planned oversized complex will take a strip of the public pedestrian zone of the Varšavska Street for the entrance into an underground garage with 360 parking spaces. Besides contributing to the erosion of the public realm, this is a paradoxical way of solving traffic problems in the city, even though the investor and certain politicians claim otherwise. Underground garages will only attract more vehicles into the city centre which is already congested and away from large traffic nodes (Sýkora, 1999; Svirčić Gotovac, Zlatar, 2008). Apart from the existing seven parking garages in the city centre, three more are being planned for construction (Klaićeva Street, near HNK-Croatian National Theatre, Preradović Square). Compared to Western Europe cities (for example, Stockholm), in 2007 Zagreb has already had 37% more garage parking places in the city centre (Source 6). Although the number of registered motor vehicles in Zagreb has rapidly grown in the recent years – in the period 1995-2007 the number has increased for 126%, i.e. from 176 970 to 399 283 vehicles (Statistički ljetopis Zagreba, 2008), this kind of city policy is part of the problem rather than an efficient solution. Encouraging the private motorized transport necessarily leads to an even greater congestion and air pollution making the streets unattractive for pedestrians (Stanilov, 2007d). Instead of expensive garages, the focus should be on the enhancement of public transport system, the creation of bicycle tracks and encouraging pedestrian traffic. Different non-governmental organizations have been issuing warnings about omissions like this one, circumventions

of the law and the favouring of large scale private investments by changing the existing city planning documents, but their voices are being ignored. As Stanilov (2007e) noticed, the biggest limitation of the planning process in the post-socialist countries is the failure (or the incapacity?) of the planners to involve the public into the planning process, including the establishment of vision and goals, the identification of alternatives, plan development and its implementation.

New land use patterns in a number of city locations have resulted in inadequate spatial interventions that stand out from the immediate urban surroundings, often in violation with urban and construction rules, maximising plot use for a better profit and using low quality materials which, in some cases, led to catastrophic consequences on the environment (Kupska Street collapse, for example).⁶

Derelict city areas

There is still a portion of unused industrial land containing the relics of shut down industrial facilities in the city fabric. Such areas undoubtedly represent exceptionally significant development resources. Furthermore, some of this land is located near the city centre which makes it economically even more valuable. Certain industrial objects, old factory buildings and facilities represent valuable specimens of industrial heritage and are protected as cultural monuments. In spite of their architectural, cultural and historical importance, most of these edifices are left to ruin. Good examples are "Paromlin" and "Nada Dimić", industrial complexes situated near the main train station; areas and buildings of the tobacco factory; city slaughterhouse in Heinzelova Street; factories "Badelj", "Gredelj", "Gorica" and "Zvijezda" oil factory. The collapse of parts of "Paromlin" and the factory edifice of "Nada Dimić" testify to the on-going degradation of such city areas.



Figure 3: "Paromlin" – derelict industrial area in the city centre (photo by: Lana Slavuj)

The collapse of "Nada Dimić" was caused by a fire and the construction works near the old foundations of the factory during preparatory works for a future shopping centre (its underground garage to be precise, which was being excavated without the necessary legal documents retained by the private investor). Illegal interventions and not following the regulations, as in this case, is just one of many examples how the large scale private investments are shaping new city areas following their own interests and laws, while bypassing the public and the legitimate ones. Whether because of the perfidious and deliberate neglect of these spaces (when they totally decay it is easier to tear them down and build a new business complex instead) as the public suspects, or not, the fact is that much valuable land and objects have stayed neglected for more than a decade. Part of the problem lies in the complex and often unsolved property relations, as well as the unwillingness of the investors to follow the conservationists' provisions. Only lately the first steps towards the revitalization of some of the above stated objects were taken (for example, the passing of the DPU's or Detailed spatial plans as well as project tenders), while some other, especially the protected cultural monuments, still await a more concise future purpose. The anticipated new land use patterns include the building of new business or business-residential objects (Textile industry and cement factory "Sloboda").

There are many cases of successfully renewed industrial facilities in Europe. They demonstrate the possibility to use the city's industrial heritage for its contemporary needs. Through adaptation and adjustment for new purposes (business, retail, housing, art) and not necessarily neglecting them, former industrial facilities can become valuable development resources. Some of the well known examples include Dublin and London Docklands where old industrial derelict land was converted to different housing, business and retail zones. In addition, parts of German industrial region of Ruhr are included in the "European Route of Industrial Heritage". Other examples include London (Tate museum), Paris (D'orsay museum), Hamburg (Museum of work) and others where industrial heritage became a successful tourist product.

Densified areas

The impact of economic transition on housing sector in former socialist cities, including

Zagreb, was extensive. Together with large-scale privatisation of companies, both land and housing sector were privatised, which included changes in the ownership structure and management as well as a different means of financing housing construction (Pichler-Milanović, 1994). Turmoil in the economic system caused a downwards trend in housing investment in 1990'. In case of Zagreb and Croatia the situation was further aggravated by the armed conflict following the collapse of Yugoslavia. After a period of stagnation, the last decade has seen an increase of investment in the housing sector (Stanilov, 2007a). For example, in total 6031 buildings were

constructed in the City of Zagreb in the 2003 – 2007 period with 92% being built exclusively for housing purposes. Upgrading and expanding took only between 10 – 15 % of the total amount of construction in that period, and the rest is newly constructed buildings.

According to the 2001 Census there were 779 145 people living in the City of Zagreb, and mid 2007 estimates show an increase of 1%. Therefore, population growth couldn't have played an important role in expanding the housing sector. The actual reason lies in the fact that the shortage of apartments existed in the socialist era and was inherited – the small increase in population number was compensated by a

reduction in the size of the average household (Stanilov, 2007a; Mandić, Clapham, 1996).

There are two dominant processes in the spatial distribution of the newly built facilities: one is the construction of new residential units or commercial facilities on aforementioned converted land use areas or on previously unused plots, which will be discussed later. The other one is so called densification of already built-up areas which is, in the case of Zagreb, one of the main goals of the city planning regulations. The 3rd paragraph of the 2007 GUP (City Master Plan) clearly states that the goal of the spatial organization of Zagreb is urban renewal and consolidation of its urban areas which will be achieved through the following planned measures: densification of the built-up areas and the rehabilitation of the built-up stock. Even though this measurement was de iure a planned one, the densification of urban areas in Zagreb has demonstrated different characteristics. One of the reasons is that after a change from planned economy to market economy the idea of Government control over private investment was regarded as inadequate. In urban planning it resulted in a liberalized and individual approach in investment decisions, because restricting private investment was seen as a hindrance to economic development (Stanilov, 2007e). Without a clear strategy of urban development and for the purpose of maximising profit, oversized buildings were being built on relatively small plots and without adequate supporting infrastructure.

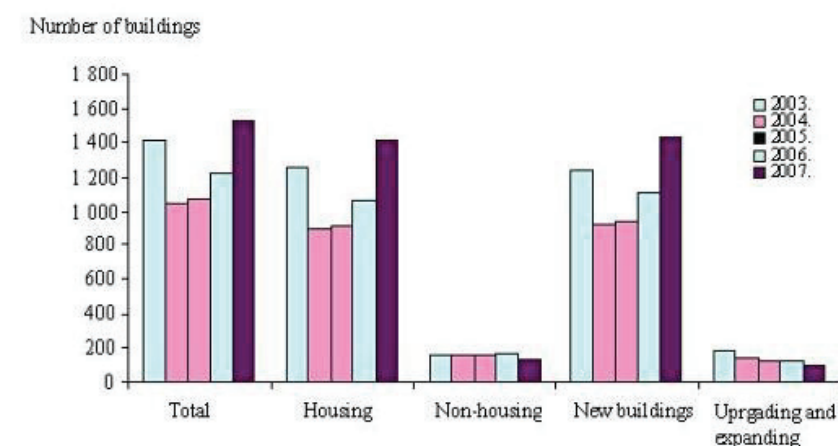


Figure 4: Constructed buildings in Zagreb 2003-2007 (Source 7)



Figure 5: Densified area of Podsljeme zone (photo by Lana Slavuj)

Zagreb district of Trešnjevka, its northern parts in particular, is a prime example of densification. 62 371 residents live in an area of 5.2 km² (data for Trešnjevka-North city quarter). At 10 700 people per km² (Source 8) it is the second most densely populated city quarter in Zagreb, second only to the Donji grad area. Trešnjevka was built in the interwar period as a residential quarter for working class families. Single storey houses used to be dominant in the area, but recent decades have seen these houses condemned and tall buildings built in their place, mostly without any urban planning. The city panorama became disfigured, new buildings aren't compatible with morphological characteristics of the surrounding terrain, and they are built too close to each other with a total disregard toward the need for green spaces. Traffic congestion is also a major issue. All that has resulted in the reduction of quality of life. Examples of urban devastation on this scale aren't limited to

Trešnjevka, they can also be found in Trnje, Vrbik, parts of Dubrava, Kajzerica and the Podsljeme area.

Sić (2007) wrote about the interpolation of multi storey buildings into the urban structure of the Podsljeme zone. The recent increase in the so called "urban villa" construction along major traffic routes of Podsljeme is a result of upper class migration into the attractive residential areas. However, overdevelopment and lack of planning resulted in the area becoming oversaturated with buildings, green spaces have decreased in size, and an overall loss of the characteristics which made the neighbourhood desirable in the first place occurred. Traffic congestion, roads without sidewalks and insufficient supporting infrastructure (including schools and kindergartens) caused a number of problems, not the least of which is the fact that Zagreb's urban area invaded the Medvednica nature park area. Unplanned and unsuitable development within the Nature park's areas was one of the main reasons for passing a law in 2009 which shrunk the total area of the Park from 22 826 hectares to 17 938 hectares (NN 25/2009).

Newly built areas

Besides densification, another process commonly occurring in post-socialist cities is a spatial restructuring resulting in the transfer of functions to a city's suburban areas – suburbanisation (Stanilov, 2007a). The context

of a new, more liberal real estate market facilitated the domination of commercial services in city centres, pushing residential functions into suburban, un-built areas. The advantages of suburban areas are multiple – in addition to noticeably lower prices of land, its suitability for large scale construction (especially important for large shopping centres which are usually too big for available building zones in the city centre), the psychological factor shouldn't be disregarded: people want to move out from multi storey large buildings into so-called "green oases" outside the loud, densely built urban areas.

The process of suburbanisation is clearly visible in today's Zagreb, not only in its residential aspect, but also in the commercial functions with large shopping centres sprouting in the eastern and western city limits. The appearance of shopping centres is usually a result of increased purchasing power of the people and an overall growth of the tertiary sector during the transition period. Unlike in the West, where suburbanisation had started with the residential function and was followed by relocation of commercial functions, post-socialist countries often saw large shopping centres precede the influx of residents into the suburbs. According to Stanilov (2007a), the reason behind this was the desire of large shopping centres to penetrate new markets as soon as possible. Low purchasing power of Zagreb's citizens had somewhat delayed that process in Zagreb, as did unresolved land

ownership issues and a series of other problems (Lukić, Jakovčić, 2004). There were many favourable factors for the construction of shopping centres in the city periphery – in addition to lower real estate prices the area has good traffic connections with main city routes such as Zagrebačka and Slavenska avenues. Furthermore, several city quarters (Malešnica, Prečko, Špansko) are located to the north and south of Zagrebačka Avenue. Their proximity was one of the important contributing factors for the construction of several shopping centres and specialised hypermarkets in the western Zagreb rim (Sić, 2007).

The factors that contributed to the relocation of commercial functions to the city periphery were no different when it comes to building new housing units in Zagreb area. Compared to the socialist period, there are some similarities in housing construction. The typical block structure – multi storey apartment buildings – was kept, but their distribution within the city is more heterogeneous. In addition, building blocks are built much closer to each other and with more storeys, and in part they have a mixed residential-commercial function (Sić, 2007). There are several examples for such residential suburbanization in Zagreb, with Lanište in the southwest and Borovje in the southeast being the most well known. The first housing unit in Lanište was built in the early 1990s, and 3 500 people live in the city neighbourhood today (Source 9, 10). Problems occurring in the area are similar to those in densified zones – buildings up to 9 storeys high are being constructed too close to one other, population increase is accompanied by more cars which cause traffic congestions, the number of parking places is insufficient, the supporting infrastructure is inadequate and green areas are shrinking. In case of Lanište major problem is the connection of the area to the city centre via the so called Rotor (roundabout), one of the trouble spots of Zagreb traffic network. The solution for that problem is the construction of a new bridge across Sava near Jarun. Preparatory works for that haven't even started.

The state and local authorities haven't completely withdrawn from housing investments. Subsidized apartments for lower class citizens and Homeland war veterans at several locations are an example of that, as are apartments for junior researchers financed by the Ministry of science, education and sports in Borovje. Although the latter was highly praised in the beginning, the results were soon



Figure 6: New housing units in Lanište (photo by Lana Slavuj)

criticized (Source 11) due to poor project management, inadequate architectural solutions and an overall bad result. Additional projects at the un-built Borovje-south area are planned.

One of the ways how government and local authorities try to control the chaos created by opening the real estate and construction sectors to private investments is so called "urban reparcelling" ("komasacija") which was put into the Act on spatial planning and construction from 2007 (NN 76/07). According to the Act, urban reparcelling is a mean of reshaping parcels together and solving ownership issues and other legal matters, in order to enable construction. Urban reparcelling also allows expropriation of land and it should ensure a proportional level of construction of roads, green areas and facilities of public importance as well as housing units, but also prevents possible speculative management of real estate used for maximising profits (Source 12).

CONCLUSION

Carried out research of the urban structure of Zagreb confirmed the existence of four problem areas which mirror social, economic and political changes of post-socialist urbanisation. Key initiator of these changes is interrelation of economic (transition from planned to market economy and strengthening of a private sector) and political factors (forming of a new legislative and planning framework). This symbiosis has made possible for new actors (political, economic, professional, NGO's, public) to operate in the urban space. As a consequence many areas in the city have faced functional and morphological transformation. The process of physical and economical regeneration of former industrial and military land is noticeable, i.e. its conversion into spaces for tertiary and quaternary sectors and housing. The transformation of public spaces (such as city squares, pedestrian zones or housing facilities) into private spaces noticed in other post-socialist cities is also present in Zagreb. Part of the still underused and derelict industrial land with accompanying buildings that undergo or await transformation represent important city development resources. Its transformation will lead to a further differentiation of urban landscape.

In spite of new development possibilities and big investments, not all revitalization concepts and public space use represent the best solution. This is particularly apparent in the

urban densification process. Although conceived as a carefully planned measure aimed at revitalizing parts of the urban stock and regulated by the City master plan, its effects were complete opposite. Individualized and liberalized decision making policies regarding investment decisions resulted in the devastation of certain urban areas through construction of oversized buildings and inadequate infrastructure. Increasing suburbanisation saw a number of residential quarters and retail objects appear in hitherto undeveloped areas of the city outskirts. Instead of streamlining the development through adequate planned regulatory measures, the process was, for the most part, left to unfold on its own, reacting solely to immediate market demands and disregarding the long-term needs of the urban area's population. A large number of actions conducted in the city landscape have irreversible characteristics meaning that any solution, no matter positive or negative, is long-lasting. Therefore every intervention in the urban fabric should be a result of a scientifically based act of spatial planning. In addition, as long as existing laws are violated, problem areas will continue to emerge.

Changes in the urban landscape and the general disregard for regulations, coupled with many amendments to planning documents in favour of large scale private investments are an everyday occurrence in Zagreb. "Rampant capitalism" and the need to maximize profits have left a deep mark in the urban fabric, which will reflect negatively on the quality of life of its citizens for times to come.

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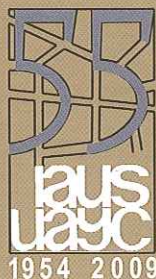
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