The Spatial Aspects of Development in South-eastern Europe*

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Abstract

This paper analyses for the first time the spatial structure of South-eastern Europe in an effort to assess regional imbalances, border conditions, urban hierarchies and detect the adjustments of the region to the forces of integration and transition. The analysis is based on a unique data base compiled from national sources and is carried on with the use of statistical, diagrammatic and cartographic methods. The analysis shows that South-eastern Europe is characterized by increasing regional disparities, an increasingly superior performance of the metropolitan regions, serious discontinuities at the borders which have, in most cases, generated over-time border regions with below average performance and finally an urban system with serious deficiencies in medium sized cities. These findings suggest that regional policy should become a permanent ingredient of indigenous and international development initiatives, which need to pay a greater attention to the needs of border regions, encouraging and promoting programs and policies of cross-border cooperation.

Key words: regional inequality, urban system, transition, South-eastern Europe

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1. Introduction

A growing literature is now concerned with the regional aspects of the transition process and the type and evolution of regional disparities in Central and Eastern Europe. A recent paper (Petrakos 2001a) and several previous studies[1] argue that the process of transition in Central and Eastern Europe is associated with increasing regional disparities. His analysis of Poland, Hungary, Romania and Bulgaria has revealed many similarities but also significant differences among these countries. The latter are related to national characteristics (such as institutional factors), to economic factors (such as the level of development), to the success of restructuring and catching up, to size and to geographic co-ordinates. Although the process of spatial adjustment to the forces of transition is very complex, the available evidence seems to reveal some general patterns. It shows that in countries sharing common borders with the EU and being at a short distance from the European core, spatial adjustments have been favouring metropolitan and western regions. In addition, countries with a better record in terms of transforming their economy, and with a larger size, tend to experience increasing disparities less often and less intensively than countries with a less successful record and a smaller size. However, disparities have increased at various rates and degrees in all transition countries to levels that are higher than those in most of the EU countries.

In other parallel literature concerned with the prospects of countries or macro-regions in the new European economic environment and their adjustment to the market and policy driven forces of transition, a number of papers have focussed on the less advanced and most problematic European Region: the Balkans[2]. In this literature it is argued that one of the factors that has affected the performance of the Region[3] is related to its 'unfavourable geography'. Besides the lack of adjacency or proximity of all Balkan countries to the European development centre, the region is characterised by a

[1] A number of early reports have paid attention to the spatial aspects of the transition process. Petrakos (1996a) has attempted a theoretical inquiry concerning the interaction of the various processes of transition and space. At the same time, a number of empirical papers appeared. Evidence from Estonia shows that core-periphery differences have increased, with Talin and Western coastal regions benefiting the most from the new orientation of the country (Raagmaa 1996). Evidence from East Germany already indicates that development is highly selective and depends on the behaviour of foreign capital. Berlin emerges as a development pole with strong links with the West German and the international economy but weak local linkages and low spread effects (Haussermann 1993). Similar trends have been detected in The Slovak Republic, where Bratislava, with 9% of the national population, generates 30% of the country's GDP (Balaz 1996). In Hungary, disparities increased during the early years of transition (Fazekas 1996), although regional unemployment patterns have remained stable (Fazekas 2000). FDI and domestic capital prefer metropolitan and western regions (Lorentzen 1996, 1999), turning an already unbalanced pre-1989 situation of the regions into a serious core-periphery and east-west disparity (Nemes-Nagy 2000). Additional evidence comes from Poland (Gorzelak 2000), indicating that different regions adjust in a different way to the new economic environment. Another study (Ingham et.al. 1996) shows that the regional pattern of unemployment is relatively stable in the 1990-1994 period, indicating that initial best performing regions are also final best performing regions and initial losers are final losers also. This basic picture is also supported by reports for Albania (Petrakos 1996b), Bulgaria (Minassian and Totev 1996, Petrakos 1996b) and Romania (Ramboll 1996, Constantin 1997).

[2] See for example: Petrakos and Totev (2000), Petrakos (2000a), Petrakos and Totev (2001).

[3] In the rest of the paper the term 'Region' (with upper case R) will refer to Southeastern Europe as a European Region, while the term 'region' (with lower case r) will refer to refer to national subdivisions, usually NUTS III level regions.

relatively high degree of fragmentation, as it is comprised of many relatively small countries, which, generally speaking have poor economic interaction (Petrakos 2000a, Petrakos 2001b, 2001c).

This paper intends to analyse the spatial aspects of the development process in South-eastern Europe on the basis of statistical, diagrammatic and cartographic analysis. There are a number of reasons that make such an analysis useful. First, we would like to have more concrete evidence about the regional evolutions in a European macro-region that has been characterised by relatively low levels of development and relatively poor performance under transition. For a number of countries this might well be the first time that any sort of regional analysis becomes available in the international literature. Second, we would like to have a better understanding of the type of disparities that have been characterising the region and especially the condition of the border regions. Earlier work (Petrakos 1996b, 1997) based on the experience of Albania, Bulgaria and Greece has indicated that South-eastern Europe is a highly fragmented economic space with national development axes that do not meet with each other, and border regions that are characterized by low levels of development. Finally, we will attempt to have a first look into the structure of the Balkan system of urban centres in an effort to identify poles or axes of development on a macro-geographical level and examine the possibilities for balanced growth at the national level. Therefore, our analysis intends to contribute to the understanding of the economic conditions in South-eastern Europe and of the prospects for development and cooperation by adding the spatial dimension.

The rest of the paper is organised as follows: In section 2 we examine the evolution of regional inequalities in an effort to see in which countries the process of transition has increased inequalities. In section 3 we examine the pattern of regional inequalities and especially the performance of border regions compared to the national average. In section 4 we examine the urban structure of the region and finally, in section 5 we draw our conclusions and present some policy recommendations.

2. Regional inequalities in South-eastern Europe

In order to evaluate the level and evolution of regional inequalities in South-eastern Europe in the 1990s we used an extensive regional database compiled from various national sources by the University of Thessaly South and East European Development Center (SEED)[4]. The analysis in based on the following indicators of spatial inequality:

- The coefficient of variation (CV)– or ó-convergence coefficient (ó/$\overline{x}$) – defined as the population weighted standard deviation of regional GDP per capita divided by its mean value
- The ratio of maximum to minimum regional GDP per capita (max/min)

[4] This database includes regional information for Albania, Bulgaria, Bulgaria, Croatia, Greece, FRY, FYROM and Romania. It also includes digital maps at the NUTS III level and accurate information about the location and size of cities of over 10 thousand people.

- The â-convergence coefficient estimated from an econometric model in the tradition of Barro and Sala-I-Martin (1991) and
- The â-density coefficient estimated from the regression of regional GDP per capita on regional population density.

The coefficient of variation (CV) is a dimension-less index that allows cross-country, cross-variable and over time comparisons of the level of regional disparities. The value of the coefficient is basically determined by the value of standard deviation of a variable and, as a result, it is affected by all observations. In principle, the greater its value, the greater is the level of regional disparities. The max/min ratio is also a dimension-less index of disparities, but its value is affected only by the two extreme observations of the variable under consideration. In principle again, the greater its value, the greater is the spread of the observations and the greater the level of disparities.

The â-convergence coefficient is estimated from the regression:

$$y_t/y_0 = á + â\, y_0 + e \qquad (1)$$

where y_0 is regional GDP per capita at the beginning of a time period and y_t is the same variable at the end of a time period. Obviously, the y_t/y_0 ratio indicates the growth of regional GDP per capita in the (0, t) period. As a result, a positive relation (â>0) of this dependent variable with the initial value y_0 would imply that regions with a higher initial value of y would tend to have a higher growth performance. On the other hand, a negative relation (â<0) of the dependent variable with the initial value would indicate that the best performing regions tend to be those with the lower initial values. This indicates that positive values of the estimated coefficient â are associated with tendencies of regional divergence, while negative values with tendencies of regional convergence.

Finally, the â-density coefficient is the slope coefficient of the regression of GDP per capita on regional population density. A positive value of this coefficient for GDP per capita indicates that regions with a higher population density enjoy a higher level of GDP per capita. This coefficient is a measure of inequality based on agglomeration economies.

Table 1 presents for each country the weighted coefficient of variation (CV) or ó-convergence coefficient, the max/min ratio, the â-convergence and the â-density coefficients for years with available information in the early and late 1990s. The inter-temporal character of the information allows for a first assessment of the impact of transition on spatial disparities and on the prospects for a balanced type of restructuring and growth in the Region. A first observation is that all countries (except Albania) have experienced an increase in their CV and that, at the end of the period, all have CV values that are higher than that of Greece. Some countries like Romania and Bulgaria have experienced a relatively high increase in their CV, while others, like FRY have been characterised by high values of CV throughout the period. Also, all countries (with the exception of FYROM) have increasing max/min

ratios, which in the late 1990s are higher or significantly higher than that of Greece. FRY is an exceptional case of inequality measured by max/min ratio, as the most advanced regions of the country have GDP per capita values that are more than 20 times higher than those of the less advanced regions[5]. A second observation is that the â-convergence coefficient is positive and statistically significant in all countries for the period under examination. This finding, which indicates that GDP per capita growth is higher in the most advanced regions, provides evidence that serious divergence trends are in motion in all countries in the Region. Finally, we observe in the last column that the â-density coefficient is positive and statistically significant in all countries except FRY. This is an indication that more densely populated regions enjoy some sort of agglomeration economies, which allow for a more efficient organization of activities. It also implies that increasing inequalities in former socialist countries are – at least partly – an inevitable by-product of marketization and restructuring of the economy and, as a result, a condition that may have to be tolerated to some extent if they intend to achieve a higher level of efficiency. The exception of FRY is explained by the fact that some of the most densely populated regions of the country, in Kosovo, are characterized by the lowest figures of GDP per capita. When the Kosovo regions are excluded from the regression, the â-density coefficient becomes positive and statistically significant, indicating that in the rest of the economy agglomeration economies are in operation.

Figure 1 provides comparative information about the spread of regional GDP per capita around the national average for the early and late 1990s. The increase in disparities in visually evident in all countries with the possible exception of FYROM and Greece. Some countries (especially Bulgaria, FRY and Romania) tend to develop a metropolitan or core-periphery pattern of development, while some others (Albania, FYROM and Greece) have a more evenly spread distribution. FRY stands out as an exceptional case of serious inequality in Europe, with an unacceptable distance dividing the capital region of Belgrade from the poorest regions in Kosovo. This distance has occurred not only because of the relative improvement of Belgrade, but also because of the relative deterioration of the condition in most regions in Kosovo.

The dominant and improving position of the metropolitan regions is also verified by the data in Table 2, which provides relative GDP per capita figures for the capital cities of all countries in the early and late 1990s. We observe that in the period under examination capital regions have experienced a relative improvement of their position in all countries[6]. The region of Tirana had in 1998 (1990) a GDP per capita figure that was 39 (28) percent higher than the national average. The region of Sofia-city had in 1999 a figure that was 71 percent higher than the national average. The region of Skopje had in 1995 (1991) a figure that was 46 (66) percent higher than the national average. The region of Attica had in 1997 (1991) a figure that was 30 (15) percent higher than the national average. The region of Bucharest had in 1998 (1994) a figure that was 91 (31) percent higher than the national average. The region of Belgrade had in 1998 (1991) a figure that was 74 (52) percent higher than the national

[5] This extraordinary type of inequalities highlights one of the contributing factors to the Kosovo crisis.
[6] Keep in mind that data concerns capital regions, not capital cities. GDP per capita figures for cities should reveal even higher differences from the national average.

average. The regions of Bucharest (Romania) and Belgrade (FRY) have the highest difference from their respective national averages, while the regions of Tirana (Albania) and Attica (Greece) the lowest. Although the picture is not uniform, the analysis reveals a central point: One of the factors contributing to greater inequality in the 1990s is the strengthening of the position of metropolitan regions, a process that seems to be equally affecting the West and the East (Lever 1993, Coffey and Bailly 1996).

As a result, earlier assessments that the process of transition in the East is associated with increasing inequality at the regional level (Petrakos 2001a) seem to receive significant empirical support from our findings. To one degree or another, all countries provide clear signs that the reforms and the transition policies initiated in the early 1990s have a clear impact on their spatial balances. This is true also for Greece, an EU country experiencing greater competition in the integrated post-EMU markets with varying rates of success at the regional level[7]. How serious are these inequalities by international standards? One way to answer this question is to compare the CV and the max/min ratios of the countries in South-eastern Europe with the respective figures of the EU countries, which are provided in Table 3 in an ascending order. We observe in Table 3 that the Scandinavian and Mediterranean countries of the EU (Sweden, Spain, Greece, Finland) have, in general, a lower level of regional inequality than the western or central countries (Belgium, Austria, Germany, France). We also observe that most Southeast European transition countries have levels of inequality that are comparable to or higher than those of Austria, Germany or France. Of course, CV indicators are not directly comparable, as countries differ in size and some of them do not have NUTS III data available. The point, however, remains that regional inequalities in South-eastern Europe seem to be relatively high by EU standards. This may be an issue of concern in the immediate future. Given that some EU countries experience high levels of inequality despite the existence of long-established and well-funded regional policies, the odds for transition countries with non-existent, poorly designed and under-funded regional policies (Gorzelak 2000) do not seem to be very good.

3. Geographical patterns of regional inequality

In this part of the analysis we examine some critical aspects of the economic geography of Southeastern Europe with the use of a series of Maps. Map 1 presents population density at the NUTS III level for all countries with available regional data[8]. We observe that serious variations exist at the Balkan and the national levels, as some regions have higher concentration of population and activities than others. In general, each country has a metropolitan region with the highest density, which, in several cases is the most visible part of a broader area with a higher than average

[7] Petrakos and Saratsis (2000) have shown that the process of economic integration has affected performance at the regional level in Greece.

concentration of population and activities[9]. We also observe that in several cases, the border zones are among the regions with the lowest densities. This is most visible in the case of Greece, where 40 years of isolation in the post-war period have led to significant population erosion along the entire border zone. Similar low population densities can be observed in the Albanian borders with Greece[10], the Bulgarian borders with Greece and FRY, the borders of FYROM with Bulgaria and the borders of FRY with Bulgaria. Finally, one could argue that at the macro level the map does not reveal any 'continuum' of high population density across borders. The existing concentration of population and activities gives the impression that national development axes do not meet or cross anywhere, verifying the assertion that the Balkan region is one of the most fragmented spaces at the European level (Petrakos 2001c).

In Map 2 we present the most recent information about population change at the regional level for countries with available data. At the macro level, as we move from the South to the North and from the East to the West, we observe that we meet regions with negative or highly negative population change. In general, the Southern and South-western part of the region is characterized by positive population change, while the Northern and Eastern part is characterized by negative population change. In addition, the process of population change is characterized by a national pattern. The vast majority of regions in Greece and Albania[11] experience some sort of population growth, FRY and FYROM have a mixed pattern[12], while in Romania most regions experience a population decline in the 1990s. In Bulgaria all but the capital region have experienced a negative population change record in the same period.

In Map 3 we present the regional variations of GDP per capita around the national average for all Balkan countries with available information. Before we look into the regional patterns we should note that, at the national level, the Balkan countries are characterized by very different levels of development. Greece stands out as the most advanced country of the region with a GNP per capita equal to 12,110 USD in 1999, while Albania (930), Bulgaria (1,410), Croatia (4.530), FYROM (1,660),

[8] Bosnia is a special case, as before 1990, when it was a region of former Yugoslavia, it did not have any further regional divisions. After Dayton, Bosnia is divided into two spatial – ethnic entities for which there is no available information. Croatia was divided into regions in 1994.

[9] In that respect, these areas could be characterized as national 'development axes'. For example, Attica is the most visible part of a South-North development axis in Greece, which concentrates more than 70% of the national population. In Albania, the region of Tirana is the central part of a development area in the Western coastal part of the country, while in Bulgaria a (less visible) development axis connects the region of Sofia with Varna in the Black Sea. In FRY one could vaguely speak about a North-South development axis connecting Novi-Sad with Belgrade and Voivodina, while in Romania it is difficult to identify a development axis on the basis of the concentration of population.

[10] This Albanian region is characterized by the significant presence of a Greek minority, which, after 1989 has shown a higher than average tendency to migrate to Greece on a temporary, but also on a permanent basis. Therefore, it is possible that the lower population densities in the Albanian borders with Greece have been affected by post-1989 migration flows.

[11] Despite serious emigration to Greece and Italy, Albania maintains positive population growth records due to high fertility rates.

[12] In both countries the Southern regions, or those with a serious presence of Albanian population, have a positive record. In some regions positive population change is also related to immigration from Bosnia.

FRY (1,429), and Romania (1,470) are well below this level[13]. Therefore, two regions from different countries with the same position in the Map do not necessarily have the same or similar levels of development. The only common characteristic they have is the same position with respect to their national average. Map 3 provides more accurate information about regional variations at the national level and the formation of development poles or axes. To some extent, it verifies the findings of Map 1 (based on population density) with some interesting differences. Starting from Greece, we observe that Athens and Attica stand out as the most advanced parts of a South-North development axis covering most of the eastern part of the country. In Albania, the variations in regional GDP per capita reveal a North-South development axis in the Western coastal part of the country very similar to the one found on the basis of Map 1. In the case of FYROM, Map 3 presents a differentiated spatial pattern of development compared to Map 1. GDP per capita figures reveal a clearer North-South axis of development connecting Skopje with the Greek borders. In the case of Bulgaria, the development pattern maintains more or less a horizontal West-East axis connecting Sofia with the coastal cities of Varna and Burgas in the Black Sea. FRY clearly maintains a North-South divide and the greatest regional variation among all Balkan countries[14], as the regions around Belgrade and the Northern regions have a GDP per capita that is several times higher than that of Kosovo. In the case of FRY, population density and GDP per capita statistics produce a different picture, as higher population densities in the regions of Kosovo are not associated with a better than average growth potential. Finally, Romania is another case where statistics on the concentration of population and the level of development follow different spatial patterns. While population tends to have higher density in the Southern, Eastern and (some) Central regions, the variations in GDP per capita produce a different pattern. Besides Bucharest and the port region of Costanza, the relatively most advanced regions are found mainly in the Central and Western part of the country bordering on Serbia (Voivondina[15]) and Hungary.

One general observation that can be made on the basis of the Map is that there are serious flaws in continuity as the borders function as real barriers to economic activities and do not allow development axes to easily expand beyond borderlines. Of course there are cases where cross-border development axes seem to be (or could be) under formation. This can be claimed for the coastal cities and regions of Bulgaria (Burgas, Varna) and Romania (Costanza), which have a potential to form a Black Sea development axis[16]. This may also be claimed (under certain political conditions) for the cities of Skopje and Thessalonica, which may be the natural extension of the South-North development axis. Other possible axes could be the ones connecting Belgrade with Sofia through Novi-Sad, or Belgrade with Budapest in the North[17].

[13] Although figures in PPP tend to favor transition countries, the differences in GNP per capita levels remain significant.
[14] Without underestimating all other factors, this North-South divide in GDP per capita levels is undoubtedly one of the contributors to the recent Kosovo crisis.
[15] Voivodina is in the Northern part of FRY, where a significant Hungarian minority exists.
[16] This will be greatly facilitated by a Trans-European highway connecting Alexandropolis (a coastal city in North-eastern Greece) with St. Petersburg in Russia, passing through the coastal cities of Bulgaria and Romania.
[17] It is difficult to assert the probability that these (or other) cross-border development axes will become reality. Their future depends very much on the will of the countries to promote regional cooperation and regional

A second general observation is that national border regions are in several cases characterized by lower than average levels of development. This is certainly the case for a part of the border zone of Greece (especially its western part), the Western borders of Albania with FYROM and FRY, the Eastern borders of FYROM with Albania and the Western borders of FYROM with Bulgaria, the Eastern borders of Bulgaria with FYROM, and the Southern borders of Romania with Bulgaria. This is also partially the case with the Southern borders of FRY with Albania and FYROM and the Northern borders of Bulgaria with Romania and the Southern borders of Bulgaria with Greece.

The conditions prevailing in border zones with respect to their development levels are further discussed with the help of Map 4 and Table 4. In Map 4 we group the border regions of each country in border zones and estimate the relative GDP per capita of each zone with respect to national average. Each border zone includes all regions bordering on each neighbouring country. Table 4 provides the GDP per capita figures for each zone in the early 1990s and the late 1990s. As a result, the Table allows us to estimate the evolution of the relative position of each border zone in the post-1989 period.

The data in the Table reveals some interesting facts: First, the majority of border zones in South-eastern Europe are characterized by GDP per capita figures that are lower or significantly lower than the respective national averages. Second, the 1990s are characterized by a variety of adjustments to the new conditions, as some border zones improved their relative standing at the national level, while some others lose further ground. The border zones that lose ground and have, in the late 1990s, GDP per capita below the national average are: (a) the border zone of Albania with FRY, the border zone of FYROM with Bulgaria, the border zone of Romania with Bulgaria, and the border zones of FRY with Albania and Croatia. In most cases they are border zones of countries engaged directly or indirectly in Regional conflicts (Albania – FRY, FRY – Croatia), or countries with problematic international relations for a long period of time (Bulgaria – Romania, FYROM – Bulgaria). On the other hand, the most interesting case of improving relative standing concerns the border regions along the northern Greek borders. In the Greek – Albanian frontier, the Albanian border zone has improved its relative standing to levels of GDP per capita that are higher than the national average[18], while the Greek border zone has maintained the same relative standing. In the Greek – Bulgarian frontier, the Greek side has considerably improved its relative standing to levels that are close to average GDP per capita, while for the Bulgarian side there is no reliable data[19]. In the Greek – FYROM frontier, both border zones of Greece and FYROM have improved their relative standing to levels of GDP per capita that are above

integration, removing or reducing barriers to cross-border interaction. It also depends on the provision of transportation infrastructure, which is absolutely necessary for any activity. For example, if the 'Adriatic' highway connecting Dubrovnik in Croatia with Patras in Western Greece ever materializes, it will provide a great stimulus for cooperation and development in the entire Western Balkan region.

[18] We note that a significant Greek minority is present in the Albanian border regions. Because of that, the Greek Ministry of Finance has been subsidizing Greek investment activities located on the Albanian side of the borders. This may be one of the factors explaining the improvement in the relative standing of the border zone.

the national average. Other cases of relative improvement have been observed in the border zone of FRY with Romania (where a Hungarian minority is present), in the border regions of FRY with Bosnia (due to proximity with the Serbian part of the Federation) and in the border zone of Albania with FYROM (due to the nearby presence of an Albanian minority in FYROM). Map 4 presents the findings discussed above in an illustrative way.

Summarizing the evidence of Maps 1-4, we could argue that there are a number of interesting points to keep in mind. First, serious regional differences in development levels are found to exist within each country, with the most pronounced case of inequality being recorded in FRY. In this, but also in other cases, regional problems are associated with the presence of a minority. This implies that one effective way to deal with pressing matters of regional inequality is to address minority problems first. Second, and partly as a result of the above, regional problems tend to be more acute in border regions, either because of the presence of minorities, or because of unfavourable geography and pre-existing conditions in international relations.

Third, interaction along an East-West frontier such as the Greek northern borderline tends to generate beneficial results for both sides of the borders, a finding which is in line with the evidence from the border zones of Central with Western Europe (Names-Nagy 2000, Petrakos 2000, Petrakos 2001). Good economic relations at the national level, or the presence of reliable cross-border transportation infrastructure and the nearby presence of large urban areas tend to improve the relative standing and importance of border zones. The fact that the Greek – FYROM borders have improved their standing may be a combined effect of dramatically improved international relations and relatively good transportation infrastructure linking Thessalonica with Skopje.

The presence of a minority on either side of the border does not seem to impede progress in relative standing. On the contrary, it may act as a stimulus to further interaction, benefiting mostly the less advanced side of the border[20]. This is the case in the border zones of Albania with Greece, Albania with FYROM, FRY with Bosnia, FRY with Romania and Romania with FRY. An interesting conclusion of this analysis is that good international relations and intensive cross-border cooperation in trade and investment may prove to be an effective way to deal with rising spatial inequalities in the Region. Overall, the findings seem to provide some evidence that closer cooperation between neighbouring countries and open borders can also help to remedy some of the regional problems on either side of the borders. This is a case where the right type of international policies may also have positive effects in directions and fields not initially intended or expected.

[19] Regional data for Bulgaria is provided on a preliminary basis by the National Institute of Statistics and does not have an official status. Moreover, the period 1997-99 was too short to make any inferences about the evolution of the border zones. As a result, we decided not to report the 1997 data for the border zones.
[20] Under the condition that minorities have not become a reason for armed conflict, as in the case of Kosovo.

4. The urban system in South-eastern Europe

The evolution and structure of the urban systems in South-eastern Europe is virtually unknown in the international literature. With the exception of some research on Greece (Petrakos et al 1999), the information about the national urban systems in the other countries has been restricted to national documents. In addition to that, the urban structure of the region as a whole has never been examined before. Reports on the European system of urban places (Cheshire 1995) have ignored South-eastern Europe due to lack of relevant data. Therefore, a number of interesting questions concerning the structure of the urban hierarchy at the national and macro-geographical levels have not received any sort of answer yet. In this part of the paper we will examine some of these issues on the basis of available data for the urban system of the Balkan countries. An additional motive for undertaking a multi-national urban system analysis is the understanding that a macro-geographical view proves often to be the most effective approach to dealing with the many aspects of backwardness in the economic space of South-eastern Europe (Petrakos 2001b).

It is now a common place in the literature that the new economic environment tends to favour further spatial concentration of activities in metropolitan areas. Despite earlier expectations of a more balanced system of urban places at the international and European level (Parr 1985), the late 1980s and the 1990s have proved to be a decade of increasing urban concentration and strengthening of the relative position of the metropolitan centres at the world and the European levels (Cohrane and Vining 1988, CEC 1992, CEC 1993, Rosenblat and Pumain 1993, Cheshire 1995, EC 1999).

We base the analysis on Figure 2, Tables 5-8 and Map 5. In Figure 2 we present, in a logarithmic form, the national rank-size distributions of all the countries in South-eastern Europe for the latest year with available information. The logarithmic form makes the figure more visible and comparison easier. First, it is clear that all countries exhibit, to some degree, a core–periphery pattern. After the first city, the rank-size curve drops significantly and abruptly until it meets the second city, which is usually much smaller in size. Therefore, a first observation is that in most national systems of urban areas there is an obvious lack of medium sized cities. Although the removal of the first city reveals a much more normal distribution, this however, usually includes small and very small cities.

As Table 5 shows, capital cities are in several cases three, four, five or even eight times larger than the second ranking city. The country with the highest ratio and the highest degree of urban asymmetry on this basis is FRY, followed by Romania and FYROM. Note that in some countries such as Albania, FYROM or FRY, the second largest city is, in fact, a small city of less than one or two hundred thousand people.

Table 6 presents information about the national population share of the metropolitan region for countries and periods with available statistics. Note that the data refers to regional statistics and includes not just the city but also the wider area around it. The evolution of this index of metropolitan

concentration reveals a number of interesting facts. First, there is a general tendency of the index to increase over time, although this tendency is more obvious in smaller countries. To some extent, this tendency is in line with the relative increases in GDP per capita (Table 3), although the relative growth of GDP is greater than the relative growth of population[21]. Second, of all the countries in the region, only Greece (and to some extent FYROM) is characterized by a relatively high degree of metropolitan concentration. All other countries have a metropolitan population, which is in the range of 10-20 percent of the national population. This proportion cannot be characterized as high by international standards. As a result, the high ratios of first-to-second ranking cities of Table 5 are not related to a very large or dominant metropolis, but to the lack of cities in the range of 500 thousand people. Indeed, as Table 7 shows, with the exception of Athens, which has a population of over 3 million and Bucharest, which has a population of a little over 2 million, all other capital cities are relatively small by European standards[22] [23].

As a result, none of the countries in the region (with the exception of Greece) has developed a large metropolitan area and none (again with the exception of Greece) has developed a large in size second ranking city[24]. Why is there such a lack of medium sized or large cities in Transition countries in South-eastern Europe? In our view, there are three reasons. The first is related to the close and inward looking character of the pre-1989 economic system, which did not allow the development of significant economic relations on the basis of existing or created comparative advantages. This lack of specialization in international markets did not allow for the realization of agglomeration economies beyond the level required by domestic demand, and as a result, did not allow for the development of significant urban concentrations. The second reason is related to the fact that planning as a system had, in general, a greater preference for a balanced distribution of activities compared to markets. Practically, this was achieved through the distribution of investment in the 5-year plans and the control of population flows through public employment and housing. Although labour markets are less regulated now in most transition countries, it is the structure of land and housing markets in metropolitan areas that generate shortages and high prices, discouraging internal migration. The third reason is related to the fact that with the collapse of Yugoslavia there are now many more countries in the Region than before. Former Yugoslavia, which had an economy that was relatively open to the West, had several medium sized cities (Skopje, Sarajevo, Zagreb, Lubljana) that became the capitals of the new independent states in the 1990s.

[21] Why do rapid increases in GDP per capita in metropolitan areas not lead to faster relative population growth? One explanation is related to the scarcity of available urban housing and the skyrocketing prices of metropolitan land. Another explanation is related to the greater opportunities provided in capital cities for legal emigration (contacts, visas, etc.).

[22] This does not mean that the size of Athens and its dominant relation to the rest of the urban centers is a desirable outcome, or one justified by economic forces.

[23] Table 7 shows also something else. All countries in the region have some sort of flaw in continuity in their urban system, as all of them lack cities in at least one size group.

[24] It seems that Greece has developed a different urban pattern than the other countries in the Region, as it is characterized by a large metropolis (over 3 million), a relatively large second ranking city (around a million) and below that many small (less than 2 hundred thousand) cities. On the other hand, all other countries are characterized by a less dominant metropolis but also a less visible second ranking city.

Returning to Figure 2, we observe that the rank-size distributions have a hierarchical structure, not only within countries, but also between countries. In general a country with a larger national population is expected to have a rank-size distribution that is over and to the right of the distribution of a country with smaller national population. In that respect, the rank-size curve of Romania is above the curve of FRY, which is above the curve of Bulgaria, which is above the curve of FYROM. This in turn means that for a given rank in the hierarchy, i.e. the 5th place, we should expect larger countries to also have larger cities. Which means that the 5th city in size in Romania is expected to be larger than the 5th city in size in FRY, which is expected to be larger than the 5th city in size in Bulgaria, etc. This rule is useful as it allows us to have a better understanding of the relation between the size of the city and the size of the national market in an urban system. Larger markets do not generate only more cities. They also generate larger cities as the level of specialization is higher, the variety of products and activities is larger and the propensity for activities to benefit from agglomeration economies (and therefore cluster) greater. The Greek cities, however, do not follow this rule. Although the national population of Greece is greater than those of FRY and Bulgaria, the Greek cities (except the 1st and the 2nd) have sizes that are smaller than the cities of FRY or Bulgaria with the same rank. This is the outcome of the concentration of more than 60% of the urban population of Greece in Athens and Thessalonica, which unavoidably generates a restriction in the size of the other cities. In addition, it is an indication that beyond some levels of concentration, the evaluation of costs and benefits also has to take into consideration the implications of the atrophy of the peripheral cities.

Finally, in Map 5 we present the distribution of cities of over 100 thousand people in a background of population density at the regional level. As expected, larger cities and metropolitan areas are located in regions with high or very high population density, while regions with low density lack relatively large cities. This close coupling of urban and regional figures indicates that issues related to the size and structure of cities and factors favouring or inhibiting the realization of agglomeration economies often lie behind regional variations in performance.

Another interesting observation is that, in most cases, border regions lack cities with population over 100 thousand. For example, in the Greek border regions with Albania, Bulgaria and FYROM there are no cities of this size or larger. This is also the case with the border regions of Albania with Greece, FYROM and FRY, the borders of FYROM with Greece, Albania and Bulgaria, the borders of Bulgaria with Greece and FYROM, etc. The only significant exception to this rule seems to be the Romanian border regions, which in several cases are densely populated and have cities with populations equal to or higher than 100 thousand people.

Finally, it is worth noting that as we move from the South to the North on the Balkan scale, on the one hand we find regions with higher population density, and on the other hand, the possibility of finding cities with a population of more than 100 thousand increases. Indeed, Greece appears to be a country with a disproportionately small number of cities of over 100 thousand people (6), as most of the urban population is concentrated in Athens and Thessalonica. Bulgaria and FRY, despite having smaller

national populations, are in a relatively better position, having, respectively, 7 and 8 cities with population of over 100 thousand. Romania on the other hand, is the country that concentrates the largest number of cities with populations of over 100 thousand people.

As Table 8 shows, the situation is similar even for smaller cites, such as the cities with population of over 50 thousand. Comparing the national share of population with the national share of cities of over 50 thousand people, we observe that the Southern part of the Region (Greece, Albania, FYROM) has a proportion of cities that is either equal to or smaller than the proportion of population. On the other hand, the Northern and Eastern part (Romania, Bulgaria, FRY) has a share that is proportionately higher. Greece is the country with the most serious lack of cities with populations of over 50 thousand.

5. Conclusions

The analysis of the previous sections has revealed a number of important features of the spatial structure of South-eastern Europe which can be summarised as follows: (a) Increasing regional disparities, (b) increasingly superior performance of the metropolitan regions, (c) serious discontinuities at the borders which have, in most cases, generated over-time border regions with below average performance and (d) an urban system with serious deficiencies in medium sized cities.

These findings have a number of policy implications. First of all, high levels of regional disparities imply that development initiatives in the region (national plans, Stability Pact, SAP, etc) are required to have a strong regional dimension. Therefore, regional policies have to be an increasingly important part of development and transition policies.

Second, it is important to realise that the status of border regions, which have been lagging behind, has been imposed on them by unfavourable geographical, economic political and international conditions. As a result, policies aiming to deal with the problems of underdevelopment first have to address its causes at the domestic and international levels. The border regions in South-eastern Europe have experienced some interesting transformations in the 1990s. Some regions, especially along the East-West frontier have improved their relative standing, benefiting from higher levels of interaction, while some others have lost further ground in relative terms. Good international relations and intensive cross-border interaction in trade and investment, as well as EU funded policies of cross-border cooperation (Kotios 2001) may prove to be equally effective ways to deal with rising spatial disparities in the Region. While the macroscopic view is important in order to realise the extent of the problem and its causes, a development policy for border regions needs to take a microscopic approach and deal with the specific problems and difficulties faced at the local level. In that respect, surveys and studies about these problems must be understood as important background information that is necessary for the design and implementation of policies of development for border regions.

We conclude this analysis with a feeling that our findings are only the first steps towards a better understanding of the spatial regularities and changes of a unique – in many ways – European Region. Further research is required to unveil the social, political, economic and international parameters that are conditioning its spatial structures and prospects. For example, a future researcher may want to ask why the most open, prosperous and 'westernised' country in the pre-1989 period (the territory of former Yugoslavia) comprises of (nowadays) States that are, in most cases, politically unstable and have the least prospects to join the EU. Or, he might want to ask why – in contrast to the situation in the EU – the most developed part of the Region is in the South, why the East and the West have exactly the opposite meaning than at the European level and why the largest and most dynamic Regional metropolis is not in the North, but in the South. Seeking answers to these questions may prove to be a useful task not only for the students of spatial characteristics of the Region, but also to those concerned with its – again unique in Europe – diverging performance during the first decade of transition from plan to market.

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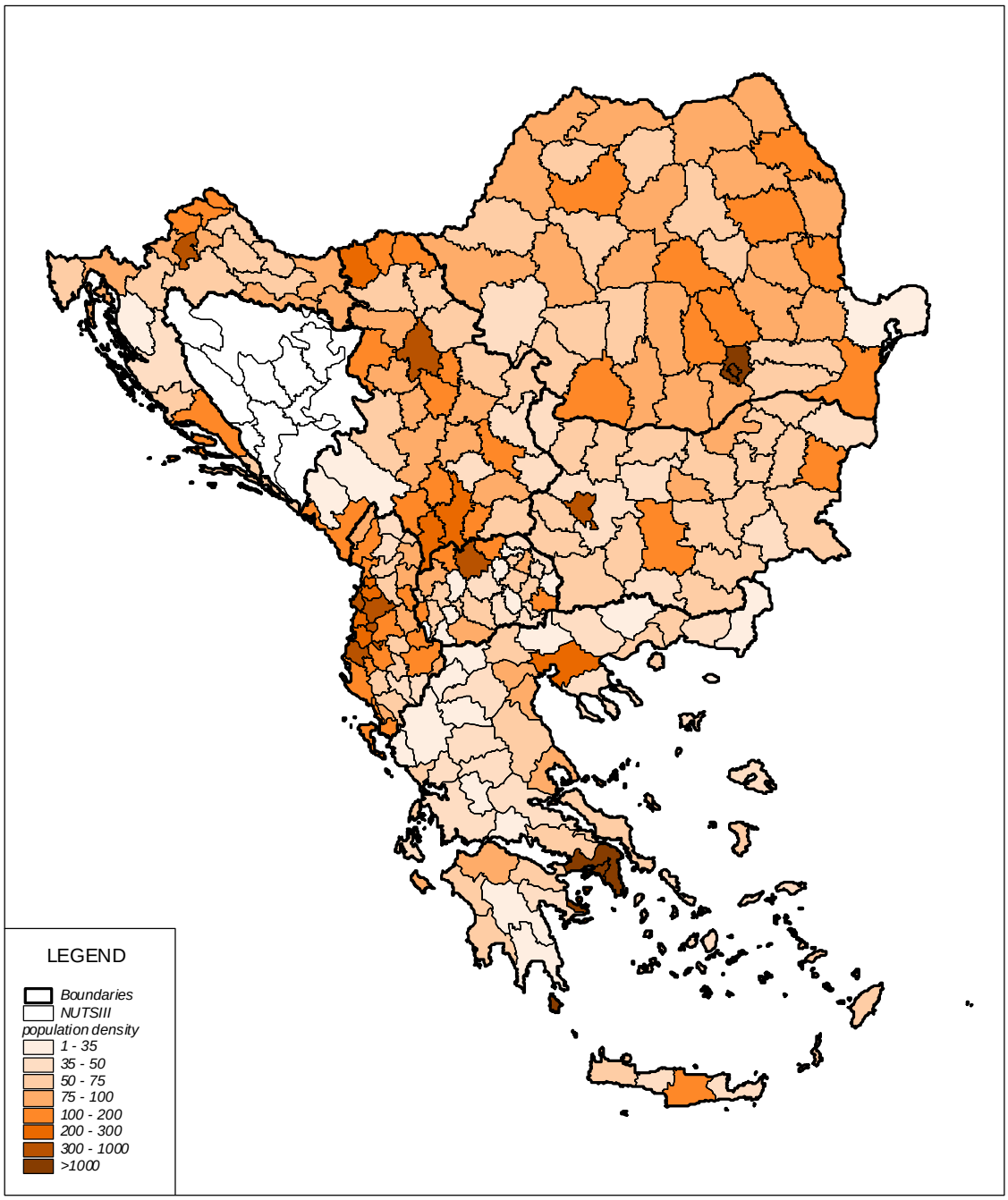
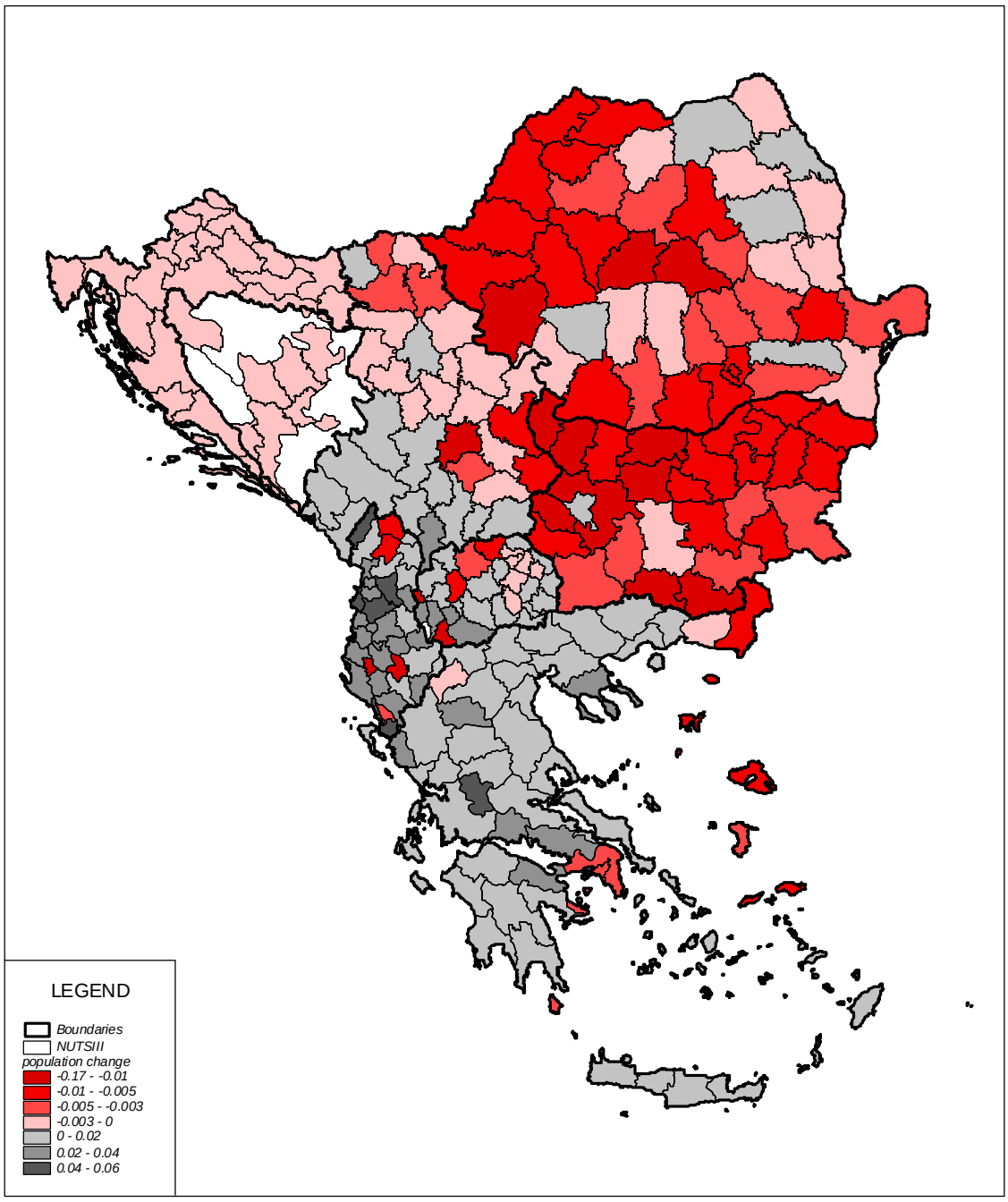
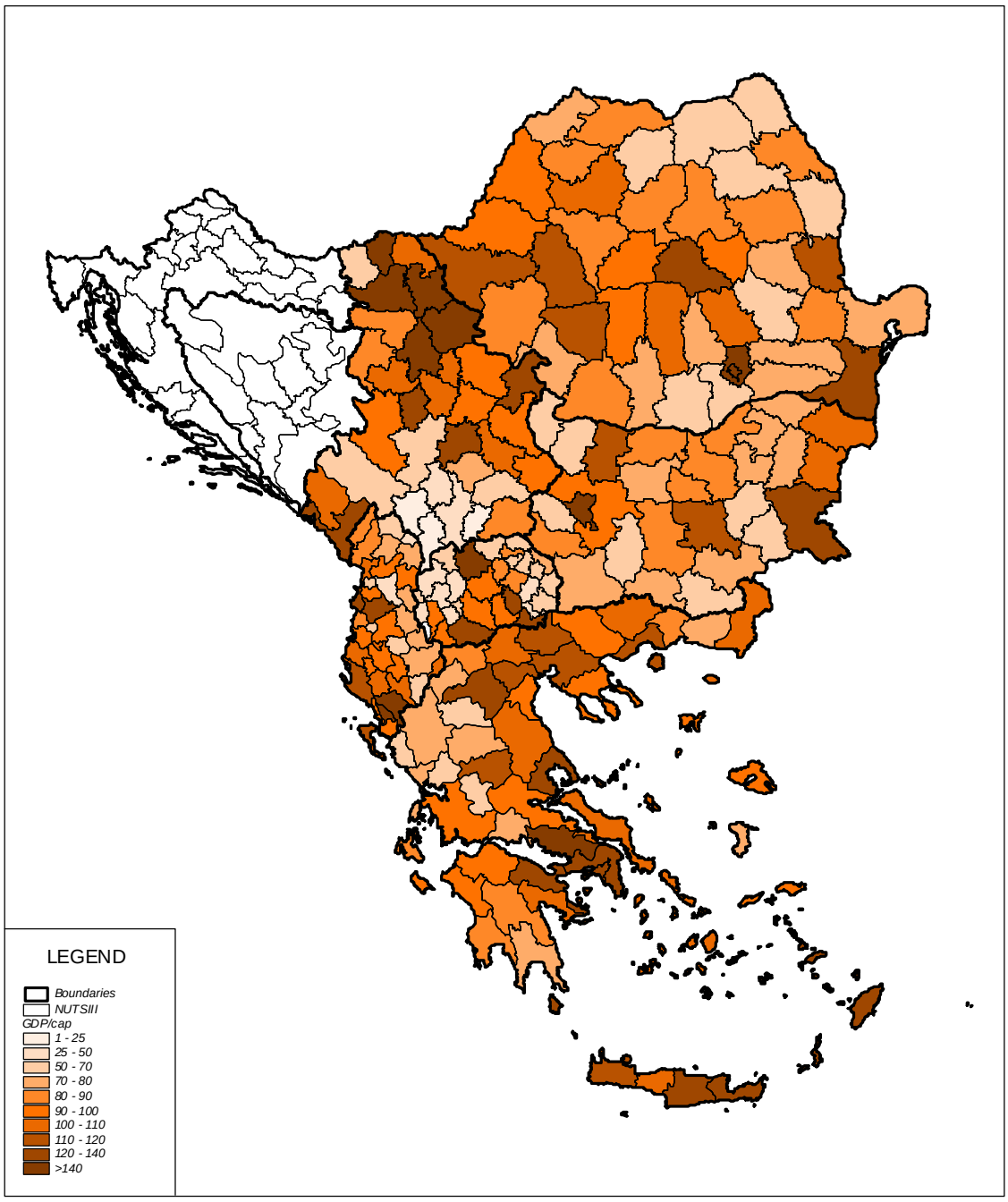
Map 1. Regional Population Density at the NUTS III level in the late 1990s.



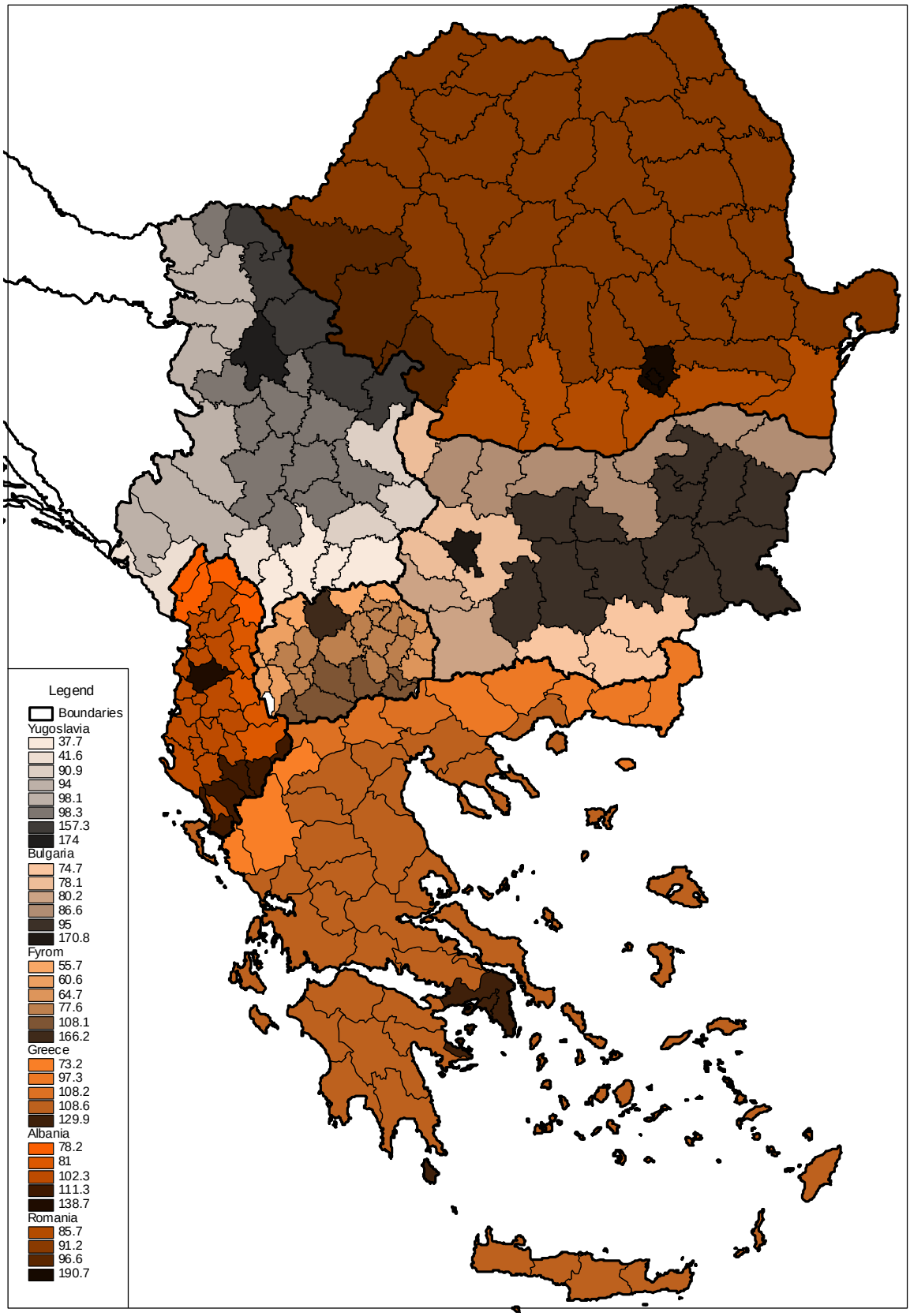
Map 2 Regional Population change at the NUTS III level in the 1990s.



Map 3. Regional GDP per capita (National Average = 100) in the late 1990s.



Map 4. GDP per capita in Border Zones (National Average = 100), National Classification.



Map 5. Cities with Population over 100.000 inhabitants and population density.

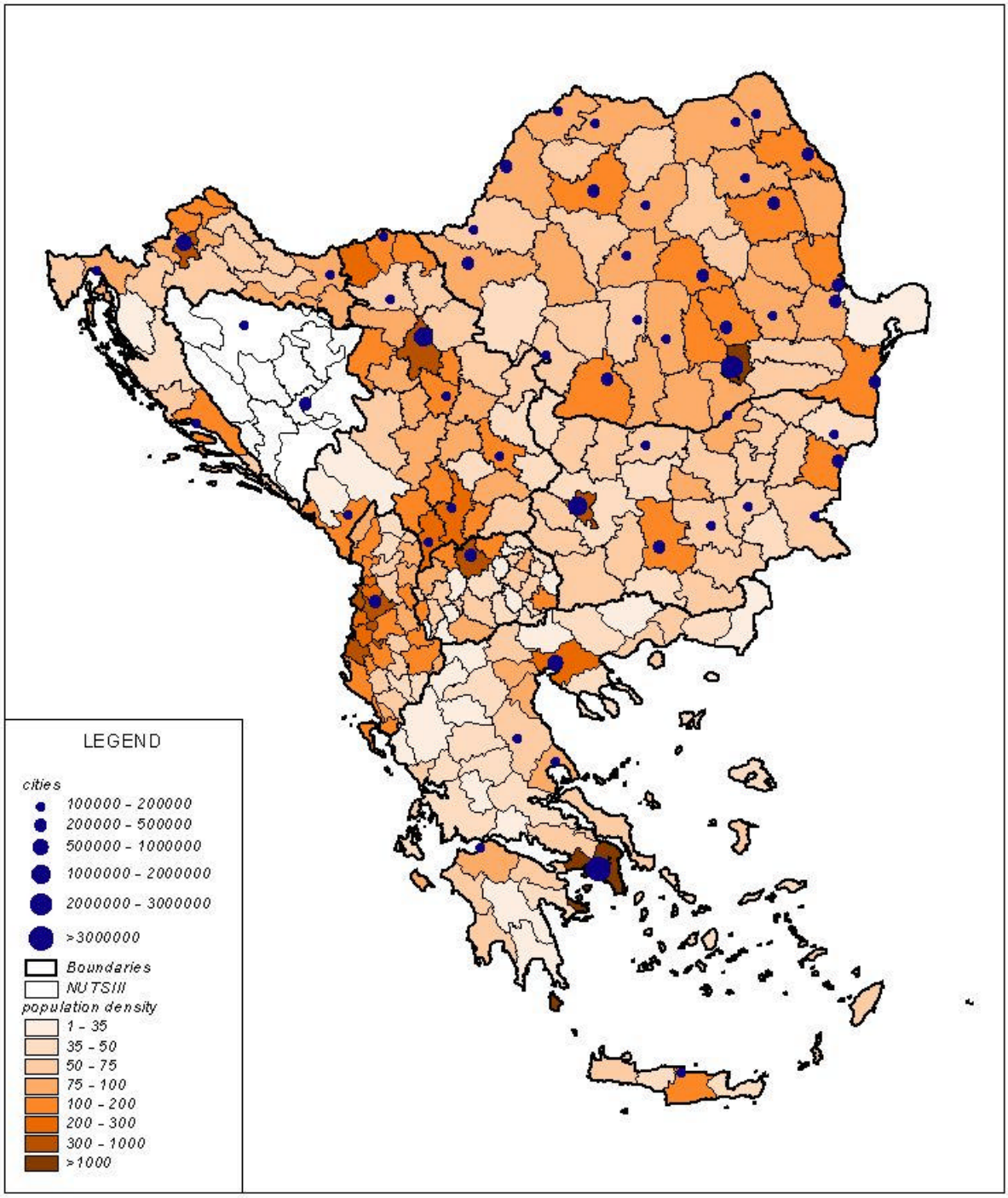


Figure 1: Regional variation in GDP per capita in Balkan countries (national average=100)

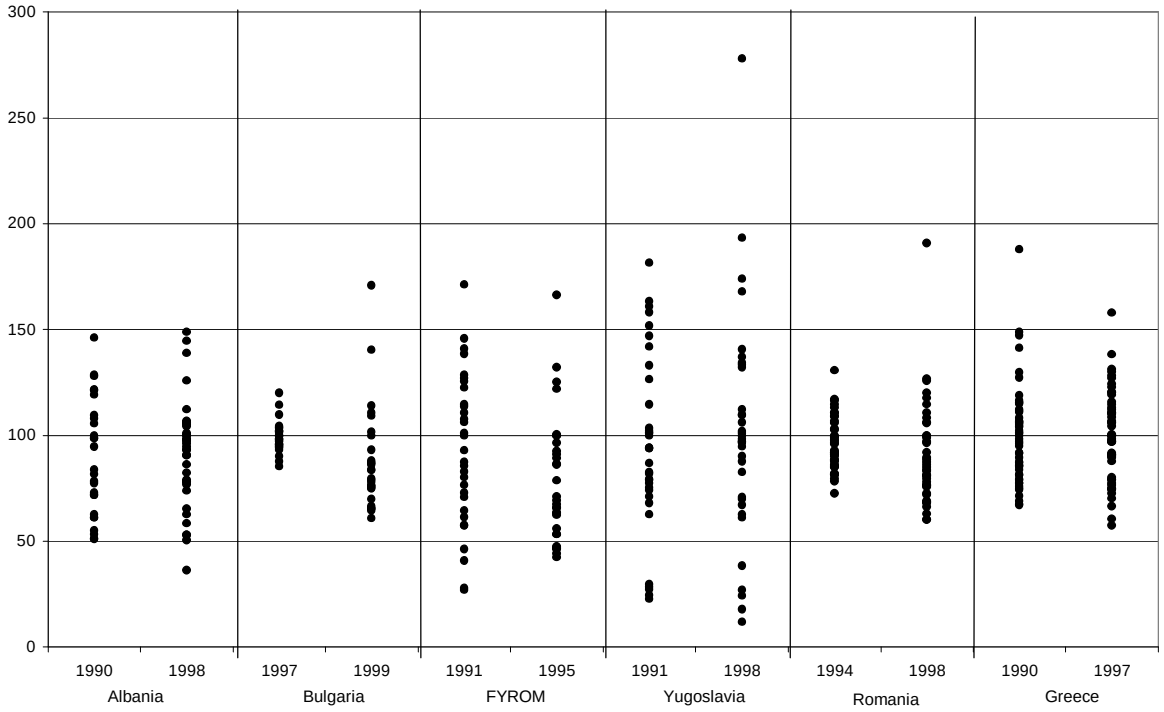


Figure 2 National rank-size distributions of the urban centres in South-eastern Europe in logarithmic form, latest data in the 1990s.

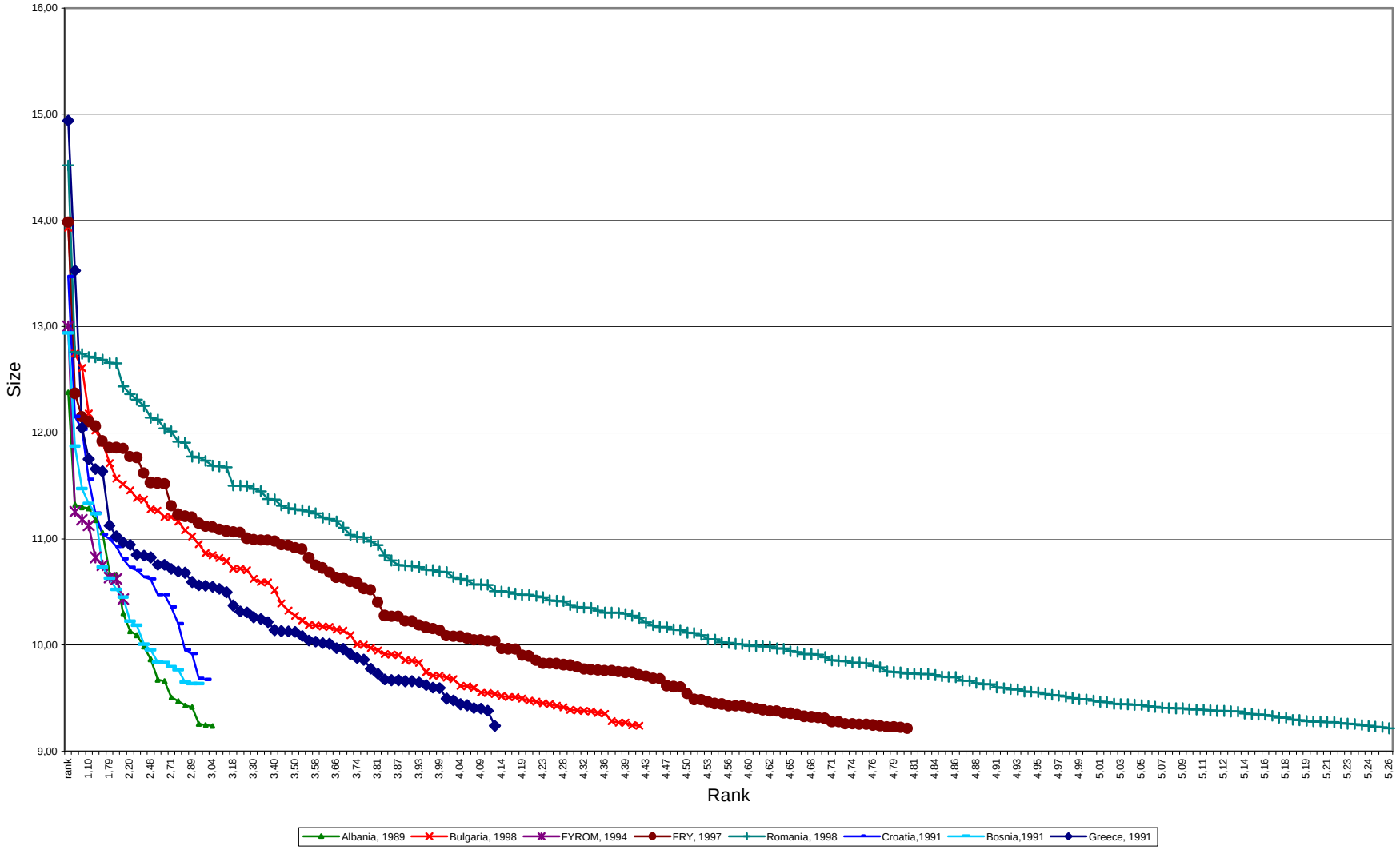


Table 1. Indicators of regional inequality in South-eastern Europe

Countries	Year	Weighted Coefficient of Variation (CV)	Max/Min ratio	b-convergence Coefficient	b-density
Albania	1990	0.317	2.87	8.899	13.980
	1998	0.294	4.11	(2.950)	(2.058)
Bulgaria	1999	0.428	2.80		
FYROM	1991	0.439	6.36	1.130	2.188
	1995	0.658	3.91	(3.933)	(1.769)
Greece	1990	0.201	2.80	1.736	1115.994
	1997	0.237	2.75	(8.999)	(1.832)
Romania	1994	0.164	1.80	0.103	1.219
	1998	0.408	3.17	(11.447)	(5.868)
N. Yugoslavia	1991	0.507	7.97	0.494	-1.706
	1998	0.573	23.13	(6.867)	(-0.819)

Source: Own estimates from SEED regional database

Table 2. GDP per capital (national average = 100) in metropolitan / capital regions in South-eastern Europe

Capital region	Country	Year	GDP per capita
Tirana	Albania	1990	128
		1998	139
Sofia – city	Bulgaria	1999	171
Skopje	FYROM	1991	146
		1995	166
Attica	Greece	1990	115
		1997	130
Bucharest	Romania	1994	131
		1998	191
Belgrade	N. Yugoslavia	1991	152
		1998	174

Source: Own estimates from SEED regional database

Table 3. Indicators of regional inequality in EU countries (1997)

Countries	Weighted Coefficient of Variation (CV)	Max/Min ratio
Sweden	0.119	1.44
Netherlands	0.216	2.32
Portugal *	0.232	1.82
Spain	0.232	2.44
Greece	0.237	2.75
Finland	0.268	1.97
Italy *	0.271	2.23
Ireland	0.287	2.00
Denmark	0.298	2.43
UK *	0.310	3.11
Belgium	0.334	2.92
Austria	0.402	2.71
Germany	0.492	7.43
France	0.525	4.39

Source: Own estimates on the basis of Eurostat Regio database.

* CV estimated on the basis of NUTS II data

Table 4. GDP per capita in border regions in South-eastern Europe (national average = 100)

Border regions of: (*column*)		Bordering to: (*row*)							
	Year	Albania	Bulgaria	FYROM	Greece	Romania	FRY	Croatia	Bosnia
Albania	1990	-	-	58	102	-	84	-	-
	1998	-	-	**81**	**111**	-	*78*	-	-
Bulgaria	1999	-	-	80	75	87	78	-	-
FYROM	1991	60	85	-	96	-	56	-	-
	1995	61	*65*	-	108	-	56	-	-
Greece	1990	74	87	102	-	-	-	-	-
	1997	73	97	108	-	-	-	-	-
Romania	1994	-	91	-	-	-	100	-	-
	1998	-	*86*	-	-	-	97	-	-
FRY	1991	47	92	36	-	131	-	162	88
	1998	*42*	91	38	-	157	-	*94*	98

Source: Own estimates from SEED regional database

Table 5. Urban primacy index in South-eastern Europe

Countries	Population ratio of the top to the second in the hierarchy city		
	1981	1991	1998
Albania	2,66[1]	2,90[2]	
Bosnia	2,59	2,90	
Bulgaria	3,01	3,01	3,28
Croatia	3,84	3,73	
FRY	7,77	8,94	8,63[3]
FYROM	5,23	5,33	5,76
Greece	4,28	4,10	
Romania	6,12	5,84	5,79

1 1979 data

2 1989 data

3 1997 data

Table 6 Metropolitan concentration in South-eastern Europe

Capital region	Country	Year	Share of national population
Tirana	Albania	1990	11.5
		1998	15.1
Sarajevo	Bosnia	1981	7.8
		1991	9.5
Sofia	Bulgaria	1980	12.9
		1991	14.0
		1997	14.6
		1999	14.8
Croatia	Zagreb	1991	18.1
Skopje	FYROM	1991	27.7
		1995	27.1
Attica	Greece	1990	34.7
		2000	*38.0
Bucharest	Romania	1980	9.4
		1991	10.3
		1994	10.3
		1998	10.2
Belgrade	N. Yugoslavia	1981	15.8
		1991	15.4
		1997	16.3

Source: Own estimates from SEED regional database
* Estimate on the basis of the Atticon Metron study.

Table 7 Size distribution of cities over 50 thousand people

	Number of cities in size group (in millions)						
Country	> 3	3 > 2	2 > 1	1 > 0,5	0,5 > 0,2	0,2 > 0,1	0,1 > 0,05
Albania					1		5
Bulgaria			1		2	6	14
Bosnia					1	1	3
Croatia				1		3	4
FRY			1			7	19
FYROM					1		4
Greece	1			1		4	7
Romania		1			11	12	23
Total	1	1	2	2	16	33	69

Source: Own estimates from SEED database.

Table 8 National shares of cities over 50 thousand people

Country	Population		Cities over 50 thousands	
	In thousands	National share	Number	National share
Albania	3.945	5,92	6	4,51
Bulgaria	8.190	12,30	23	17,29
Bosnia	3.482	5,23	5	3,75
Croatia	4.784	7,18	8	6,01
FRY	10.592	15,91	27	20,30
FYROM	2.063	3,09	5	3,75
Greece	11.000	16,52	12	9,02
Romania	22.499	33,80	47	35,33
Total	66.553	100,00	133	100,00

Source: Own estimates from SEED database.