

Niebuhr, Annekatriin; Stiller, Silvia

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Annekatrien Niebuhr\* and Silvia Stiller\*

## Territorial Disparities in Europe

*Traditionally, EU policies have been focused on economic and social cohesion. Recently, the territorial dimension of regional disparities as an aspect of EU policy has gained importance. The European Spatial Development Perspective (ESDP), adopted in 1999, is meant to support a balanced development of the EU territory. Moreover, the European Commission addressed issues of territorial cohesion in its latest cohesion report. The present paper deals with territorial disparities and their current development in the EU. It analyses which kind of regions develops dynamically and offers favourable labour market conditions. The differences between rural and urban areas are a fundamental feature of territorial disparities in the EU and are of essential significance for the ESDP. The analysis deals with the question whether disparities between poor and rich regions as well as different growth trends and labour market conditions are still marked by the dualism between city and countryside.*

The European Commission considers uneven development prospects of regions an impediment for realising the cohesion objective of the EU. By the end of the 1990s, the cohesion objective had been extended by a territorial dimension of cohesion. Therefore, the European ministers responsible for spatial planning in the member states of the EU pledged themselves to aim at a spatial balance designed to support an even growth across the territory of the EU.<sup>1</sup> This intention led to the adoption of the European Spatial Development Perspective (ESDP). The ESDP is a policy framework for the Community and the member states as well as for regional and local authorities, aiming at territorial cohesion in the EU. With the ESDP, the member states and the European Commission agreed upon common spatial objectives concerning the future development of the EU territory. Essential aspects of the ESDP are:

- polycentric and balanced spatial development in the EU
- dynamic, attractive and competitive cities and urbanised regions in the EU
- indigenous development, diverse and productive rural areas
- a new urban-rural relationship.

A precise definition of territorial cohesion is not provided by the ESDP. Furthermore, the Commission does not hint at specific indicators for measuring territorial cohesion. This, of course, makes it difficult to

deal with territorial cohesion in an analytical way. In the present analysis we interpret territorial cohesion first of all as the reduction of (economic) disparities between different spatial categories.

### Economic and Territorial Cohesion

Whereas tradition regarding the analysis of territorial disparities is fairly short, economic cohesion has been a central topic of economic research for a long time. Up to now, a number of so-called convergence studies has analysed the development of regional disparities in per capita income.<sup>2</sup> However, analyses of income convergence usually do not consider differences among spatial categories.<sup>3</sup> In contrast to convergence studies, the present analysis investigates economic disparities by taking into account the settlement structure of the EU, i.e. considering differences between spatial categories. By considering the territorial dimension with regard to the development of regional disparities, additional information is acquired which is relevant for EU cohesion policy. The present analysis aims at providing information on the issue of whether there is a systematic relationship between settlement structure, labour market conditions and economic prosperity.

<sup>1</sup> European Commission: ESDP. European Spatial Development Perspective. Towards Balanced and Sustainable Development of the Territory of the European Community, Brussels 1999.

<sup>2</sup> Barro, Sala-i-Martin, Bröcker and Tondl analyse regional convergence in Europe. See R. J. Barro, X. Sala-i-Martin: Economic Growth, New York 1995, McGraw-Hill; J. Bröcker: Konvergenz in Europa und die Europäische Währungsunion, in: B. Fischer, T. Straubhaar (eds.): Ökonomische Konvergenz in Theorie und Praxis, Baden-Baden 1998, Nomos Verlagsgesellschaft, pp. 105-135; G. Tondl: Convergence After Divergence? Regional Growth in Europe, Wien, New York 2001.

<sup>3</sup> The analysis by Straubhaar et al. is one of the rare exceptions in this context. See T. Straubhaar, M. Suhrcke, D. Urban: Divergence – Is it Geography?, HWWA Discussion Paper No. 181, Hamburg 2002.

\* Senior economists, Department of European Integration, Hamburg Institute of International Economics (HWWA), Hamburg, Germany. The authors would like to thank Elena Tcharykova for her excellent research assistance.

The results show whether income disparities between poor and rich regions and economic growth correspond with a polarity between cities and countryside. The results are important for assessing how far the objectives of the ESDP may contribute to realising economic cohesion in the EU. The study also provides information on the significance of EU regional policy for territorial cohesion.

An important element of the analysis concerns the relationship between agglomerations and rural areas. The exploration of territorial disparities adds new aspects due to various functional linkages between agglomerations and other regions. In this context the role of urban areas as growth centres and sources of beneficial spillover effects accelerating economic development in neighbouring regions is emphasised.<sup>4</sup> On the one hand, the objectives of the ESDP closely resemble the objectives of EU regional policy since the most important territorial imbalance in the EU is that between lagging regions and more prosperous areas. On the other hand, the ESDP goes beyond this simple polarity between rich and poor regions by pointing to functional linkages effective between spatial categories and stressing that the catching-up process of a less developed periphery should not take place at the cost of a prosperous core.<sup>5</sup>

#### The EU Territory in the Course of Integration

The EU territory is characterised by distinct disparities regarding population density and economic activity. On the one hand, there are densely populated areas with economic centres of European or even global significance. On the other hand, there are rural areas with a very low population density lacking an important regional centre at all. European regions differ not only with respect to their economic and social situation as e.g. measured by unemployment and per capita income. They also differ with regard to their settlement structure and divide into spatial categories, i.e. agglomerated, urbanised and rural areas.<sup>6</sup>

In the course of integration, the economic potential differs substantially among spatial categories. At first sight, it seems that opportunities for economic development are non-uniform and vary systematically with the settlement structure of regions. Up to now, neither

theoretical analyses like new economic geography models nor empirical research were able to provide a clear-cut answer to the question to what extent ongoing integration will affect agglomerated, urbanised and rural areas in different ways. At present, there are still relevant border effects impeding international trade and factor movements among EU member states.<sup>7</sup> Therefore, spatial effects of decreasing border impediments can be expected for the future. Integration may influence dispersion and concentration forces. Thus integration might change the spatial distribution of economic activities and affect territorial imbalances in the EU.

Regarding the development prospects of the EU territory, several issues of utmost importance are on the agenda of economic research. Do agglomerations, urbanised and rural areas benefit from ongoing integration to different extents? Is there an overall trend of concentration or dispersion of economic activities across space in the member states? And finally, will economic and territorial disparities increase or decrease? Quite different visions exist regarding the future economic geography of Europe. For instance, some authors believe that the metropolitan regions building the so-called "Blue Banana" ranging from London to Milan have the most favourable prospects for economic development. Other studies suggest that new growth poles and centres of economic activity will emerge such as the "Sunbelt" running from Milan to Valencia or the "Yellow Banana" extending from Paris to Warsaw.<sup>8</sup>

The present analysis aims at providing empirical evidence on territorial disparities in the EU. Apart from an investigation of disparities, recent differences in economic development among spatial categories are described. For these purposes, the 202 NUTS II regions of the EU have been grouped according to their settlement structure. For each spatial category several indicators are derived and the status quo of territorial disparities is analysed. Furthermore, it is investigated whether the current economic development of agglomerations, urbanised and rural areas is marked by systematic differences. The analysis refers to population, unemployment, production, employment, per

<sup>4</sup> For an analysis of interregional spillovers see M. Funke, A. Niebuhr: Spatial R&D Spillovers and Economic Growth, HWWA Discussion Paper No. 98, Hamburg 2000.

<sup>5</sup> See Bundesamt für Bauwesen und Raumordnung: Study Programme on European Spatial Planning, Final Report, Bonn 2001.

<sup>6</sup> See European Commission: Unity, solidarity, diversity for Europe, its people and its territory. Second report on Economic and Social Cohesion, Brussels 2001.

<sup>7</sup> For corresponding results see J. Bröcker: How would an EU-membership of the Visegrád-countries affect Europe's economic geography?, in: *Annals of Regional Science*, 1998, Vol. 32, pp. 91-114; or V. Nitsch: National borders and international trade: evidence from the European Union, in: *Canadian Journal of Economics*, 2000, Vol. 33, pp. 1091-1105.

<sup>8</sup> See for example G.-J. Hospers: Beyond the Blue Banana. Structural Change in Europe's Geo-Economy, in: *INTERECONOMICS*, Vol. 38, No. 2, 2003, pp. 76-85.

## ECONOMIC TRENDS

**Table 1**  
**Spatial Categories According to Settlement Structure**

Type	Spatial categories	Size of the regional centre (number of inhabitants)	Population density (inhabitants per km <sup>2</sup> )
<b>Agglomerated regions</b>			
1	Highly agglomerated with large centre	> 300.000	> 300
2	Agglomerated with large centre	> 300.000	150 up to 300
<b>Urbanised regions</b>			
3	Urbanised with large centre	< 300.000 or > 300.000	> 150 (and a centre with < 300.000 inhabitants) or 100 up to 150 (and a centre with > 300.000 inhabitants)
4	Urbanised without large centre	< 300.000	100 up to 150
<b>Rural regions</b>			
5	Low population density and centre	> 125.000	< 100
6	Low population density without centre	< 125.000	< 100

capita income and economic structure. The period under consideration ranges from 1995 to 1999/2000.

### Settlement Structure in the EU

The partition of regions into spatial categories is based on a typology of settlement structure established by the Study Programme on European Spatial Planning.<sup>9</sup> Based on the criteria population density and size of regional centres three groups of regions (agglomerated, urbanised and rural regions) and six spatial categories have been defined (see Table 1). The highly agglomerated areas with a large centre (agglomerated regions, type 1) mainly comprise the capital regions of the EU member states. Moreover, this group includes regions with large economic centres as e.g. the Ruhr area, parts of northern Italy and southern Germany. Compared to type 1 the agglomerated regions of type 2 have a lower population density (between 150 and 300 inhabitants per km<sup>2</sup>). They also contain some European capitals (Lisbon and the Stockholm region). Urbanised and agglomerated areas are first of all located in the core region of the EU, extending from the Southwest of the UK to Belgium, the Netherlands and West Germany. In contrast, rural areas concentrate in the periphery of the EU, i.e. especially the northern part of Sweden and Finland, Spain, Portugal and Greece.

### Strong Spatial Concentration of Population and Production

Currently, roughly half of the 370 million EU citizens clusters in agglomerated regions. In contrast, the area share of this type of region is low. Only 15% of EU territory is covered by agglomerations (see Table 2). The highest share of the EU area is attained by rural areas with 64%, while only 23% of the EU population lives in this kind of region. Urbanised regions reach a population share of 31% and 21% of the EU territory. The importance of the different types of region – with regard

<sup>9</sup> See SPESP indicator set: <http://www.bbr.bund.de->Raumordnung->Europäische Raumentwicklung und Zusammenarbeit->ESPON>

to their part of the territory – differs significantly among the EU states. Austria, Greece and Spain are countries in which the major part of the country is rural. Almost half of the Spanish population lives in rural areas. The population share of rural areas amounts to 59% in Austria and to 67% in Greece. These high population shares of rural regions contrast strongly to the situation in Germany and Belgium where less than 10% of the population lives in this type of region. While urbanised regions are of lower significance for the territory of some countries, e.g. Greece and Spain, this spatial category dominates in the Netherlands and Belgium. Countries in which agglomerations have the highest population share are Italy (72%) and Germany (57%). Economic activity as measured by GDP is even more spatially concentrated than population. More than half of the EU's GDP is produced in agglomerations. The share of urbanised areas amounts to 30% and rural areas only contribute 19% to overall EU output.

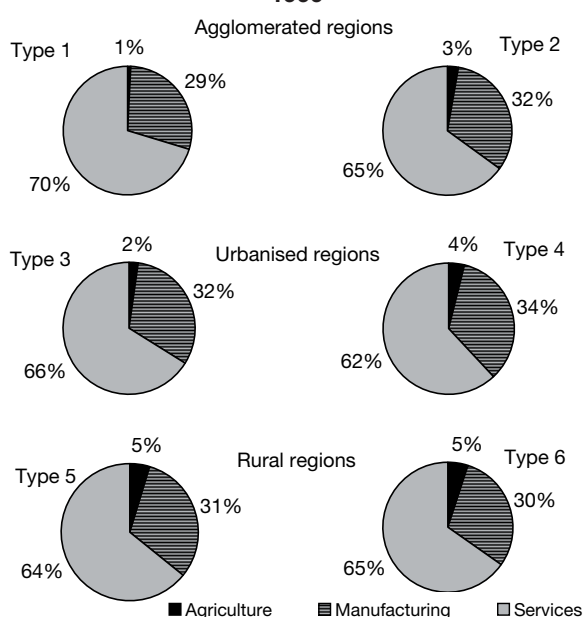
The current settlement structure reflects the historic spatial development of economic activity in Europe and in particular the process of urbanisation. Obviously, the evolution of the economic landscape in Europe is characterised by country-specific differences.

**Table 2**  
**Main Features of Spatial Categories in Europe**

Type of region	Agglomerated regions		Urbanised regions		Rural regions	
	Type 1	Type 2	Type 3	Type 4	Type 5	Type 6
Number of NUTS II regions	37	20	54	20	37	34
Population density (inhabitants per km <sup>2</sup> ), 2000	628	208	200	114	60	23
Area share of EU-15	5%	10%	15%	6%	35%	29%
Population share of the EU-15, 2000	29%	17%	26%	5%	17%	6%
GDP (PPP) share of EU-15, 2000	35%	17%	25%	5%	14%	5%
Productivity, EU-15 = 100, 1999	110	96	100	94	91	90
GDP per capita (PPP), EU-15 = 100, 2000	122	99	95	86	82	81

Sources: EUROSTAT Regio databank, own calculations.

**Figure 1**  
**Economic Structure - Shares of Sectors in GVA,**  
**1999**



Source: Cambridge Econometrics regional databank, own calculation.

In some Member States strong centripetal forces have released significant processes of spatial concentration with the consequence that agglomerations have a substantial population share. In other countries spatial concentration of population and economic activities is not yet that advanced. Altogether, there are pronounced territorial disparities in the EU.

**Productivity and Per Capita Income**

There are considerable differences in productivity (GDP per employee) and per capita income (GDP per inhabitant) between spatial categories. As the corresponding figures in Table 2 show, highly agglomerated regions (type1) were the most competitive areas in the EU in 2000. This group achieves a productivity level exceeding the EU average by 10%. An average level of productivity marks the urbanised regions with a large economic centre, outperforming even agglomerations of type 2. All other spatial categories show a below average level of productivity. The rural areas lag significantly behind other spatial categories with a productivity level roughly 10% below the EU average.

Territorial disparities with respect to per capita income display a fairly similar pattern. Per capita income tends to increase with rising population density of the spatial category. The highly agglomerated regions realise a per capita income of more than 20% above the EU average. The per capita income in urbanised

regions ranges between 95% and 86% of the EU level, whereas the rural areas again occupy the last position with an income almost 20% below the EU average. So the gap between the most prosperous group and rural regions amounts to roughly 40%. The differentiation of agglomerations, urbanised and rural regions matches rather closely the differentiation between poor and rich regions. A comparison of productivity and income shows that differences in GDP per capita are more pronounced than disparities in productivity. This reflects to some extent the functional linkages between spatial categories and is probably due to commuting between large cities as centres of regional labour markets and their hinterland. The gap between less densely populated areas and agglomerated regions is larger for per capita income than for productivity since a part of the labour force in rural and urbanised regions commutes and contributes to the production of GDP in agglomerated regions.

**Economic Structure**

The economic structure measured by the share of sectors in gross value added (GVA), points to a specialisation of spatial categories and indicates the overall trend towards the service society. In 1999, a share of 67% of GVA was produced by the service sector in the EU. Manufacturing contributed almost 31% and the agricultural sector less than 3%. The economic structure is characterised by significant differences between spatial categories (see Figure 1). Especially the composition of GVA in the most densely populated agglomerations deviates from the structure of other types of region. With a share of roughly 70%, the weight of the service sector in agglomerated regions of type 1 is clearly higher than in all other spatial categories. In contrast, in rural areas and also in urbanised areas without a large economic centre, the agricultural sector is more important than on average. In rural areas agriculture still adds 5% to overall GVA. The highest share of manufacturing industries (34%) is characteristic for urbanised regions without a large centre.

Disparities in the economic structure reflect the division of labour among spatial categories and functional linkages operating between them. Highly agglomerated regions act first of all as the main producers of various services. Agglomerated regions of high centrality provide services of high order also for other types of region. The large weight of services is among other things a result of the specific tasks in capital regions characteristic for this spatial category. Differences in the economic structure are linked with the income disparities discussed above. Agglomerations

**Table 3**  
**Regional Labour Market Disparities in the EU,**  
**1995 and 2000**

Spatial category	Unemployment rate		Change in unemployment rate 1995-2000 (percentage points)
	1995	2000	
Agglomerated regions	11.1	8.4	-2.7
Type 1	9.6	7.4	-2.2
Type 2	14.0	10.4	-3.6
Urbanised regions	9.0	7.5	-1.5
Type 3	10.0	8.4	-1.6
Type 4	6.0	5.1	-0.9
Rural regions	11.7	9.6	-2.1
Type 5	12.5	10.7	-1.8
Type 6	9.4	6.9	-2.5
EU-15	10.7	8.4	-2.3

Sources: EUROSTAT Regio databank, own calculation.

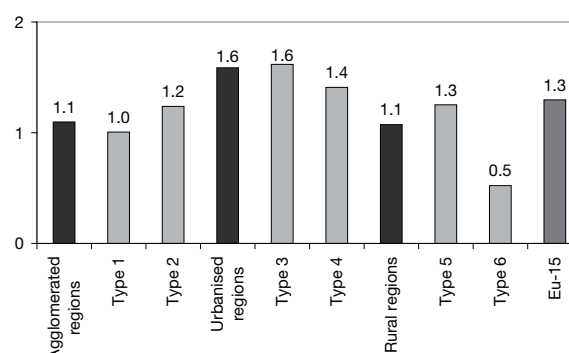
as major locations of advanced services offer a higher income level than other types of region. Apart from the concentration of highly productive and well-paid jobs in the IT-sector, consulting or financial intermediation, highly productive manufacturing firms might also add to the high income level in this group of regions.

#### Labour Market Conditions

Regional labour market conditions vary significantly across the EU territory as well (see Table 3). Currently, rural regions with a centre have the highest unemployment rates in the EU. With an unemployment rate of 10.7% labour market problems in these rural regions were much more serious than in the EU on average (8.4%) in 2000. In contrast, the situation of rural areas without a centre is quite favourable. On average only 6.9% of the labour force is unemployed in these regions. Furthermore, the most densely populated agglomerations – with an unemployment rate of 7.4% – perform much better than agglomerated regions of type 2. The most favourable labour market conditions prevail in urbanised regions without a large centre where only 5.1% of the working population is unemployed. Altogether urbanised regions tend to provide better job opportunities than agglomerated and rural regions. In contrast to per capita income, there are no systematic differences in unemployment rates among the different types of regions. Labour market conditions do not deteriorate or improve with increasing population density. Furthermore, the existence and size of a regional centre obviously does not exert a systematic effect on the unemployment level.

The average unemployment in the EU has been decreasing substantially in the second half of the 1990s – from 10.7% in 1995 to 8.4% in 2000. The overall trend of improving labour market conditions is more or less reproduced by all spatial categories. Agglomer-

**Figure 2**  
**Population Growth of Spatial Categories in the EU,**  
**1995 – 2000**



Source: EUROSTAT Regio databank, own calculation.

ated regions of type 2 realised the strongest decline in unemployment (- 3.6 percentage points). Due to this favourable development this group of regions has improved its relative position regarding unemployment. It ceded the last position to rural areas with a centre, which were marked by the highest unemployment rate among all spatial categories in 2000. This group of regions achieved a reduction in unemployment of only 1.8 percentage points. Apart from this change, the ranking of spatial categories according to unemployment rates is fairly stable. Thus, the pattern of territorial disparities concerning unemployment is relatively robust between 1995 and 2000. This confirms empirical evidence provided by other analyses. The results of Bertola and Overman/Puga point to pronounced and persistent unemployment differentials across European regions.<sup>10</sup> A remarkable result is that whereas the differences in labour market conditions between spatial categories declined slightly, the overall dispersion of regional unemployment rates increased in the second half of the 1990s.<sup>11</sup> This suggests that differences within spatial categories tended to increase in the period under consideration.

#### Population Growth<sup>12</sup>

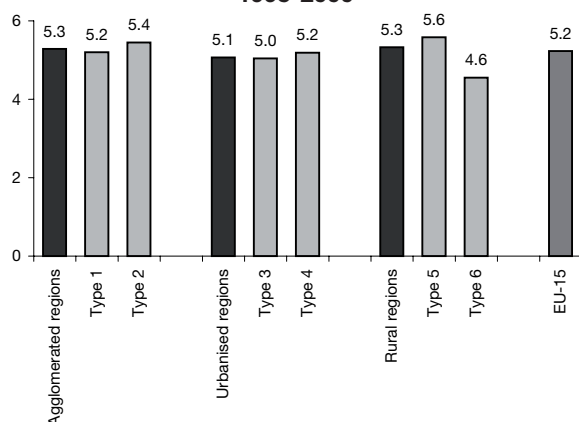
Regional labour market disparities are connected closely with differences in the demographic develop-

<sup>10</sup> See G. Bertola: Labour Markets in the European Union, IFO Studien, 2000, Vol. 46, pp. 99-122; and H.G. Overman, D. Puga: Unemployment clusters across Europe's regions and countries, in: Economic policy, 2002, Vol. 34, pp. 117-147.

<sup>11</sup> See A. Niebuhr: Die Dimension regionaler Arbeitsmarktdisparitäten in der EU, in: R. Caesar, K. Lammers, H.-E. Scharrer: Konvergenz und Divergenz in der EU: Empirische Befunde und wirtschaftspolitische Implikationen, publication by the HWWA and the "Arbeitskreis Europäische Integration e.V.", Baden-Baden 2003, Nomos Verlagsgesellschaft, forthcoming.

<sup>12</sup> The regions Smaaland med oerna, Vaestsverige (Sweden), Inner London, Outer London, Cornwall and Isles of Scilly (UK) are not considered in this part of the analysis because of missing data.

**Figure 3**  
Annual Average Growth of GDP (PPP),  
1995-2000

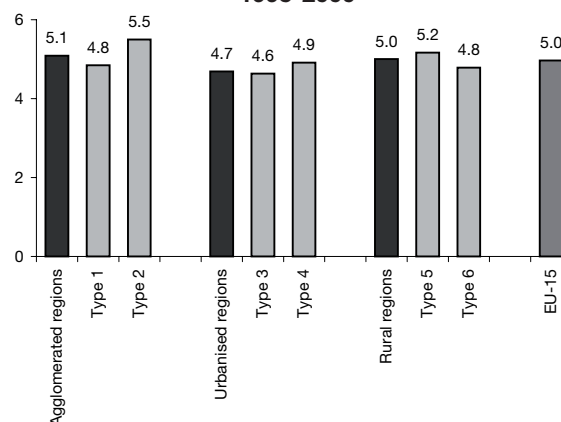


Source: EUROSTAT Regio databank, own calculation.

ment of spatial categories. The EU population grew at a rate of roughly 1.3% in the period from 1995 to 2000 (see Figure 2). Realising a growth rate of 1.6%, population within urbanised regions developed most dynamically. Population growth in agglomerations and rural regions at 1.1% was slightly below average. Among rural areas those with a regional centre realised a growth rate of 1.3% while those without a centre grew at a rate of only 0.5 % exhibiting the lowest population growth among all types of regions. Obviously this spatial category does not offer very attractive locational conditions for migrants. Compared with the pronounced differences between rural areas of type 5 and 6, the variation of population growth between different types of agglomerated and urbanised regions is modest – only 0.2 percentage points.

Altogether, current population growth has ambiguous effects on the spatial concentration of the EU population. On the one hand, the most densely populated agglomerations realised a below average population growth, tending to support a more even distribution of population across space. On the other hand, urbanised regions achieved higher growth than rural areas, presumably supporting concentration. Especially the sparsely populated areas without regional centres are at risk of further falling behind because of low population growth. The development of the population in these rural regions suggests that the growth of the labour force was modest as well since the mid 1990s. Low population growth and a relatively small demographic pressure from the labour supply side obviously add to favourable labour market conditions in these regions. Relatively low unemployment does not seem to be based on high labour demand and dynamic regional economies in this group of regions.

**Figure 4**  
Annual Average Growth of GDP per capita (PPP),  
1995-2000



Source: EUROSTAT Regio databank, own calculation.

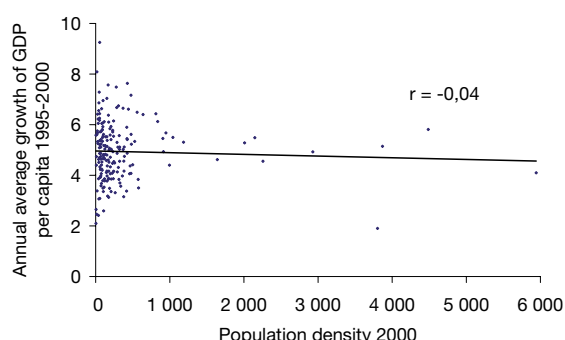
Note: The regions Smaaland med oerna, Vaestsverige (Sweden), Inner and Outer London, Cornwall and Isles of Scilly (UK) are not considered because of missing population data for 1995.

### Growth Disparities

Between 1995 and 2000 gross domestic product (GDP) at current prices expanded at an annual growth rate of 5.2% in the EU. Spatial categories show only relatively small deviations from this average growth trend (see Figure 3). Agglomerations and rural areas attain output increases slightly above the mean (5.3% each), whereas urbanised regions (5.1%) rank somewhat below the EU average. Less densely populated areas (type 2 and 4) within the agglomerated and urbanised regions achieve a slightly higher GDP growth than the types 1 and 3. However, more pronounced disparities characterise rural regions. While rural areas with a centre realise the highest GDP growth of all spatial categories (5.6%), rural regions without a centre lag behind (4.6%).

GDP per capita (at current prices) grew at an average rate of 5% in the EU from 1995 to 2000. The highest increases in per capita income are found in the agglomerations (5.1%). The rural areas achieved a growth rate of 5% as did the EU-15 on average. At 4.7 % the urbanised regions range slightly below the average income growth in the EU. However, there are significant differences within these groups of regions. The most pronounced growth differential is detected for the agglomerated regions. Whereas the agglomerations of type 2 realised the highest growth of all spatial categories (5.5%), the highly agglomerated regions with a population density of more than 300 inhabitants per km<sup>2</sup> grew only below averagely at a rate of 4.8%. Significant differences also mark rural areas. The rural regions with an economic centre achieved

**Figure 5**  
**Growth of per capita Income and Population Density**



Source: EUROSTAT Regio databank, own calculation.

Note: The regions Smaaland med oerna, Vaestsverige (Sweden), Inner and Outer London, Cornwall and Isles of Scilly (UK) are not considered because of missing population data for 1995.

a rather dynamic development with a growth rate of 5.2%. On the other hand, rural regions without a centre could not keep up with the average development in the EU. Their GDP per capita only increased by 4.8% per year. This might possibly indicate the necessity of some minimum degree of agglomeration of economic activity and population in order to realise dynamic development.<sup>13</sup> The lack of a regional centre might imply that this group of regions cannot provide essential economies of agglomeration. In contrast, the growth of agglomerated regions seems to point to an interplay of economies and diseconomies of agglomeration. The agglomerated regions should provide the largest opportunities to utilise agglomeration economies. However, the relatively low growth of type 1 regions might be evidence that diseconomies of agglomeration are effective at the same time. A more dynamic development of less densely populated agglomerations (type 2) might indicate an environment allowing benefits from agglomeration economies and simultaneously avoiding the diseconomies of agglomeration found in type 1.

Differences in economic growth combined with results concerning labour market conditions and demographic development suggest that a reduction in unemployment can be based on economic success to quite different degrees. A dynamic growth process seems to be the main reason for the significant decline of unemployment in agglomerated regions and rural areas with a centre. In contrast, the pronounced

reduction of the unemployment rate in rural regions without a centre is not first of all the result of an above average growth process. Instead of high growth and labour demand the modest development of labour supply, reflected by low population growth (presumably caused by emigration), seems to play an important role with respect to the improved labour market conditions in rural regions without a centre.

### Convergence of per capita Income and Settlement Structure

Convergence of regional income implies a significant negative correlation between regional growth of per capita income and income level. Thus, in the case of regional income convergence poor regions tend to grow faster than more prosperous areas. Transferred to the spatial categories under consideration in the present analysis, convergence requires a negative correlation between population density and growth of per capita income since the income level tends to rise with increasing population density (see also Table 2). For realising convergence rural regions should have a higher growth of per capita income than agglomerated regions.

However, Figure 5 reveals that there is no clear positive or negative correlation between population density and income growth. This result is caused by a differentiated development of spatial categories. As Figures 3 and 4 indicate, there is no systematic relationship between growth, income level and settlement structure. Some regions, especially rural areas with a centre, managed to catch up because of their above average income growth. However, not all spatial categories follow a pattern of regional income convergence. For instance, the gap between rural areas without a centre and other types of regions expanded between 1995 and 2000 because of their unfavourable development. To sum up, there is only weak evidence for a decline of income disparities in the second half of the 1990s.<sup>14</sup>

### Summary of Results

The results of the empirical analyses demonstrate that the EU's economic geography is marked by an uneven distribution of population and economic activity across space. The EU territory exhibits substantial distinctions among different types of region with regard to competitiveness and income. The disparities

<sup>13</sup> The growth gap of these regions is smaller for GDP per capita than for total GDP. This difference in growth performance is due to the low population growth of rural regions without a centre. With regard to per capita income a modest development of population has *ceteris paribus* a positive impact.

<sup>14</sup> Other authors find geography driven divergence for European regions since 1980. According to the results population density is superior in explaining divergence compared to initial income. See T. Straubhaar, M. Suhrcke, D. Urban, op. cit.



in productivity and per capita income display systematic linkages with the settlement structure. There is a clear ranking among agglomerated, urbanised and rural areas with regard to per capita income and productivity. The disparities follow an explicit urban-rural pattern, i.e. both GDP per capita and per employee rise with increasing population density of the spatial category. However, regional labour market disparities do not correspond to such a simple scheme. Moreover, demographic development and economic growth are marked by differentiated spatial patterns as well. Altogether, one cannot infer from territorial disparities and settlement structure to the growth prospects of spatial categories.

The analyses reveal that labour market conditions have improved in all spatial categories in the second half of the 1990s and that changes in labour market conditions are not correlated systematically with the regions' settlement structure. Agglomerated regions as well as rural regions suffer from above average unemployment. Thus, for realising territorial cohesion with regard to unemployment, labour market conditions have to improve in different spatial categories. Altogether, territorial imbalances regarding unemployment rates have declined since the middle of the 1990s. Of course, the considered time span is too short for providing clear-cut results on long-term trends in spatial development. Nevertheless, one result is certain: territorial disparities do not follow a simple pattern, i.e. the most prosperous regions are not necessarily marked by the most favourable labour market conditions and the most dynamic economic development. Some of the relatively poor rural areas achieve a fairly successful economic development. The empirical evidence does not suggest that rural areas are systematically falling behind. However, some regions continue to lag behind. The income gap between rural regions without a centre and other spatial categories increased during the period under consideration. It is especially this kind of rural region that is at risk of falling behind and entering a negative process of cumulative causation marked by low growth and depopulation.

Finally, the results regarding economic growth point to the existence of both positive effects of agglomeration and diseconomies of agglomeration. The unfavourable development of rural regions without an economic centre suggests that a minimum level of agglomeration is necessary in order to attain a dynamic development. The operation of agglomeration economies is also reflected by the above average growth of the agglomerated regions. However, at the same time the differentiated growth within this spatial category

points to possible negative effects of agglomeration since less densely populated agglomerations achieve a higher growth rate than agglomerations of type 1.

### Policy Implications

In the second cohesion report the Commission states that the spatial concentration of economic activities might increase the efficiency of production in the short term, but the long-term competitiveness of the EU might decline because of adverse effects on the economic potential of weaker regions. Moreover, the Commission hints at negative congestion effects which might arise in agglomerated regions, whereas other areas suffer from economic decline and depopulation. According to the cohesion report, there is no evidence that diseconomies of agglomeration serve as an automatic mechanism of correction for unbalanced growth.<sup>15</sup> In contrast to the Commission's view one can be of the opinion that agglomeration in the EU is still too low from the perspective of overall economic growth. New growth theory and new economic geography provide arguments suggesting that it could be more efficient to have an even higher concentration of economic activities in the EU. Therefore policy measures aiming at a more even distribution of economic activities across space do not necessarily enhance efficiency but may have adverse effects on overall growth rates. EU policy has to consider the potential conflict of aims between equity and efficiency.

The empirical evidence provided above does not support the view that spatial development and disparities in the EU correspond to a simple centre-periphery pattern. Neither information on settlement structure nor on the level of per capita income or productivity allow the drawing of clear-cut conclusions on a region's growth potential. Economic backwardness does not imply unfavourable growth prospects and spatial categories suffer from differentiated economic and social problems. Furthermore, the Commission notes in its latest cohesion report that urban areas may act as growth centres for achieving polycentric development. The results of several studies point to significant growth spillovers between neighbouring regions. Agglomerations are identified as sources of corresponding growth impulses.<sup>16</sup> However, spillovers may also act as growth impediments for neighbouring regions in the case of economic decline. Existing linkages

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<sup>15</sup> European Commission: Unity, solidarity, diversity for Europe, its people and its territory. Second report on Economic and Social Cohesion, Brussels 2001.

<sup>16</sup> See e.g. A. Niebuhr: Räumliche Wachstumsstrukturen: Theoretische Erklärungsansätze und empirische Befunde für Deutschland, Munich 1999, Florentz.

between agglomerations and rural regions are based on a functional division of labour between spatial categories and emphasise the importance of a dynamic development of agglomerations for the economic prospects of neighbouring areas. An approach that considers these aspects is at least partly in contrast to the traditional objective of economic convergence, suggesting that EU regional policy might not always correspond with the aims of the ESDP. Regional policy aiming at the lagging rural regions in the EU and at the same time taking into account the objectives of the ESDP has to keep in mind the spatial division of labour

and the role of agglomerations as growth poles for neighbouring areas.

To sum up, the diverse situation of spatial categories suggests a policy approach with differentiated instruments meeting the respective requirements of agglomerated, urbanised and rural regions. Moreover, detailed knowledge on the regional situation is a necessary precondition for designing adequate policy measures to meet the individual needs of regional economies and spatial interdependencies. Therefore territorial cohesion should be an issue of policy at the national or regional level and not a task of EU policy.