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EUROPEAN PARLIAMENT
Directorate-General for Internal Policies of the Union

Policy Department
Structural and Cohesion Policies

REGIONAL DISPARITIES AND COHESION: WHAT STRATEGIES FOR THE FUTURE

REGIONAL DEVELOPMENT

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Content:
This study aims to assess the extent of regional disparities within the European Union. Using state-of-the-art scientific methodologies and tools enabling a critical analysis, it presents empirical evidence on the dynamics of regional disparities and territorial cohesion challenges. On this basis, perspectives on how to approach territorial cohesion from a statistical and a political point of view are introduced. Finally, the study puts forward a number of methods to help overcome the current shortcomings of the territorial evidence base, while providing concrete recommendations on how to improve the design, implementation and monitoring of Cohesion policy.

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Executive summary

The face of the European Union (EU) undoubtedly changed with the latest enlargements of 2004 and 2007. The accession of 12 new members not only entails the integration of countries with generally lower Gross Domestic Product (GDP) and higher unemployment levels, but also causes an increase in the Union's diversity in terms of e.g. social structures, institutional profiles, urban-rural relationships and environmental challenges. Embracing this diversity however implies a need to adapt analytical approaches to social, economic and environmental phenomena correspondingly. Yet, the statistical apparatus of the Union has remained largely unchanged.

In consequence the main representations of the European territory primarily highlight the contrasts between the old and the new Member States (NMS). These simplistic dichotomies not only lead to the stigmatisation of the NMS but at the same time mask persistent regional and spatial challenges within the old Member States.

This does not however imply that the European-level ambition of territorial cohesion must be abandoned. On the contrary, numerous reports and other policy documents highlight the increasingly acute need for regulatory measures to promote a more territorially coherent economic and social development. The inclusion of territorial cohesion in Article 3 of the Constitutional Treaty, as well as the elaboration of the "Territorial Agenda of the European Union" to be approved by the Member States at the Informal Ministerial conference held in Leipzig on 24-25 May 2007, illustrates this increased level of political awareness. The current study however demonstrates that these initiatives lack a sufficient evidence base upon which to build their strategies and develop their policy measures.

To help remedy this situation, the present study compiles state-of-the-art scientific methodologies to produce spatial and territorial syntheses of economic and social characteristics and processes. For this purpose, the study considers four analytical perspectives on regional disparities:

- A focus on regional dynamics over time, based on the idea that a proper understanding of a region's current characteristics and growth perspectives requires knowledge of its path of development. At the European scale, the time perspective considered when addressing processes of convergence and polarisation has generally been too short.

- A regional hypothesis, implying that each region offers a unique synthesis of social and economic processes at various scales. It follows from this that the region can be a 'filter' through which one can observe the effects of these complex processes while also assessing the impact of policies undertaken to regulate them. A proper use of this 'filter' however implies that each region should be perceived in accordance with its spatial context and hierarchical relations (e.g. at the European, national, inter-regional or cross-border levels).

- An integrative perspective on development, whereby the economic dimension is only one aspect in the wider context of improving standards of living and sustainable development. This implies an acknowledgement that there are other processes, e.g. in the demographic, social, educational or environmental spheres, that are of relevance for regional development and territorial cohesion.

- An emphasis on the functional territories of the EU such as labour markets or service provision areas. These territories are directly relevant for European citizens and businesses as they constitute the daily context of their activities and determine their potentials for regular interaction.

Based on these hypotheses, the study presents empirical evidence on the state and dynamics of regional disparities and territorial cohesion challenges across Europe. On this basis, perspectives on how to approach territorial cohesion statistically and politically are introduced. Finally, the study suggests a number of methods to help overcome the current shortcomings of the territorial evidence base while providing concrete recommendations on how to improve the design, implementation and monitoring of Cohesion policy.

'Catching-up' has taken place *between* countries

The analysis in this study begins with a synthesis of the data that has been central to territorial cohesion thinking, i.e. GDP *per capita* and unemployment rate. The latest economic trends, from the 1980s to the present, show that the disparities in economic levels of development measured in GDP, have been significantly reduced *between* the EU-15 Member States and the former 'cohesion countries' (Greece, Spain, Portugal and Ireland) have experienced a substantial 'catch-up' effect.

In more concrete terms, the analysis of variation in GDP from 1995 to 2004 shows that the most peripheral countries (e.g. the Nordic countries, Ireland, the Iberian Peninsula and the Eastern countries) have witnessed a higher rate of economic growth than the rest of the EU (United Kingdom excepted). This trend is however rather recent, particularly for the NMS, and it is therefore not possible, considering the limited time-span available, to assess its sustainability and durability over time. The possibility of simply reproducing, across the NMS, the levels of economic development successfully achieved in the EU-15 'cohesion countries' has become the main concern for territorial Cohesion policy in Europe.

The analysis of medium-term economic trends enables us to place territorial Cohesion policy in the wider context of national and regional dynamics thus highlighting the potential for European policies to synergize with these processes. In concrete terms the latter implies the placing of emphasis on the use of growth rates in the policymaking process.

But simultaneously, polarisation trends *within* countries increase disparities

The recent trends highlighting convergence between countries are not observed at the intra-national level where differences between regions are in fact accentuating. The increase in economic disparities between regions belonging to the same country is the consequence of polarisation processes. Interestingly, the increase in regional disparities is deemed to be due more to the high performance of some regions, for instance capital and metropolitan ones, than to the sluggish performance of lagging regions. These processes of polarisation do not however only concern the accumulation of wealth and the means of economic production in specific regions. A stronger concentration of jobs in those areas is also to be found as a result.

The empirical evidence produced in this study therefore suggests that the wealthiest regions are in the process of strengthening their positions. As such, the already large pre-existing economic

gaps are being further accentuated resulting in increasing polarisation of the territory. Wealth, and its growth, is in relative terms slowly but surely being concentrated on a few select locations while large tracts of the European territory face the prospect of becoming economic backwaters.

The increase in intra-national regional disparities is experienced by almost all the EU-27 Member States (with the exception of France and Germany) and therefore can be deemed to be a European-wide process. Yet, the polarisation trends are hardly visible when analysing regional disparities on a pan-European basis, i.e. independently from their country of origin, as polarisation *within* countries is statistically concealed by the process of ongoing convergence *between* countries. If the effects of the polarisation processes are difficult to measure on a pan-European basis, they do nonetheless pose a long-term concern to Cohesion policy as they strengthen the territorial imbalances in lower territorial contexts.

Large agglomerations are the frontrunners

The result of these polarisation processes is that metropolitan areas and other functionally significant cities, offering a broad range of high level services as well as hosting high value-added and decision-making capacities, are now taking a larger share of the European economy. This increasing significance of metropolitan areas sharpens territorial imbalances across the continent and enhances their role as structuring poles for the European territory. Polarisation is, moreover, also a consequence of the impact of various globalisation processes in Europe, putting metropolitan areas in the forefront as potential gateways between Europe and the rest of the world.

If, however, it can be argued that polarisation engenders positive impacts for businesses and industries, its negative consequences appear in the form of higher societal 'costs' as unwanted 'externalities'. Indeed, the territorial impacts of polarisation are not only felt in the metropolitan areas themselves, with higher congestion and stronger pressure on the environment, but also in the rest of the territory. The flipside of this 'metropolisation' should also be highlighted: increasing depopulation in the less developed areas, increasing economic vulnerability for small and medium-sized towns and economic decoupling between metropolitan regions and their surroundings. Consequently, polarisation processes lead to an under-utilisation of the regional potentials that are found outside the metropolitan regions. A direct concern for territorial Cohesion policy is therefore to counter-balance the long-term territorial impacts of such processes and to seek a more optimal use of the territorial potentials across Europe.

In that sense, assessing the importance of the structural role of metropolitan regions *vis-à-vis* the European territory is central, particularly, in the light of questions concerning service provision needs. However, the importance of secondary poles, for instance small and medium-sized towns, in structuring the territory should not be disregarded, as they often play a central role for local communities.

Accessibility: core-periphery thinking revisited

The trend analysis identifies processes of intra-national polarisation, in particular between major metropolitan regions, on the one hand and remote rural territories, on the other. This suggests that access to large markets, extensive and diversified labour markets and advanced services, is becoming an increasingly important factor in economic development. The question here is whether this must necessarily lead to increased territorial disparities and reduced cohesion, or if

appropriate policy measures can help in developing more balanced relations between Europe's metropolises and other regions.

Issues of accessibility and peripherality have been central to European spatial thinking since the Keeble (1981, 1988) reports of the early 1980s. In these works the focus has not however been so much on the specific challenges faced by regions of low accessibility but rather on the structure of the European territory itself. Typically, the analyses made lead to the identification of a European core area of high accessibility, with the more or less explicit underlying hypothesis that other parts of Europe need to 'improve' their connections to this area in order to increase their economic development potentials.

The present study challenges this view, on the basis of recent growth figures and with reference to the lack of scientific evidence on the correlation between transport endowment and the level of economic development. Furthermore, one may hypothesise that the relevance of intra-European accessibility measures decreases in a context of globalising trade patterns, as connections to global markets become more significant for individual companies.

European measures of accessibility nonetheless provide useful information on the structure of the European territory and on the types of economic development that can be expected in its different parts. Mapping potential accessibility to European GDP makes it possible to identify areas that are well positioned to develop 'hub' functions, by acting as a crossroads for businesses and entrepreneurs. 'Hub' functions should not however be primarily considered in the sense of transportation hubs, but may also include clusters of advanced business services and all kinds of activities making interactions between economic actors possible. The Eastern limit of the core area identified by this map (see Map 3.4.) corresponds to the border between the 'old' and 'new' Member States.

In contrast, the map of potential accessibility to European population (Map 3.3.) provides a picture of areas where such 'hub' functions could be developed if GDP levels in the Member States continue to converge. In this perspective, a major core area centred on the border regions of Southern Poland, the Czech Republic and Slovakia emerges, as well as peaks of high accessibility around Prague, Budapest and Bucharest.

This geography of 'hub' functions does not however imply that peripheral regions cannot attain high levels of economic performance on the basis of other types of economic activities. The main challenge in these areas is centred on the question of whether the level of service provision is sufficiently attractive for people and for companies. A review of access to services such as airports, hospitals and universities (see Chapter 3) illustrates how these service provision levels depend on the degree to which Member States have implemented policy actions in favour of equal access across their territory.

In a context of deregulation, reduced state subsidies and a focus on cost-efficiency in public service provision, the maintenance of current service provision levels in all peripheral regions may not be possible. The extent of the challenges to come depends on the number of people around each facility. This has been mapped by calculating the number of people within commuting distance of each point in Europe, the so-called "population potential within commuting distance" (see Figure 3.7.).

Such a map is not only relevant in terms of service provision. It also gives an indication of the total number of people that can be mobilised to construct a sustainable, local labour market.

While a diversified economic profile can emerge in areas with large numbers of potential employees, a focus on few branches is necessary to develop competitive activities in small labour markets. This creates higher vulnerability to market fluctuations and economic cycles, as local communities have few alternative sources of income if a given sector experiences a recession. The map of population potential within commuting distance is therefore of central importance here when it comes to identifying the structural obstacles to achieving territorial cohesion in the EU. Low population potentials are identified in all types of so-called "structurally disadvantaged" regions (i.e. mountainous, insular and sparsely populated areas) thus reflecting the main common challenge of these areas.

Infrastructural investments may extend labour markets and increase the number of people within commuting distance thus alleviating this "structural disadvantage". As exemplified by the high speed train strategies in France and Sweden, the effect of transport infrastructure on labour markets however depends on their objectives and design. An infrastructure focusing on improving the accessibility of the main cities may actually disconnect these economies from their regional contexts and create additional challenges in peripheral areas. Furthermore, as pointed out by Copus (2001), increased accessibility may have "*perverse 'pump' effects, whereby the removal of the 'natural protection' of poor accessibility results in economic activity being siphoned away from the periphery to more accessible areas enjoying various agglomerative advantages*".

European territory shows territorial imbalances at different scales

Structural Funds regulations assess regional disparities in the EU by comparing the level of regional development with the EU average, using the GDP *per capita* indicator. The question here is whether this way of proceeding addresses the issues of territorial cohesion. If the perspective is to reach a balanced development in which all regions can be socially, economically and environmentally sustainable, scales other than the European one are relevant. In this perspective, the study proposes to benchmark European regions by combining the European, national, inter-regional and cross-border scales of analysis.

By first measuring regional disparities at the European scale, i.e. considering the deviation to the European average, it appears that the main territorial imbalance stems from the gap between the old and new Member States in terms of economic development. From the point of view of the individual region, this European positioning is far from being the only relevant scale for social and economic development. Contrasts within countries or across regional borders will indeed have specific impacts on investments, migratory flows and trade patterns. As such, while European statistical comparisons may provide convenient criteria for eligibility, measures of national, inter-regional and cross-border contrasts better reflect the existence and extent of territorial imbalances. They should therefore be incorporated into the design of territorial Cohesion policy.

In the former EU-15 countries, the analysis of regional values compared to the respective national average and the values of surrounding regions confirms that the main source of territorial imbalance stems from the dominance of the main metropolitan areas over the rest of the national territory. In addition, the persistent territorial dichotomies of some countries, opposing two main groups of regions are visible in the EU-15 countries such as Italy (North-South), Belgium (Flanders-Wallonia), Germany (West-East) and Spain (North-East and South-West).

By way of comparison, the same analysis applied to the New Member States reveals three types of territorial imbalances. First, an East-West gradient can be observed in all countries, with the Western parts performing better than their Eastern counterparts. Second, the presence of significant disparities between predominantly urban and rural regions tends to suggest that rural areas do not follow the same pace of development as urban ones. Thirdly, the New Member States experience particularly acute processes of polarisation opposing the largest metropolitan areas to their surrounding regions.

The study therefore argues that the territorial imbalances in Europe are plural and should not simply be reduced to the question of an East-West divide. The combined analysis at different scales demonstrates how regions may show signs of disadvantage in different respects. The ensuing typology of situations results in a mosaic-like pattern of 'lagging' regions should then be reflected in the way in which future Cohesion policy is designed.

Indeed, development disparities between neighbouring regions and between regions of the same country can have a detrimental impact on the perspectives for balanced, sustainable growth. Inversely, processes of economic growth diffusion between neighbouring regions and regions of the same country need to be carefully monitored so that they can be encouraged and amplified whenever they occur.

Pro-active territorial cohesion strategies need to be designed and implemented at the scales where economic actors make their strategic decisions. An exclusively pan-European perspective will at best compensate for some of the detrimental territorial effects of economic trends, though this will only occur in a reactive manner and will have little chance of promoting a decisive or long term impact.

In search of better measures of regional disparity

In its analytical section, the study shows the extent to which the objective of territorial cohesion is currently challenged by the magnitude of regional disparities in their multiple dimensions. This implies that one needs to combine a number of different indicators to obtain a satisfactory image of regional performance. The mere addition of indicators is however seldom possible, as the various phenomena are often incommensurable.

As such, exploratory statistical methods need to be applied in order to produce scientifically sound combinations of indicators. Such methodologies have been applied in this study by using a limited set of indicators (GDP *per capita*, unemployment rate, life expectancy at birth, and educational levels). By highlighting the different dimensions of regional development, they provide some 'food for thought' on how to address territorial disparities in the future.

While the output of these methods is however easily communicable (in the form of performance "scores" for each region), the intermediate calculations are not generally accessible to the layman. A policy claiming to be based on scientific evidence would need to accept such a limitation. While economists have largely succeeded in promoting and indeed imposing equally inaccessible econometric models on policy makers as the basis for economic policy-making, planners and geographers are still expected to provide territorial 'evidence' that is 'transparent' to the policy maker.

Furthermore, methods combing multiple social and economic dimensions would necessitate a wider and more relevant set of indicators. The indicators currently available at the regional level

are very limited in their scope and fail to encapsulate the multiple dimensions related to regional development (economic, social, environmental, demographic, and educational). The majority of statistics available at the EU level for Regional policy focus essentially on its economic dimension (*Lisbon strategy*). A less important, but growing range of data is now being produced on the environmental dimension (*Gothenburg Strategy*). However, indicators depicting the social dimension of development are currently seldom available at the regional scale, thus rendering European-level data collection impossible and hindering efficient support policies in this field (*Social Agenda*).

The construction of scientific methodologies, able to provide a policy-relevant knowledge base, has thus far been hampered by the lack of comparable and geographically detailed data outside the over-used GDP and unemployment indicators. The collection of better datasets can be improved in four ways: a wider range of indicators at the regional (NUTS3) level, enlargement of the data collecting exercise to include EU neighbouring countries, the collection of data at local levels (LAU1 and LAU2) and the development of longer time-series.

Policy recommendations

The policy recommendations are structured around a 'policy cycle' consisting of four main stages and namely: *agenda setting*, *policy design*, *policy implementation*, and *evaluation and learning* stages.

Agenda setting

- The involvement of regional stakeholders in the early stages of agenda settings implies that the focus of the evidence base should be on local realities. This for example implies the strictly limited use of regional or national average values as a basis for policy making, insofar as these fail to reflect the extent of variations between localities. Statistical methods focused on local realities would stimulate the inclusion of regional stakeholders in debates on the Cohesion policy agenda.

- Policy makers need to take a leading role in questions related to statistical issues in order to move from a *data-driven* to a *problem-driven* approach to Regional policy. Currently, the lack of appropriate social, environmental and economic data jeopardises the European Union's ability to maintain a territorial policy in the longer term. A pro-active role in respect of statistical issues is also necessary to cover the economic, social and environmental dimensions, particularly from a sustainable development perspective.

- The territorial dimension of disparities should also be highlighted. The territory is indeed a useful 'filter' through which to assess the degree of compliance between the politically defined strategic objectives and the concrete effects of implemented policies. An appropriate use of this 'filter' however presupposes continuous critical debates in respect of all "territorial evidence", as conclusions change dramatically, depending on the spatial scale and the time-span considered. Making territorial data accessible to all stakeholders, and encouraging them to use it pro-actively in the elaboration of their strategic targets and in their debates, would be one way of progressively allowing a balanced vision of Europe's territorial structures and trends to emerge.

Policy design and implementation

- The knowledge base for Cohesion policy needs to be diversified. The 'monolithic' approach to regional disparities, according to which deviations from European average values would be sufficient to identify areas where territorial cohesion is an issue, is inadequate. Based on its scientific findings, the present study advocates the need to develop a territorially differentiated approach to Regional policy, adapted to the particular structural needs and socio-economic profiles of each region.

- Criteria for eligibility need to be re-considered and adapted, as they are essentially political constructs of an instrumental and conventional nature. A more dynamic and holistic perspective on regional development would provide a more nuanced picture of regionally-based structural disparities across Europe.

- Cohesion policy can be designed as a framework within which local and regional authorities are guided and encouraged in the formulation of policies seeking to overcome contradictions between the different dimensions of sustainable and economic development. This implies approaching Cohesion policy from a *contributory* point of view rather than a simple *redistributive* attribution of financial aid from the European level to regions or Member States.

- Access to structuring services, as for instance airports, universities or hospitals, is of critical importance when assessing regional development perspectives. The lack of such services seriously reduces the perspectives for economically and socially sustainable local development. Service provision and territorial cohesion policies need to be integrated accordingly.

Recommendations related to policy evaluation and learning

- New tools for assessing the efficiency of policies are needed, especially relating to the synergies, combined territorial impacts of sector policies and Cohesion policy. By improving the capacity of regions themselves to get involved in these assessment and evaluation efforts, policies can be improved and stakeholders empowered. Innovative statistical approaches, developed in interaction with the stakeholders, could help to ensure that the evidence basis matches wider policy objectives.

- Understanding the territorial processes requires that one takes into account the changing geography of functional territories. This creates a complex geography of evaluation and learning regions which do not necessarily correspond to the politically identified target areas of Cohesion policy. While target areas remain politically defined, territorial cohesion strategies should seek to integrate the dynamics of these functional territories.

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Glossary of abbreviations and acronyms

ESPON: European Spatial Planning Observatory Network

EU: European Union

FDI: Foreign Direct Investments

GDP in pps: Gross Domestic Product in Purchasing Power Standards

NMS: New Member States

NUTS: French acronym for Nomenclature of Territorial Units for Statistics

OMS: Old Member States

RTDI: Research, Technological Development and Innovation

R&D: Research and Development

UK: United Kingdom of Great Britain and Northern Ireland

1. Setting the scene

1.1. Territorial cohesion and the European policy context

Since the turn of the millennium the policies of the European Union (EU) have essentially revolved around three overarching objectives: economic competitiveness, promoted by the *Lisbon Strategy*, sustainable development, supported by the *Gothenburg Strategy*, and territorial cohesion.

There is however an implicit but effective hierarchy between the three objectives. *Lisbon* and *Gothenburg* provide widely consensual political objectives, centred on the notions of economic growth, competitiveness and sustainability. Moreover, these two strategies are rather future-oriented, aiming at helping Europe to embrace the global challenges of the 21st century. In comparison, territorial cohesion seems to be less fashionable. First, it is often perceived as a rather self-centred European objective, which means that it deals essentially with the internal structure of the Union and not with the position of the EU in a global perspective. Second, territorial cohesion, as pointed out by Robert (2007), is also perceived as a *reactive* policy objective. Indeed, the emergence of territorial cohesion as a central European objective during the 1990s was fuelled by the fear that external factors such as globalisation, liberalisation and increased competition and their associated territorial impacts, might threaten the regional structure of Europe (Robert, 2007). In opposition, the two other objectives (economic competitiveness and sustainable development) are deemed to be *proactive* European policies.

What is more, territorial cohesion is deemed to be a rather complex and 'fuzzy' policy principle, often difficult to grasp, combining notions of spatial development and planning from widely divergent sources, ranging from the French tradition of *aménagement du territoire* (with a strong focus on reduced territorial disparities) with German *Raumplanung*'s emphasis on integrating and coordinating potential spatial impacts of sector policies (Davoudi, 2005).

The overall ambition of territorial cohesion as stated in the European Commission's *Third Cohesion Report* [(1)] is the provision of equal chances for all Europeans *wherever they happen to live or work in the Union*, or that "people should not be disadvantaged by wherever they happen to live or work in the Union" [(2)]. The main instrument of territorial cohesion is not merely "Regional policy" as such, rather the "coordination of a wide range of sectoral policies and initiatives, making both sectoral policies which have a spatial impact and Regional policy more coherent" [(3)]. The 'success' of territorial cohesion is not only measured by its capacity to make the European territory more balanced, but also by its capacity to efficiently coordinate spatial policies in European regions.

In order to turn it into a more *future-oriented, proactive* policy objective, territorial cohesion ought to be thought of as a framework within which the principles of the *Lisbon agenda* are adapted to the spatial and regional configuration of Europe. This implies acknowledging that regions have a significant role to play in the improvements of productivity and competitiveness, by developing appropriate contexts for business development and functional labour markets. In a similar way, the regional and local perspectives on the *Gothenburg agenda* makes it possible

(1) Commission of the European Communities 2004: *A new partnership for cohesion: convergence, competitiveness, cooperation*, i.e. *The Third Report on Economic and Social Cohesion.*
(2) Ibid, 27.
(3) Ibid.

to concretely envisage ways of combining economic, social and ecological sustainability, for example in the context of a city, a metropolitan labour market or a depopulating rural area. When territorial cohesion is interpreted as the construction of a solid regional framework, allowing all parts of the European territory to prosper on the basis of their individual strengths, it becomes a generic policy principle rather than an individualised and marginal policy.

Until now, the problem of territorial cohesion has been dealt with within the framework of Regional policy. Indeed, Regional policy is the only European policy that explicitly sets the goal of territorial cohesion as an overarching one. The focus of the Cohesion policy is rather on identifying potential threats to European integration, such as excessive territorial contrasts in wealth or productivity and insufficient transport infrastructure endowments within and between some regions. As such, the Cohesion policy has had an important symbolic role to play in the story of European integration besides its purely financial, redistributive effects. The new programming period 2007-2013 has however witnessed a change in policy thinking on regional development more generally, as Regional policy is increasingly seen as a policy for *all* regions, while *all* policies are now considered as having a regional and/or territorial impact, even though they may not be 'regional' in their initial or primary stated objectives. The move of Regional policy from a purely redistributive perspective to a contributory one, re-brands it as the new focal point of the raft of once disparate European policies that have territorial impacts.

The latest EU enlargements of 2004 and 2007 have made the challenges to regional development and European integration more acute, due to the large increase in regional disparities they engendered. The main concern here is not with the objectives of Regional policy in themselves, but rather with the means it has at its disposal. Indeed, even if Cohesion policy is the EU's second largest policy in terms of budgetary allocations for the 2007-2013 programming period, it has seen only a slight increase of its total budget in comparison with the previous programming period and in the light of the challenges ahead. Consequently, the main concern of European policy makers is how to prioritise their objectives in order to optimize the use of the limited funding available. This however entails possession of a detailed understanding of the specific challenges faced by each territory in order that appropriate responses can be developed. The latter is strongly connected to the capacity to build the scientific tools and methodology able to provide an objective and relevant picture of regional disparities in Europe.

Thus far, the main criterion used for attributing the Structural and Cohesion Funds has concentrated on economic development measures, embodied by the indicator of Gross Domestic Product (GDP) *per capita* [(4)] . The main method used has been comparisons of the level of each region to the average European level, with "75% of EU-average" as the paradigmatic threshold. The results of this approach led to the agreement on the Objectives of the 2007-2013 programming period, as agreed by the Member States in December 2005.

The result of this process was that the main beneficiaries of Regional policy support, i.e. with respect of the Convergence Objective, are regions located in the Cohesion countries who in their turn receive European funding as their level of development is below 90% of the EU average. Moreover, some of the former Objective 1 regions in the EU-15 [(5)] from the previous

(4) Indeed originally the difference between convergence and cohesion was more disciplinary than anything else, with economics in particular focussing on the empirically observable process of regions converging in GDP terms, while cohesion has, from the beginning, had more of a political connotation relating also to other aspects of integration in addition to that measurable via GDP development.

(5) EU-15 refers to the countries that belonged to the European Union before the latest enlargements of 2004 and 2007.

programming period (2000-2006) were still granted funding in the framework of the so-called "Phasing in" and "Phasing out" financial arrangements. The level of funding will however be progressively reduced from 2007 to 2013, which, in the end, means that, in the next programming periods, they will not be eligible for specific funding.

The main problem raised by this approach to the allocation of funds and one of the starting points for our analysis, is that it does not take into consideration the persistence of specific structural problems in some regions. Indeed, the 2004 and 2007 enlargements have led to an nearly exclusive focus on the contrast between old and new Member States [(6)], making other disparities 'statistically invisible'. This phenomenon is exemplified by the "Phasing in" financial arrangement, which implies that regions that are below the threshold of 75% of EU-15 average, but above that of the EU-27 [(7)] will receive decreasing financial support between 2007 and 2013. This support is designated as compensation for the so-called 'statistical effect', which has left these regions out of the main Regional policy Objective because the European average has changed, even if their own economic situation has not improved significantly. The progressive reduction in funding implies that the challenges faced in these regions are no longer considered to be of European concern, thus displacing public intervention from the European level to the national or regional one.

Yet, the integration of European markets and the concern for fairer competition between Member States have however significantly reduced the scope for national or regional intervention, as for instance illustrated by the strict rules concerning financial assistance to enterprises in the context of Regional State Aid. A re-nationalisation of Regional policy in the previous EU-15 Member States would furthermore represent a step back in the construction of a more integrated European Union. It is therefore increasingly obvious that the historic 'monolithic' approach to regional disparities described above has become obsolete as it is unable to grasp the diversity of situations encountered in a European Union of 27 Member States.

In order to propose a new way of approaching this issue, it seems imperative to look beyond the essentially technical concerns around the distribution of Cohesion policy funding. The focus must, at least initially, be on the principles and objectives of territorial cohesion. This implies the need to improve our understanding of what territorial cohesion actually entails, in order to create corresponding indicators. For this purpose, it is necessary to start from the definition of territorial cohesion promoted by the European Commission: "a balanced development throughout the EU, reducing structural disparities between regions and promoting equal opportunities for all" [(8)]. Three fundamental elements can be identified in this definition.

First of all, the idea of 'a balanced development throughout the EU' not only refers to the level of economic performance but is also open to various components relating to the social, demographic and environmental characteristics of the regions. Territorial cohesion thus addresses the notion of 'development' in its plurality and diversity across the European territory.

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(6) The expression 'New Member States' refers to the countries that have joined the European Union since 2004, increasing the number of members from 15 to 27.

(7) EU-27 refers to the current composition of the European Union, with 27 Member States (dated from the 1st of January 2007).

(8) Extracted from the glossary of the European Union available at:http://europa.eu/scadplus/glossary/index_en.htm

Secondly, the objective of 'reducing structural disparities' emphasises the necessity to have a dynamic perspective on territorial cohesion: territorial cohesion is a process that needs to be monitored continuously. Successful, creative, and innovative regions tend to outdistance other areas; this only becomes a problem when contrasted development trends have self-reinforcing effects over longer periods of time. This double nature of regional disparities, as both a necessity and a potential threat, explains the need for constant benchmarking 'between regions'. Territorial cohesion is a process of comparing the level of development of the regions in the various territorial contexts they belong to: from the European to the cross-border.

Finally, the inclusion of 'equal opportunities for all' forwards the notion of accessibility, understood as access to services for persons and businesses and thus relating to and idea of spatial justice.

1.2. Scope of the study: a measurement of disparities that makes sense

Within the broader policy context defined above, the main aim of this study is to produce a picture of the current level of disparities between regions in Europe. Our argumentation is based on four main issues of interest: the plural meanings of 'development', the need to look at the evolution of disparities over time, the multiple territorial (and policy) contexts of the regions and the notion of accessibility.

The understanding of territorial cohesion as a 'dynamic process' here is crucial. Great care must however be taken when interpreting trend data. Economic cycles and temporary fluctuations in performance are often mistakenly interpreted as the manifestation of structural strengths or weaknesses. Furthermore, trend data generally needs to be expressed with reference to some initial situation (e.g. as a percentage change). This implies that such data needs to be analysed and understood in view of this initial situation.

Chapter 2 of this study embraces the dynamics of economic development in Europe, from the 1980s to the present in the case of the previous EU-15 countries and from the mid-1990s to the present for the EU-27 as a whole. The analysis of these economic trends considers mainly the evolution of incomes *per capita*, of employment and of productivity. The results provide us with mixed messages, as both processes of convergence and polarisation are simultaneously underway across the continent. As such, while convergence trends tend to reduce the gap between the Eastern and Western halves of Europe, distinct polarisation processes at other territorial scales show that the challenges related to territorial cohesion go beyond this simple 'macro' opposition.

This observation highlights the need for a multi-level approach to the European territory. Questions to be addressed include: How are the different scales organised? Which are the regions with the strongest market potentials? What are the structural challenges in different parts of Europe? It is our contention that, in an economy of flows, accessibility is the main parameter defining the scope for action within each region.

Chapter 3 however demonstrates that pan-European measures of accessibility, which have been the main focus of attention up to now, do not provide the most appropriate basis to understand the issues of Territorial cohesion in Europe. Addressing the notions of centrality and peripherality at the European scale admittedly provides us with interesting insights into where the potential European "hub-functions" could be developed. It does not however provide much of an indication of the concrete opportunities related to the improvement of territorial cohesion

in peripheral and lagging regions. Indeed, their strategies for development must be designed in interaction with neighbouring regions, rather than through hypothetical connection with a "European core". The main structural challenges to be overcome are on the other hand at the local level, a critical question being whether each community has access to the services it needs to implement. Consequently, measuring local access to services enables us to add a more concrete dimension to cohesion, relating to the territorial context for daily life and assessing the level of service provision within regions.

Chapter 4 proposes methodologies for territorial benchmarking capable of identifying territorial structural challenges across Europe, but without applying the 'monolithic' approaches described above. The general idea is that structural territorial challenges cannot only be measured as deviations from a European average, as is usually the case in the context of Regional policy. One also has to consider other territorial contexts of importance for the regions: the national, the inter-regional, as well as the cross-border. The chapter also advocates the use of criteria other than economically-based ones (such as GDP *per capita*) to describe the socio-economic context of the region. In this respect unemployment, median age, and the level of education are as decisive as GDP in defining the profile of a region. Statistical methods classifying European regions according to their social and economic profiles are proposed. These methods complement traditional rankings made according to individual indicators.

Chapter 5 synthesizes the policy implications of the previous chapters and concludes with the presentation of a number of strategies that could be pursued in the future. It provides tentative paths of reflection on how to better conceptualise the links between Cohesion policy and regional disparities, thereby seeking to identify policy actions that could potentially reduce regional disparities. The starting point here is the central role played by the goal of territorial cohesion in the EU's Treaty base, as well as the central importance of a broader understanding of regionally relevant policies, and the policy impacts of various sector policies on the regional level.

In the 2007-2013 Structural Funds period, the Regional Competitiveness, Employment and the Territorial cooperation objectives cover all EU regions. In this context it becomes crucial to undertake a Cohesion policy that reflects and accommodates the current regional diversity and complexity of the European territory. The diversity in regional profiles and situations intrinsically calls for a territorially differentiated approach to Cohesion policy, that is to say, a policy that is adapted to the needs of each individual region. This point was aptly illustrated in chapter 4. Chapter 2, moreover, highlights the fact that convergence *between* countries does not lead to a simple mechanical reduction of regional disparities *within* countries. On the contrary, it shows that simultaneously supporting the development of both countries and regions remains a necessity for the Union. Different types of regions (e.g. rural-urban, metropolitan *vs.* hinterland) need differentiated policy measures.

Finally, it is obvious that achieving greater territorial cohesion is not a matter that can be dealt with solely through Cohesion policy. Addressing the structural challenges of the regions requires a higher degree of coordination between sector policies thus enhancing possible synergy effects. This is a key result from our argumentation in chapter 3. Linking Cohesion policy more firmly and more explicitly to sector policies, e.g. innovation, infrastructure, environment or transport, is therefore a prerequisite for the production of appropriate and effective cohesion policies. Themes previously overlooked, e.g. service provision, services across borders and the accessibility of such services should thus also be addressed if social and organisational innovations and 'best practices' are to be identified across the EU regions.

2. Processes of convergence and polarisation in Europe

This section of the study depicts the temporal aspects of disparities and cohesion, i.e. the economic processes of convergence [(9)] and polarisation [(10)] taking place across the European territory, on both a medium- and a long-term basis. In economic theory two types of convergence are identified, namely *absolute convergence* and *relative* or *conditional convergence*. In simplistic terms the former, based firmly in neoclassical growth theory, denotes a process where poorer economies (be they national, regional or local) are growing faster than the richer ones due to decreasing returns on capital, assisted by increasing factors (labour, investments) mobility and trade. The poorer economies would therefore eventually 'catch up' with their richer counterparts with the economic gap eroded over time. The latter viewpoint argues that growth is dependent on a much wider range of factors than merely the technology used and the productivity of the worker. Factors such as, for example, the political system in which the region operates are in addition seen as important here.

In general, this chapter considers the notion of convergence, in light with the discussion above, as being absolute, while instead of the rather vague term "divergence", the term "polarisation" is used as a substitute.

Spatial disparities are extremely sensitive to the scale of analysis: the smaller the units of analysis, the stronger the tendency for large differences between them to occur. As a rule and unless otherwise stated, the analysis in this chapter operates primarily on the NUTS 3 [(11)] level which implies that there are at least two spatial entities in each Member State save for Luxembourg and Cyprus.

2.1. Trends and counter-currents in the 1980s and 1990s

One of the main goals of EU Cohesion policy relates to the 'catching-up' process of the EU's poorest countries. From an economic point of view Europe has become increasingly more uniform over the last two decades. Differences in terms of production value, for example, have decreased with Member States becoming increasingly similar in this respect. This is illustrated by Table 2.1 which presents a simple statistical measure of disparities (standard deviation) in GDP *per capita* (adjusted for differences in purchasing power) as well as of the unemployment rate across the EU-15 Member States, starting from the early 1980s and running up to the turn of the millennium.

Differences between the Member States have substantially decreased, in terms of economic welfare, over the decade and a half in question. The primary reason for this convergence is the vast amount of financing directed to the former Cohesion Countries combined with the substantially faster growth of the Irish and Portuguese economies in particular and, especially in

(9) Convergence occurs when several entities, for instance regions or countries, progressively attain the same standards of development; for instance, economic convergence occurs when entities attain similar levels of GDP *per capita*.

(10) In economic terms, polarisation relates to the phenomenon that witnesses a stronger concentration of wealth or production means in a handful of places, thus creating significant imbalances across the territory.

(11) NUTS is a French acronym for Nomenclature of Territorial Units for Statistics (*Nomenclature des Unités Territoriales Statistiques*). It is a statistical norm created by *Eurostat*, the Office for Statistics of the European Union, in order to have at its disposal a unique outline for territorial division. This nomenclature is constructed in a hierarchical manner for EU territory, NUTS 0 being the highest level (countries).

the case of Ireland, the vast amounts of Foreign Direct Investment (FDI) that have been poured into the country. The absolute size of the Irish economy actually doubled between 1983 and 1997.

There are however – even when measured as is the case here only *between countries* – counter-currents to this trend of general economic convergence in the EU-15. One of these concerns the labour market. Differences in e.g. unemployment have increased substantially since the mid 1980s, one indication that a uniform European labour market has not yet been achieved. As Europe is a territorially rather large and a culturally and economically diverse continent, differing economic cycles in different parts of the continent imply that uniformity in terms of national labour markets is hard to achieve. This is further emphasised if the viewpoint is shifted from economic convergence *between* Member States to an examination of the differences *within* them.

Table 2.1. Socio-economic disparities between EU-15 Member States 1983-1998

	Standard deviation				*Indicating:*
	1983	1988 [1]	1993	1998	
GDP/head in PPS, index EU15=100	17.2	14.9	12.5	11.2	- increasing convergence
Unemployment rate (LFS)	3.1	3.9	4.6	5.5 [2]	- increasing polarisation

[1] Estimate [2] 1999

Data source: First and Second (and Sixth Periodic) Report on Economic and Social Cohesion, European Commission

Figure 2.1 illustrates the variety of cycles and trajectories in terms of country-specific regional disparities. The time period at hand covers the years 1983 to 1998, the spatial reference is NUTS 2, and, once more, GDP *per capita* (adjusted to the EU-15 average) is used as a general proxy for regional economic progress. Data for Denmark and Luxembourg is not presented here as these countries constitute only a single NUTS 2 region. A high value implies large internal disparities while a low value correspondingly implies small differences. It is however important to notice that the number of statistical regions inside a country influences its level of internal disparities: the larger the number of regions, the more disparate a country is likely to be. This does not however, in any way, reveal the specific geographic pattern behind these differences.

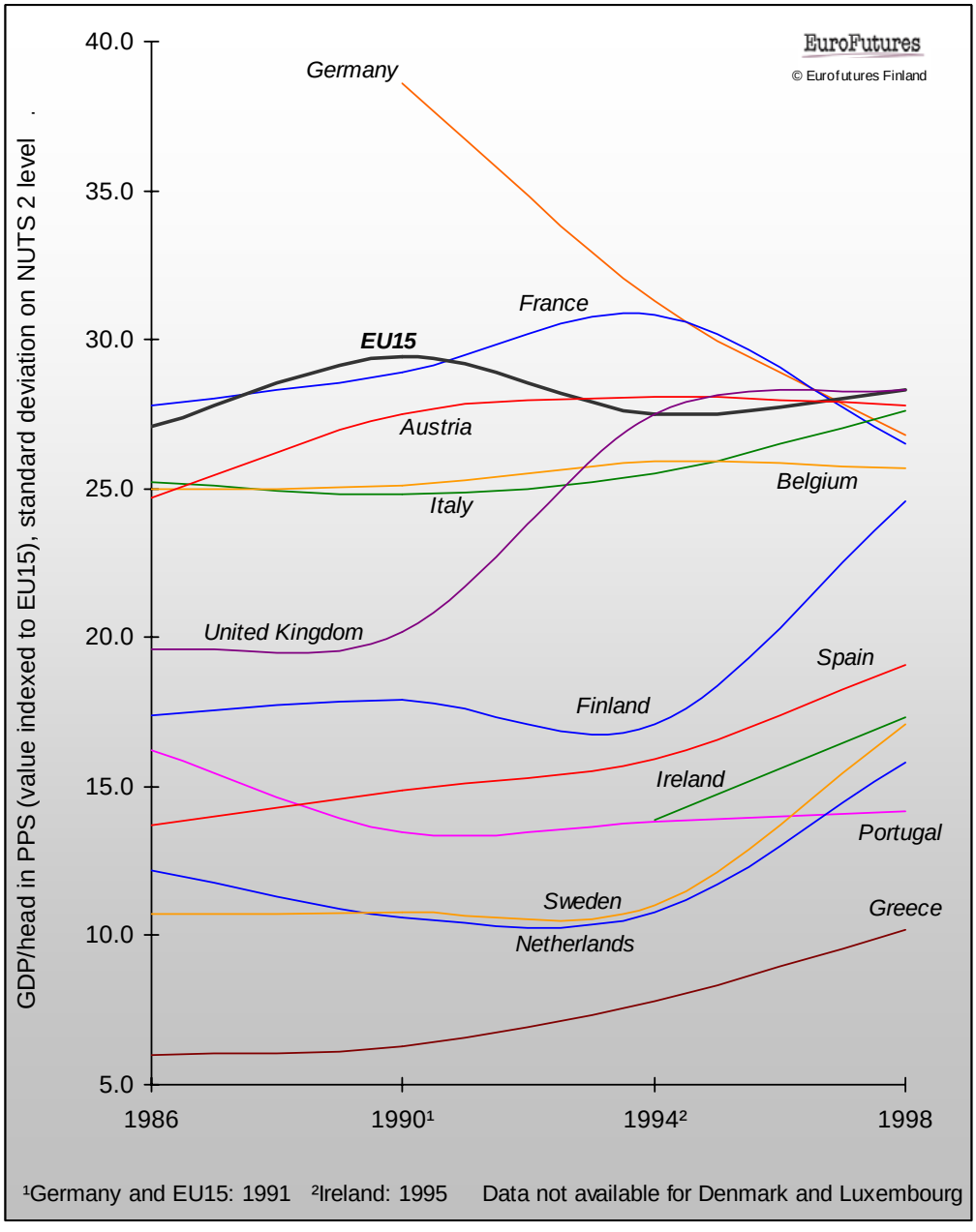
On the whole, during the above-mentioned period, internal differences have decreased in only three (EU-15) countries: Germany, Portugal and France. In the latter two cases however there have also been short periods of increasing disparities. In the German case, where only post-1991 data is shown (i.e. for a post-reunification Germany that includes the New *Länder*), the 'catching up' of the *Länder* from the former East Germany explains the rapid decrease. Looking only at former Western Germany the situation has largely remained unchanged, albeit with a slight increase of regional disparities in the final years of the time series.

In all other cases an internal spatial polarisation of varying degrees has occurred during the period. In the UK as well as in Finland, disparities increased particularly rapidly in the 1990s, in both cases to a large extent due to the extraordinary rapid economic growth of the capital regions (London and Helsinki respectively). In the remaining Member States, particularly in the late 1990s, a substantial period of concentration in terms of economic activity has occurred, typically to a selected few metropolitan areas.

In the more peripheral areas of these countries a relative decline has been witnessed. Sweden, Spain and Greece are prime examples of this type of development.

Exceptions to this general pattern are however, if not numerous, at least several in type. Typically these include highly specialised regions, be they in manufacturing or in e.g. R&D that have managed to take advantage of globalisation to increase their relative standing in the welfare hierarchy of their respective countries.

Figure 2.1. Regional disparities in GDP per capita within the EU-15 Member States 1986-1998



Data source: First and Second Report on Economic and Social Cohesion, European Commission

What this then suggests is that during the 1980s and 1990s a general tendency occurred towards the diminution of differences between the fifteen Member States while at the same time increasing internal differences emerged within them. This trend was further accentuated with the inclusion of twelve New Member States (NMS12) in the period 2004-07.

2.2. Increasing polarisation in an enlarged Union

While the primary economic dichotomy in the EU prior to the entry of the newest accession group was focussed along a North-South divide, the inclusion of the NMS12 has shifted the axis of this divide to an East-West polarity [(12)]. In 1994 the combined economic volume – taking into account differing purchasing power rates – of the current EU-27 area was divided in such a way that 90.5% of the value-added was produced in the EU-15 and only 9.5% in the NMS12. By 2004 the NMS12's share of joint production had increased, but only to 10.8%, with the remaining 89.2% still being produced in the old 15 Member States. This seemingly slow development is not however so surprising as the lion's share of the EU-27 population resides in the old Member States. Even with a perfectly balanced structure the ratio between the old and the new Member States would (in 2004) have been 79% to 21%.

Therefore the current East-West European divide is, while remaining important on a macro scale, probably not the most pressing challenge from the viewpoint of territorial or spatial cohesion as East-West differences are converging within the context of existing European policy goals. Intra-regional disparities are not however following this trend.

The past decade has, in economic terms, seen clear spatial polarisation across the European territory. The *Gini* coefficient [(13)] for total regional GDP (adjusted for purchasing power) in 1995 for all 1 283 NUTS 3 regions then in the European Union was 0.55. By 2004 this coefficient had increased to 0.56, this difference entailed a moderately strong process of economic concentration (Table 2.2). In purely theoretical terms the coefficient 0.56 implies that 56% of the entire EU production would have to be relocated in order to achieve total equality within the EU in terms of the production of value-added.

Table 2.2. Gini Concentration Coefficient for regional GDP in 1995 and 2004

	Gini Concentration Ratio for total Gross Domestic Product on NUTS level 3		
	1995	2004	*Indicating*
Countries now belonging to EU27, total	0.55	0.56	- increasing disparities
of which:			
• in EU15 countries	0.55	0.56	- increasing disparities
• in the New Member States	0.47	0.49	- strongly increasing disparities

Data source: Eurostat

Measured in terms of *Gini* coefficients, this concentration process is stronger in the NMS12 than in the EU-15, notwithstanding the fact that regional differences in the NMS12 were smaller at the onset, and remain so. This is however, in part, the consequence of having fewer (statistical NUTS 3) regions in the NMS12.

(12) The existence of this gap is clearly highlighted by the results presented in section 4.2.1 of this report.

(13) The *Gini* coefficient is a commonly used measurement of the degree of concentration (inequality) of a variable in a distribution of its elements. It compares the distribution of a variable with theoretical perfect equality. The *Gini* coefficient ranges between 0, which implies no concentration (perfect equality), and 1, which denotes total concentration (perfect inequality).

2.2.1. Agglomeration forces in production

The next question concerns exactly where this concentration has occurred and what types of factors seem to act as drivers for these processes? Table 2.3 presents the real economic growth as well as the *per capita* growth for all EU (NUTS 3) regions between 1995 and 2004. The data is divided along a set of commonly used regional groupings of the EU space.

Table 2.3. Development of GDP and GDP per capita 1995-2004 in selected regional groupings of Europe

Regional grouping according to:	Real GDP change 1995-2004 Percent per year on average	GDP/capita change 1995-2004 Percent per year on average
Urban hierarchy[1]		
1. Metropolitan European Growth Areas	4.3	3.9
2. Transnational/national Functional Urban Areas	2.9	2.6
3. Regional/local Functional Urban Areas	2.3	2.3
4. No significant Functional Urban Areas	2.3	2.0
Wealth (GDP/capita in PPS 2004, index EU27=100)		
Over 150	2.7	2.4
126 to 150	2.7	2.3
101 to 125	2.3	1.9
76 to 100	2.2	1.9
50 to 75	2.3	2.3
Less than 50	3.8	4.5
Core-periphery[2]		
Within the Pentagon	1.9	1.6
Outside the Pentagon	3.0	2.9
Structural Fund (2000-06) eligibility		
Objective 1 eligibility	3.0	3.2
Objective 2 eligibility	2.1	1.7
No eligibility	2.5	2.2
Multimodal accessibility potential (index EU27=100)		
Over 150	1.9	1.6
126 to 150	2.3	1.7
100 to 125	2.2	1.9
75 to 99	2.5	2.4
50 to 74	2.9	2.8
Less than 50	3.3	3.7
EU 27 unweighted average	2.5	2.4

Note. Due to data restrictions all figures reflect unweighted (interregional) averages where each region is weighted equally regardless of size.

[1] *Based on a classificaton of Functional Urban Areas from the ESPON project 1.1.1.*

[2] *The Pentagon is a term often used to define the economic core of Europe, stemming from its five cornerstones London, Paris, Milan, Munich and Hamburg.*

Data source: Eurostat

The hierarchy of the urban system seems to be a strong explanatory variable when it comes to recent economic progress. The largest, and often most advanced, urban regions have had the fastest growth (first batch in Table 2.3) while the smaller and functionally less significant an

urban region is, the slower has been its growth rate. Typical regional market centres or regions lacking even such cities have witnessed the worst development and, despite an average albeit modest growth even for this group (as opposed to an absolute decline), their relative standing *vis-à-vis* the rest of the Union has worsened significantly during the period. As this process has been similar, though at differing intensity, in both the Old and the New Member States alike a tendency towards the spatial polarisation of economic activity is clearly discernible at this analytical level.

Similar agglomeration forces [(14)] are also evident if the territory of the Union is divided using GDP/capita as an indicator of wealth (second batch in Table 2.3). In this respect, the richest regions have seen the fastest growth while the poorer a region is; the slower has been its progress. The last class is nevertheless an exception in this fairly rigid hierarchy. The poorest regions (i.e. with a GDP less than 50% of the EU mean) have witnessed excellent average growth rates of nearly four percent per year during the period. This group of regions exclusively consists, with the exception of a small number of Greek and Portuguese regions, of regions in the NMS12, typically all regions of the country in question apart from the capital (where GDP tends to be above 50% of the EU mean). Naturally, growth rates in these regions have, on average, been better than in the Western parts of the EU on the whole, starting as they have from a very low position. In growth *per capita* terms their position is even stronger as most of these regions are simultaneously facing rapid depopulation. Nevertheless, despite this apparent counter-current for the poorest regions, on the whole, and also in wealth terms, a process of polarisation is undoubtedly taking place across Europe.

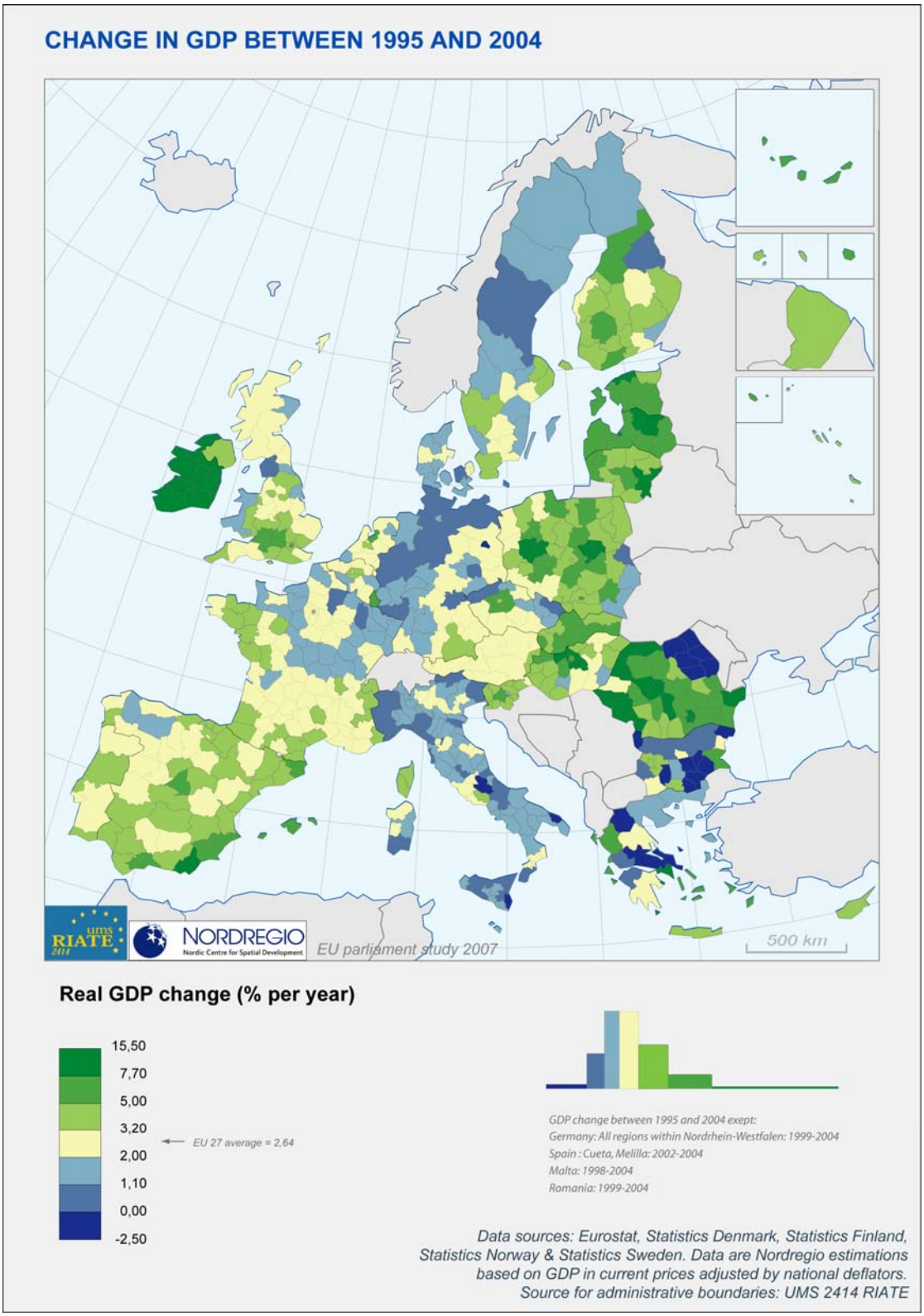
The same explanation as that outlined above lies behind the fact that the regions, again on average, inside the Pentagon have grown substantially more slowly than those outside it. Furthermore, all fast growing Nordic regions as well as e.g. the Spanish ones are situated in the European periphery which implies better average growth rates for the peripheral parts of Europe than for its core (Map 2.2). This remark confirms the fact that a good level in European accessibility terms cannot be deemed as a sufficient condition for fostering growth, thus questioning the existence of a positive correlation between economic growth and current accessibility. This issue will be further developed in section 3.1.

In 1995 the regions within the Pentagon accounted for 45% of all EU-27 value-added. By 2004 this share had declined by nearly two percentage points to 43.4%. Using this fairly crude division of Europe as the platform of measurement, indications emerge of a process counteracting the formerly fairly rigid core-periphery European dichotomy.

Finally, similar tendencies are also discernible when demarcating European territory along the (2000-2006) Structural Fund Eligibility divide. Regions eligible for Objective 1 status have had by far the fastest growth – more than 3% per year on average during the period.

(14) The term "agglomeration forces" refers to economic processes of concentration linked to the benefits that firms and businesses enjoy when locating close to other businesses or their consumers, most typically in large urban areas.

Map 2.2. Real GDP change 1995-2004 in EU regions



2.2.2. New jobs are also being concentrated

European labour markets are currently undergoing a period of rapid change. When examining regional labour markets, on a country by country basis, simultaneous processes of convergence and polarisation become evident. Although comparable data is available for only a short period of time indications nevertheless exist to show that countries with large differences in terms of regional unemployment rates have experienced increasing convergence between 2001 and 2003. Germany, Belgium, France, Spain and the UK are the most prominent examples of such a pattern. In this respect developments in Italy have not however been equally encouraging as the country's substantial intra-regional disparities, i.e. the North-South dichotomy, remained largely unchanged during the period in question.

On the other hand several countries with negligible or only small internal differences, such as Greece, Bulgaria, Slovakia or Lithuania, can now be seen to be moving in the opposite direction with regional differences in terms of unemployment increasing during the period. A third group of countries also exists where the situation remains basically unchanged.

Nonetheless, in most countries, regional differences in terms of unemployment are decreasing, which indicates that differences within countries are becoming smaller. Economic upswings and downturns – despite increasing globalisation and national interdependences – are still very much tied to the territory of the Nation State [(15)]. As a general rule, regional differences, in terms of unemployment, tend to increase in a situation of rapid growth while they tend to decrease when the economy is not expanding. This decrease for most EU countries could thus be, to a large extent, a reflection of the sluggish economic growth that occurred between 2001 and 2003, and thus also be deemed circumstantial. Another issue here is that even if differences in regional unemployment *within* many *countries* have increased, they have not necessarily done so where disparities *between all EU regions* (regardless of country) are examined. Corresponding data for the years 2002-2005 points to total intra-regional disparities in the EU having decreased substantially during the period. For those 825 NUTS 3 regions for which data is available[16], the corresponding coefficient of variation decreased from 42.4 in 2002 to 31.5 in 2005 which would indicate that the EU territory altogether has, in light of the rate of unemployment, became substantially more homogenous over the period in question.

A calculation of the absolute number of unemployed persons however clearly indicates the opposite. When utilising once more the *Gini* coefficient (for an interpretation of the method, see the section on GDP below) as a measurement of concentration, a clear polarisation process can be seen to have taken place in the *number* of unemployed persons (*Gini* index increasing from 0.47 in 2002 to 0.49 in 2005).

The difference between these two results and the confusion therein stems from shifts in the labour force. As the unemployment rate is a function of (1) unemployed persons and (2) persons in the labour force (which consists of employed plus unemployed persons), changes in either number will affect the unemployment rate.

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(15) Territorially very large economies, such as the USA, India or China, are obvious exceptions as there might be both recession *and* growth occurring simultaneously in different parts of the countries.

(16) Data is unavailable for 455 NUTS 3 regions primarily from Germany, the UK, Belgium, Greece, Portugal and Austria, which renders it difficult to depict the situation for the whole Union.

Table 2.4. Dispersion of regional unemployment rates at NUTS 3 level 2001 and changes 2001-03

	Dispersion of regional unemployment rates at NUTS level 3 (%)			*Interpretation*	
	2001	2003	Change	*Disparities in 2001*	*Tendency*
Denmark	22.0	19.1	-2.9	*Small*	*Decreasing*
Ireland	22.7	16.6	-6.1		
Latvia	24.4	20.5	-3.9		
Sweden	27.0	18.7	-8.3		
Lithuania	10.4	17.0	6.6	*Small*	*Increasing*
Greece	25.7	30.8	5.1		
Slovakia	28.0	35.5	7.5		
Bulgaria	28.2	34.1	5.9		
Netherlands	31.0	25.1	-5.9	*Medium*	*Decreasing*
Estonia	33.1	27.7	-5.4		
Finland	35.5	29.1	-6.4		
Poland	35.6	25.8	-9.8		
Slovenia	33.8	34.0	0.2	*Medium*	*Increasing*
Portugal	34.7	35.2	0.5		
Hungary	34.7	36.7	2.0		
Romania	35.2	37.1	1.9		
United Kingdom	39.5	37.3	-2.2	*Large*	*Decreasing*
Spain	43.2	36.2	-7.0		
France	44.3	37.8	-6.5		
Austria	39.4	43.7	4.3	*Large*	*Increasing*
Czech Republic	44.5	44.6	0.1		
Belgium	57.2	46.5	-10.7	*Very large*	*Decreasing*
Germany	65.3	52.1	-13.2		
Italy	82.4	81.9	-0.5		
Cyprus	:	:	:	*:*	*:*
Luxembourg	:	:	:	*:*	*:*
Malta	:	:	:	*:*	*:*

Data source: Eurostat *Dispersion is measured as coefficient of variation in unemployment rate.*

In this case, the European labour force has increased by 5.5 million persons during the period concerned, all of which is due to an increase in employment. This has resulted in the *relative* number of unemployed persons becoming smaller (despite the fact that their actual number has remained unchanged) and, consequently, also that statistical differences in the concentration of the unemployment rate have decreased. In terms of the number of *unemployed persons* seeking new jobs however, these people have become more concentrated during the period 2002-2005. As argued above, this latter approach reflects the real changes better than does the former, and thus it would be fair to state that intra-regional disparities in terms of unemployed persons have increased in the EU.

The spatial patterns with regard to employment changes also reflect a wide variation while the picture changes depending on the angle from which it is examined. Table 2.5 presents

employment changes for a set of frequently utilised regional categories of the EU space (the same groupings as in Table 2.3).

Table 2.5. Employment changes 1995-2004 in selected regional groupings of Europe

Regional grouping according to:	Employment change 1995-2004 Percent per year on average
Urban hierarchy[1]	
1. Metropolitan European Growth Areas	1.3
2. Transnational/national Functional Urban Areas	0.9
3. Regional/local Functional Urban Areas	0.4
4. No significant Functional Urban Areas	0.5
Wealth (GDP/capita in PPS 2004, index EU27=100)	
Over 150	1.0
126 to 150	1.1
101 to 125	0.9
76 to 100	0.8
50 to 75	0.2
Less than 50	-1.1
Core-periphery[2]	
Within the Pentagon	0.5
Outside the Pentagon	0.6
Structural Fund (2000-06) eligibility	
Objective 1 eligibility	0.1
Objective 2 eligibility	0.8
No eligibility	0.8
Multimodal accessibility potential (index EU27=100)	
Over 150	0.7
126 to 150	0.8
100 to 125	0.7
75 to 99	0.4
50 to 74	0.5
Less than 50	0.7
EU27 unweighted average	0.6

Note. Due to data restrictions all figures reflect unweighted (interregional) averages where each region is weighted equally regardless of size.

[1] *Based on a classificaton of Functional Urban Areas from the ESPON project 1.1.1.*

[2] *The Pentagon is a term often used to define the economic core of Europe, stemming from its five cornerstones London, Paris, Milan, Munich and Hamburg.*

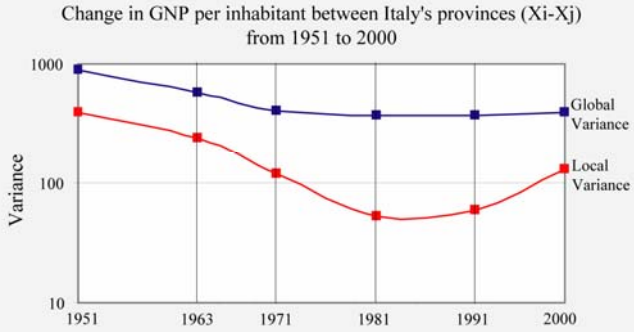
Data source: Eurostat

As was the case with general economic growth, new job creation also displays strong agglomeration tendencies. For example, as is evident from the first batch of data in Table 2.5, the largest European cities have witnessed the most favourable development. On average, during the period in question the (net) number of new jobs in these 76 urban regions has increased by some 1.3 percent *each year*, which is nearly double the pace for the EU on the whole. Development has also been rapid in the second tier of cities, at almost one percent per year, on average. In contrast, the speed of new job creation in regions with, in functional terms, less important small and medium-sized cities has, on average, been modest at best. Indeed it has been even worse here than for regions that have no significant urban functions.

Text Box 2.1: EXAMPLE OF GNP per INHABITANT IN ITALY (1951-2000)

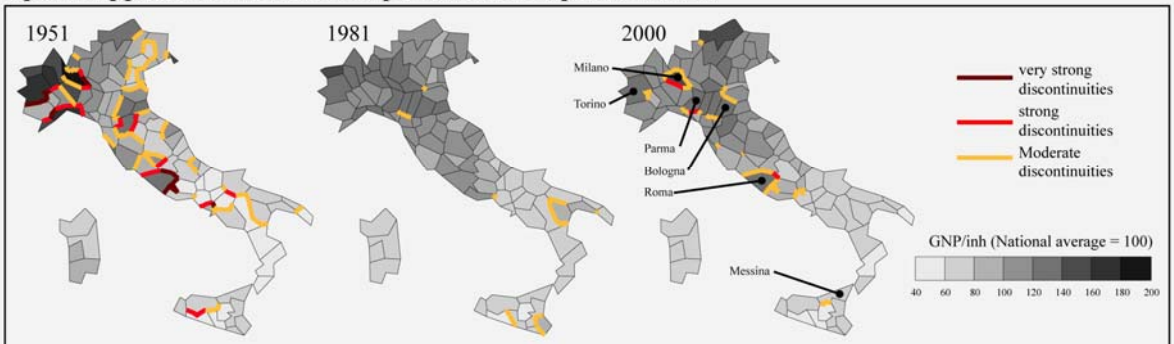
Being able to monitor the development of disparities in Europe requires the use of comparable data from the local/regional level available over a longer time series. Unfortunately, the present state of *Eurostat* data does not allow us to undertake such an analysis. The following text-box develops such a methodology in the case of GNP/capita in Italy from 1951 to 2000.

Statistical approach: a differential evolution of disparities



Analysing global and local deviations in GNP/capita provides complementary information on how disparities have evolved inside Italy.
From 1951 to 1981, the differences decreased both at the global and the local levels, although more significantly at the local level. Since 1981, the disparities between Italian provinces have stabilized when considering the whole country. At the same time however, the differences between contiguous provinces began to increase, emphasizing a decoupling between convergence at the national level and at the local level.

Spatial approach: The return of powerful metropolitan areas?



The Italian national context displays rather strong differences in the level of economic development between the northern and southern parts of the country. If these have been reduced since the 1950s, they remain pivotal in understanding the country's contemporary economic landscape. In 1951, the territorial distribution of GNP per capita was rather fragmented. Most disparities were concentrated between metropolitan areas and their surroundings: Genoa, Torino, Milano, Roma, and Bologna. Though apparent differences also existed between contiguous provinces, even where no large city was located (in Sicily, North-East)... From 1951 to 1981, the disparities between metropolitan areas and their surrounding areas were significantly reduced. Since 1991, these differences have however again begun to increase.

Italian policy context

The reduction of disparities between 1951 and 1981 can, in part, be explained by the joint effects of national and European policies. From 1951, the Italian State launched a programme of economic development for its southern provinces (*Cassa per il Mezzogiorno*). In 1957, financial aid levels were doubled and oriented towards industrial investment.
Simultaneously, the European Commission intervened with its own regional policy (DG XVI) starting in 1968 to help lagging Italian regions. Furthermore, during the 1950s, the Italian economy was very dynamic. In the European context, only Germany saw stronger economy growth. The combination of these facts contributed to a strong convergence process between 1951 and 1980.
The 1980s was however to be a decade of budgetary restrictions. The ending, in 1984, of the *Cassa per il Mezzogiorno* has *de facto* limited the ability for the poorest Italian provinces to catch up with the richest ones. Besides, the inclusion of Italy in global trade has triggered processes of financial, industrial and economic concentrations towards the most developed metropolitan areas, enjoying greater economies of scale . This is clearly shown in the figure displaying disparities in 2000.
Consequently, the changes in the orientation of Italian regional policy alone do not explain the new pattern of disparities between provinces. Global economic processes provide an advantage to the most advanced and well connected areas, fostering networking between the main agglomerations in which phenomena based on connectivity tend to prevail over proximity relations.

Similar anti-cohesive tendencies are also clearly discernible when it comes to the wealth status of the regions (second batch of data in Table 2.5). In this sense the discernable hierarchical development is even more rigid, as the poorer (in GDP per *capita* terms) a region is, the fewer new jobs have been created. The poorest regions (which are exclusively in the NMS12) with a GDP *per capita* of less than 50% of the EU mean are, partly as a result of rapid depopulation, the only category where the total number of jobs has *de facto* decreased during the decade in question.
As was the case with economic growth however, a number of detectable de-agglomeration propensities exist within the European territory. Regions situated outside the Pentagon have seen, on average, a more positive development than those within it, although these differences remain fairly marginal. In respect of the poor performance of Objective 1 regions in comparison with other areas, the major explanation here lies in the fact that the vast majority of these regions are situated in the NMS12 where development, with the exception of a handful of metropolitan areas, has been extremely unfavourable. On the whole, employment in the 15 Old Member States increased by nearly 11% between 1995 and 2004, whereas it has decreased by more than 7% in the NMS12 (excl. Romania).

2.2.3. All things considered: patterns remain highly mixed

Turning once again to the recent dynamics of national disparities both in terms of GDP *per capita* and in the light of unemployment the EU countries thus display a wide variety of trajectories. Figure 2.3 presents changes between 2001 and 2003 in the dispersion of regional GDP per *capita* and unemployment rates within all EU countries, except for Cyprus, Luxembourg and Malta. Dispersion is measured as the coefficient of variation (i.e. the square of standard deviation) at NUTS 3 level within the country while the changes reflect the percentage point difference between the situation at the beginning and that at the end of the time interval. A positive value indicates that internal differences within the country in question have grown whereas a negative value reflects a process of convergence between the regions.

All tentative combinations can be found among the Member States. The most alarming ones concern the situation where inter-regional disparities in both production and the labour market have increased during the period. Such is the case in e.g. Lithuania, Slovakia and Hungary. Notwithstanding the fact that the situation at the beginning of the period in question was rather balanced in the former two countries current trends are nonetheless highly troubling.

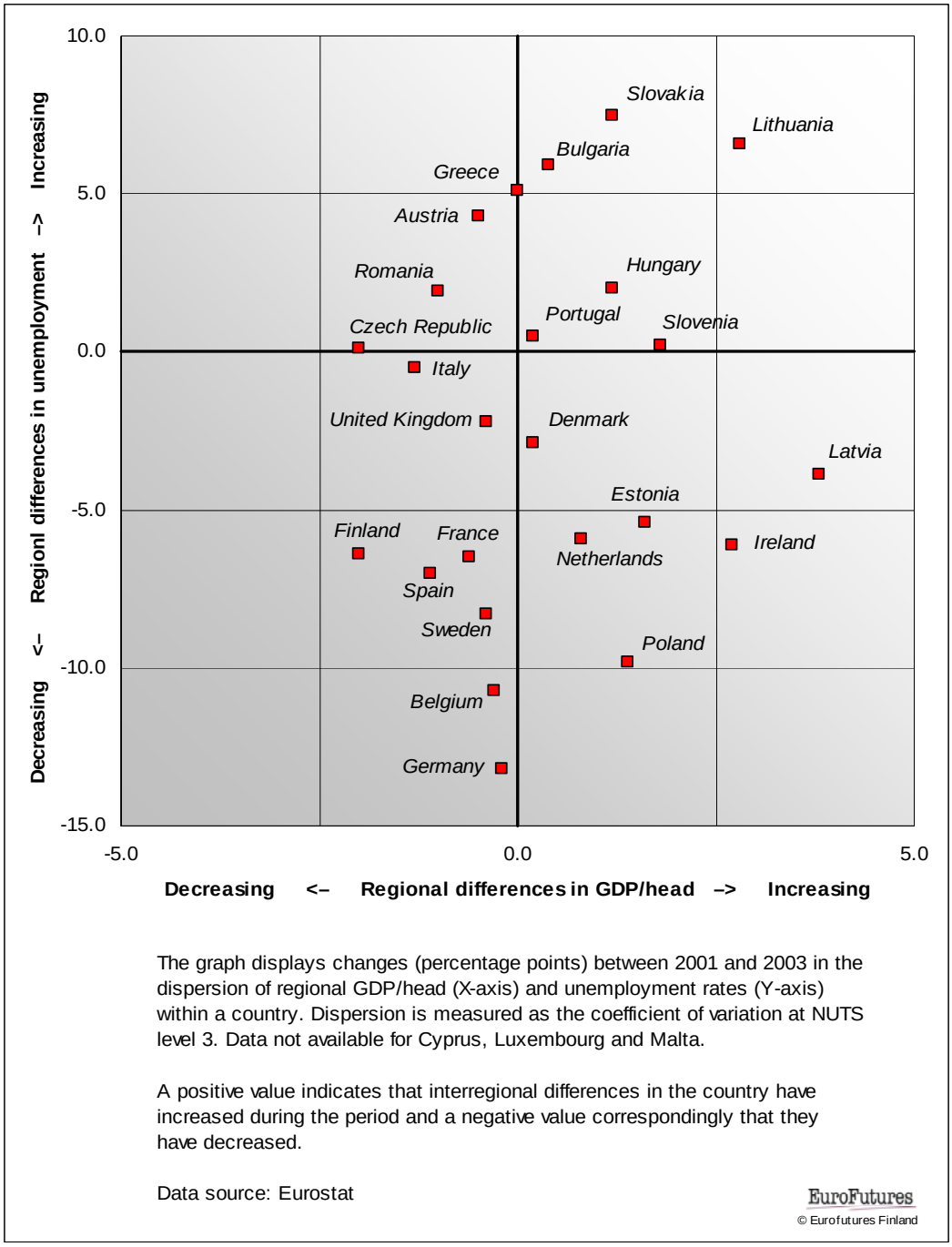
In rapidly growing economies such as Estonia, Latvia or Ireland regional differences in respect of unemployment have moved in a positive direction though rapid economic growth does entail regional polarisation. Dublin, Cork, Tallinn and Riga are among the fastest growing regional economies in Europe and this has led to a process of relative decline in the more peripheral parts of these countries. Migration into the rapidly growing urban areas entails that a large number of tentatively unemployed persons relocate into employment in these cities, which acts as a counterbalancing factor in respect of labour market polarisation. In the Irish case Dublin seems to have reached saturation point while employment growth has been even faster in all other regions of the country.

On the other hand however, in Austria and Romania, the opposite situation prevails and disparities in terms of unemployment have increased despite a reduction in GDP *per capita* differences.

Overall, regional differences, particularly in Finland and Spain, but also in e.g. France, are in general decreasing, though in the Finnish case in particular structural unemployment in the more peripheral regions remains high and changes here have been modest in comparison with those in respect of production.

Thus, there are a multitude of spatial patterns across Europe in terms of developments towards or away from territorial cohesion. For policy makers the main issue is then how to cope with these twin processes of convergence and polarisation while discovering the best type and level of public intervention in order to achieve greater territorial cohesion. The next section intends to summarise some of these issues in brief.

Figure 2.3. Changes in dispersion of regional GDP/capita and unemployment rates 2001-03



2.3. Conclusions and related policy challenges

This chapter has demonstrated that medium and long-term economic trends currently show signs of both convergence and polarisation across the European territory. These mixed conclusions are partly due to the analytical point of view and territorial level adopted: if differences between countries are becoming smaller, differences between regions are on the increase. This fact notwithstanding, a number of major trends are now discernible regardless of the previous regional/national perspective.

The analysis above has clearly indicated that metropolitan areas and other functionally significant cities, often highly specialised ones with a high knowledge component, are increasingly taking larger shares of the European economic cake. Such agglomeration forces are apparent in the Eastern and Western parts of the EU alike. Rural areas and areas with regional administrative or market centres are faced with the largest challenges in this respect.

Furthermore, empirical evidence also suggests that the wealthiest regions – principally the same ones as above – are increasingly strengthening their acquired positions. A situation is therefore emerging where already large economic gaps are being further accentuated resulting in increasing polarisation. Wealth, and its growth, is in relative terms slowly but surely being concentrated in a few select locations while large tracts of the European territory face the prospect of becoming economic backwaters.

The obvious policy challenge thus concerns how to strike a balance between, on the one hand, the need to ensure the global competitiveness of these few 'growth engines' particularly in smaller countries and, on the other, to secure the developmental opportunities of the more peripheral regions by harnessing the underutilised resources that are available within them, without disturbing the territorial balance too violently. The centrality of this challenge raises serious questions over Europe's ability to ensure territorial cohesion and it needs to be addressed in the Regional policy debate.

Conversely, on a macro scale, peripheral regions are outperforming the European core in terms of economic growth, which indicates that the accepted historical and hierarchical pattern of development (Core or *Pentagon* vs. periphery) is increasingly being challenged by the newcomers that have been able to succeed in the new globalised economy.

These peripheral 'growth engines', that as such bear witness to the possibility of success despite apparent locational handicaps, often however act as isolated "islands" of prosperity in otherwise disadvantaged areas and, by extension, as a barrier to additional development while also further increasing regional cross-border discontinuities.

A possibility for a conflict thus exists in policy objectives at this scale, where actions aimed at increasing the competitiveness of certain selected regions further accentuate existing territorial gaps with the surrounding regions. These types of territorial imbalances are often also the ones felt to be the most unfair by European citizens in their daily lives.

Additionally, the analysis developed above clearly highlights the fact that opposing trends of convergence and polarisation can simultaneously exist within any given territorial unit, depending on which aspect is put in focus. In such a case the primary policy challenge is how to identify the most critical of these factors and how to stimulate that without, at the same time, further negatively accelerating other factors.

Finally, empirical evidence also indicates that the national context and the nation state is still – despite increasing international cooperation and interdependence – a strong determinant of convergence or the lack of it. Consequently pan-European policy objectives may not always in such cases be uniformly suitable across the entire European territory and the need for increasingly tailor-made solutions becomes even more apparent.

The analysis of macro-economic trends in Europe highlights the fact that market forces alone are not able to reduce disparities in the level of development between regions. While the East-West gap is declining, polarisation trends due to agglomeration forces are now causing greater imbalances to occur across the European territory. These increasing imbalances stem from the significant differences in terms of economic potentials that exist, advantaging some regions more than others. A deeper analysis of the structure of the European territory is thus needed: which are the regions with the highest potentials for economic interactions? Which are the most disadvantaged regions? What are their structural challenges? The analysis of accessibility measures in the next chapter provides relevant insights into these issues.

Main conclusions on trend analysis

- In terms of economic development, disparities between European countries have been reduced over the last two decades, showing a clear convergence *between countries*. However, differences analysed in labour market terms, like the unemployment rate, show a sharp increase over the same period of time.

- Over the last two decades, disparities between regions *within countries* have increased in almost all EU-27 countries. This phenomenon is mainly due to the strong performance of the capital regions and other metropolitan regions.

- The distribution of economic activities across the European territory is increasingly polarised towards the larger agglomerations and most advanced regions that enjoy higher rates of economic growth.

- The poorer and more peripheral regions of the EU have also shown high rates of economic growth, though they continue to represent only a small part of the whole European economy and are thus unable to act as a counterweight to the broader European process of spatial polarisation in the short term.

Text box 2.2. Technical note on GDP estimations

Gross Domestic Product (GDP) is the most commonly utilised measurement of a country or region's economic output. GDP refers to the monetary value of all market and certain non-market goods and services that are produced within a given territory. Some countries or regions are small in size while others are large, which renders meaningful comparison between different spatial entities difficult. Therefore some sort of denominator is normally used in order to make spatial units more comparable in size. GDP *per capita* or GDP per employed person are some of the most frequently utilised methods.

GDP *per capita* may be viewed as a rough indicator of a country or region's prosperity, while GDP per employed person can provide a general picture of a given territory's overall productivity. These measures are however only approximations as welfare consists of many aspects that are not included in GDP. Furthermore, using the number of persons employed as a measure of labour productivity ignores differences in the actual number of hours worked and in differing skill levels between persons. Therefore GDP per hour worked is also, at times, used as an estimate for labour productivity.

All the same, GDP *per capita* is probably the most widely utilised measurement of a territory's economic performance and is, as such, difficult to bypass in any comprehensive analysis. This measure thus remains the cornerstone indicator within the framework of European Regional policy.

Nonetheless, when measuring regional economic performance GDP *per capita* is additionally problematic from the point of view of not taking into account the commuting that occurs across regional boundaries. Regions with higher in- than out-commuting receive higher *per capita* values simply because the denominator in this case is smaller than would be the case if all employed persons within the region was utilised. This is most often the case for European regions containing larger cities. Similarly, regions with higher out- than in-commuting populations attain lower *per capita* values because their population "produces" their value-added in a neighbouring region. This is, in the European context, often the case for smaller regions surrounding large metropolises.

In each country's national statistics, GDP is estimated in terms of the national currency units. These have to be modified into a common unit which takes into account not only the exchange rate between different currencies but also the actual buying power of the currency. This hypothetical currency is labelled Purchasing Power Standard (PPS) or Purchasing Power Parity (PPP). Even PPSs however do not take into account the fact that prices and hence the buying power *within* a country might differ considerably from one area to the next such as is the case between Eastern and Western Germany. We have nonetheless adjusted all GDP *per capita* data with PPS so that comparison of the level of a region's GDP is also possible across countries.

Eurostat does not report figures relating to real GDP growth or change on the NUTS 3 level (only on NUTS 2, which is problematic due to the fact that many smaller countries constitute one single NUTS 2 region only) so we had to estimate the growth rates ourselves for NUTS 3 regions. To add even more complexity, the inflation rate needs to be taken into account when GDP is compared across different years. We have here utilised a national GDP deflator to adjust Gross Domestic Product in *Euro* in current prices (primarily 1995 and 2004) so that both years are comparable (constant prices). We have then calculated either real growth or growth also taking into account changes in population (*per capita* growth), as well as growth in GDP per person employed.

3. Challenges of accessibility in Europe

The polarisation trends demonstrated in the previous chapters highlight the fact that some regions, often the largest metropolitan areas, seem to have stronger potentials for growth. If this is partly due to internal factors such as economies of agglomeration [(17)], it is also often influenced by their locational advantage as nodes in the European system. The present chapter on accessibility critically assesses the way the European territory is structured *vis-à-vis* access to regional markets, but also undertakes to discuss the issue of local access to services, an issue that is central to the concern over territorial cohesion.

Traditionally, accessibility has been defined as the main 'product' of a transport system. Measures of accessibility provide an assessment of each region's territorial context, and allow for comparisons of locational preconditions for economic development across Europe.

There are two main components in a measure of accessibility. The first is the transport infrastructure endowment. This includes all physical, logistical and organisational factors that contribute to connect a region to the outside world. These infrastructure elements are not necessarily located within each region's boundaries. An airport located outside a region's boundaries may for example be a critical component of its transport infrastructure.

The second component of accessibility is the destinations made available by this transport infrastructure. The relevance of each destination, and its potential importance for a region's economic development, decreases when the effort required to reach it rises. This effort can be expressed in different ways, depending on the type of accessibility one investigates, e.g. airline distances, road distance, travel-time and transport cost. Inversely, the closer a destination is, the more it becomes attractive and so the more it contributes to the regional level of accessibility.

European measures of accessibility generally express the size of the destination region in terms of economic weight (total GDP) or demographic mass (total population). The underlying hypothesis here is that the larger the destination-region, the more valuable it is to have access to. Measures of size can indeed be taken as proxies for the extent and scope of the production inputs that can be imported from each region, and of potential opportunities to export products to it. Measures constructed on this basis will be a main focus of the present report.

The relevance of a destination is also determined by its economic and functional characteristics. A destination can be of importance because it provides high-level specialised services. As such the notion of access to "global cities" has been recognised as a factor of economic development. The links between regions with complementary economic profiles can however be equally important at the local scale. This implies that the relevance of destinations sometimes needs to be measured in different ways.

(17) Economies of agglomeration refer to the benefits resulting from the clustering of activities. They are generally subdivided into three categories. First, urbanization economies associated with the agglomeration of population and the resulting infrastructure facilities and labour pool. Second, industrialisation economies resulting from the clustering of industrial activities giving rise to an "industrial climate". Third, localization economies resulting from the agglomeration of specific activities which favour specialized facilities and labour pools etc.

This is important to bear in mind in order to fully understand the potential effects of European integration on individual regions. Regions have a propensity to exchange and communicate not only because they are geographically close but because they have developed mutual links of an economic, social or cultural nature. In the context of regional development then it becomes all the more important to understand the transport system as a means for regions to enhance these links.

The present chapter first deals with European indicators of centrality and peripherality. We demonstrate that these indicators are of little use when seeking to assess regional development potential. They do however provide an indication of the general organisation of the European continent: where are the main concentrations of population and wealth-production? How is access to these demographic and economic strongholds organised?

An approach to accessibility focusing on the territorial context of daily life and assessing the level of service provision in this sphere is more useful in the perspective of Cohesion policy. In this respect, we argue that it is often more relevant to look at areas within which economic exchange or commuting trips may occur than to look at actual functional economic areas or labour market areas. Such a prospective approach more accurately reflects the field of possibilities for territorial policies as it incorporates potential interactions as well as existing ones. It does not however take into account institutional challenges to territorial development such as for example regional boundaries.

A Cohesion policy needs to relate both to these potentials for interaction at the local and regional scales and to the general organisation of the European territory. The synthesis of the two above -mentioned approaches therefore provides a framework within which to integrate considerations of accessibility into Cohesion policy design.

3.1. The limited political relevance of European centrality and peripherality measures

In terms of accessibility, the ESPON programme [(18)] has mainly applied so-called gravitational models of potential accessibility [(19)]. The relevance of the destination/region increases with the size of the regional economy, expressed in total GDP, and decreases with the distance to the region of origin. In other words, the larger and closer the destination/regions are, the higher the economic potential. The analogy with the laws of gravity is obvious: the influence of a celestial body (or “region”) on the trajectory (or “economic growth pattern”) of another results from its size and from the distance between them. The output of such models is an indicator that ranks regions from the most peripheral to the most central.

These methodologies have been applied in calculations produced for the European Commission from the early 1980s onwards (Keeble, 1981, 1988). They typically lead to the identification of a European core area, first identified as a “triangular plateau of high accessibility” by Keeble in 1981, which later became four-sided with the inclusion of the UK up to Birmingham. This type of representation is one of the sources of inspiration of the so-called “Pentagon” in the ESDP context.

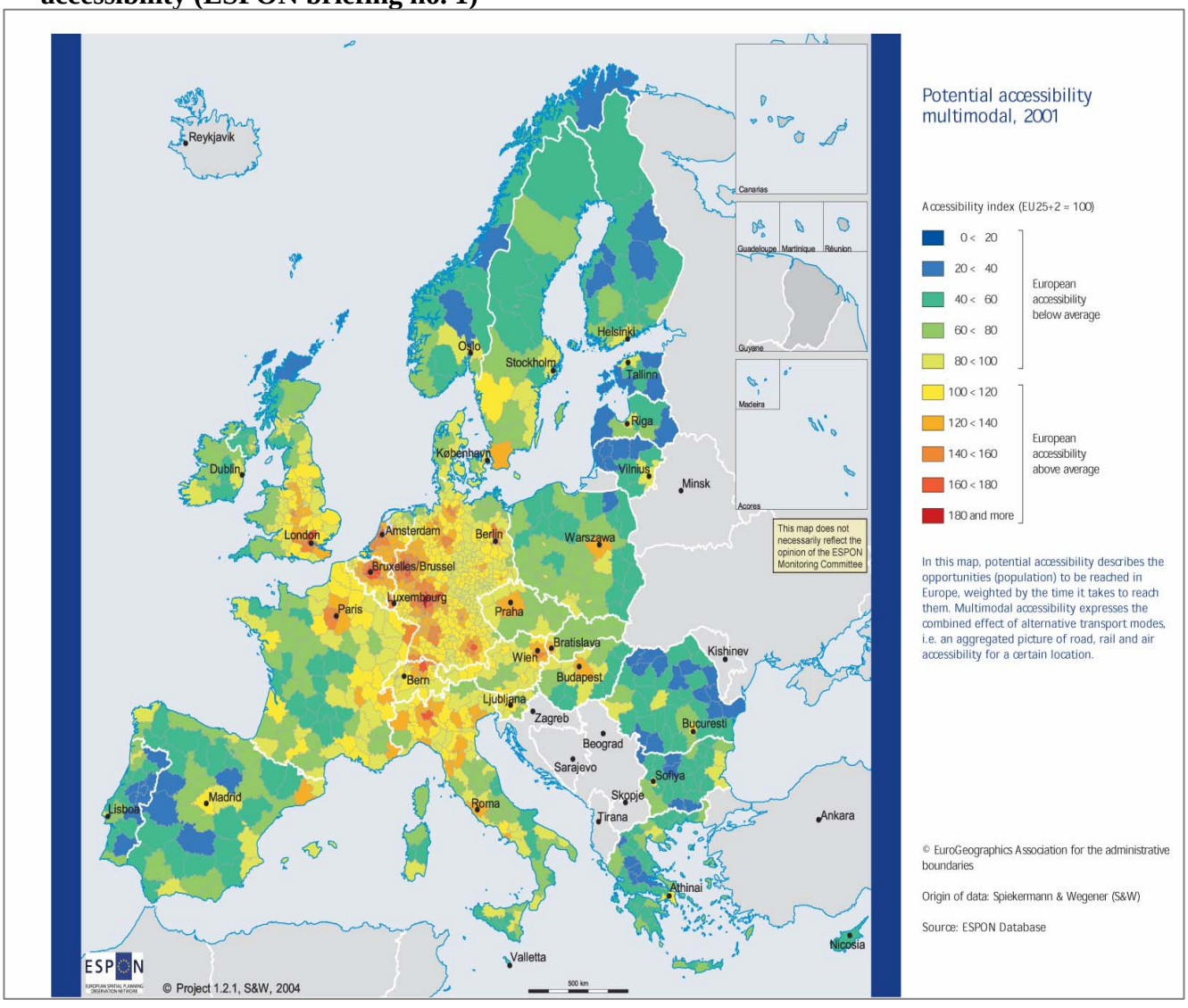
[(18)] The European Spatial Planning Observatory Network (ESPON) is a programme set up in the framework of the Interreg initiative, undertaking applied research and studies on territorial development and spatial planning seen from a European perspective in support of policy development.

[(19)] The results from the ESPON projects 1.2.1 (Transport services and networks: territorial trends and supply) and 2.1.1 (Territorial impact of EU transport and TEN policies) are available online on the homepage of the ESPON programme www.espon.eu

These models can be calculated based on different modes of transportation, such as road, rail, and air. The choice of the transport mode obviously influences the time-distance between regions while also having different levels of significance at the intra-regional scale. Air connections cover larger distance, but concern a finite selection of points; inversely, practically all settlements have access to the road network, but this is a slower mode of transportation; railway access is in an intermediate situation both in terms of coverage and speed.

Furthermore, each network will primarily be used for certain types of uses. While air transportation is well suited for medium- to long-range travel, it is only a freight transport option for goods of limited weight and high value. A two-hour access time to a major European metropolitan area by air therefore implies different possibilities for economic development, than the same access time by car or by train. Multimodal accessibility maps however aggregate these different types of access times as if they were comparable. This implies that multimodal accessibility maps (e.g. Figure 3.1) are difficult to interpret.

Figure 3.1. Map of multimodal accessibility, aggregating incommensurable values of accessibility (ESPON briefing no. 1)



Each type of accessibility creates specific "locational advantages" [(20)] which in turn allow a certain range of economic development strategies to be implemented. It is therefore not possible to view accessibility via particular modes of transportation as "better" or "more important" for economic development than others. For example, the equivalent values observed West and South of the greater Paris region, and in Northernmost Sweden and Finland in Figure 3.1 correspond to quite different local realities, insofar as average road and rail connectivity compensates for low air connectivity in the former case, while high air connectivity in the regional capitals compensates for poor rail and road connectivity in the latter cases. While air accessibility enhances the potential for regional actors to widen their range of contacts with other actors across Europe, road and rail accessibility creates increased potentials for functional economic integration with neighbouring regions.

Compared to the multimodal accessibility map, the pattern of potential accessibility by road produced by ESPON (see Figure 3.2) is closer to the traditional vision of European core and periphery, with a core area centred on the Benelux countries and Western parts of Germany and with values decreasing almost continuously from this area to the outer borders of the European Union. As the railway structure in Europe is rather similar to the road network potential accessibility by rail displays a similar core-periphery pattern. The two patterns however reflect the distribution of GDP in Europe rather than the structure of the networks: contrary to air transportation, neither the road nor the rail network creates a potential accessibility pattern that is fundamentally different from the matrix of "straight line" distances between regions.

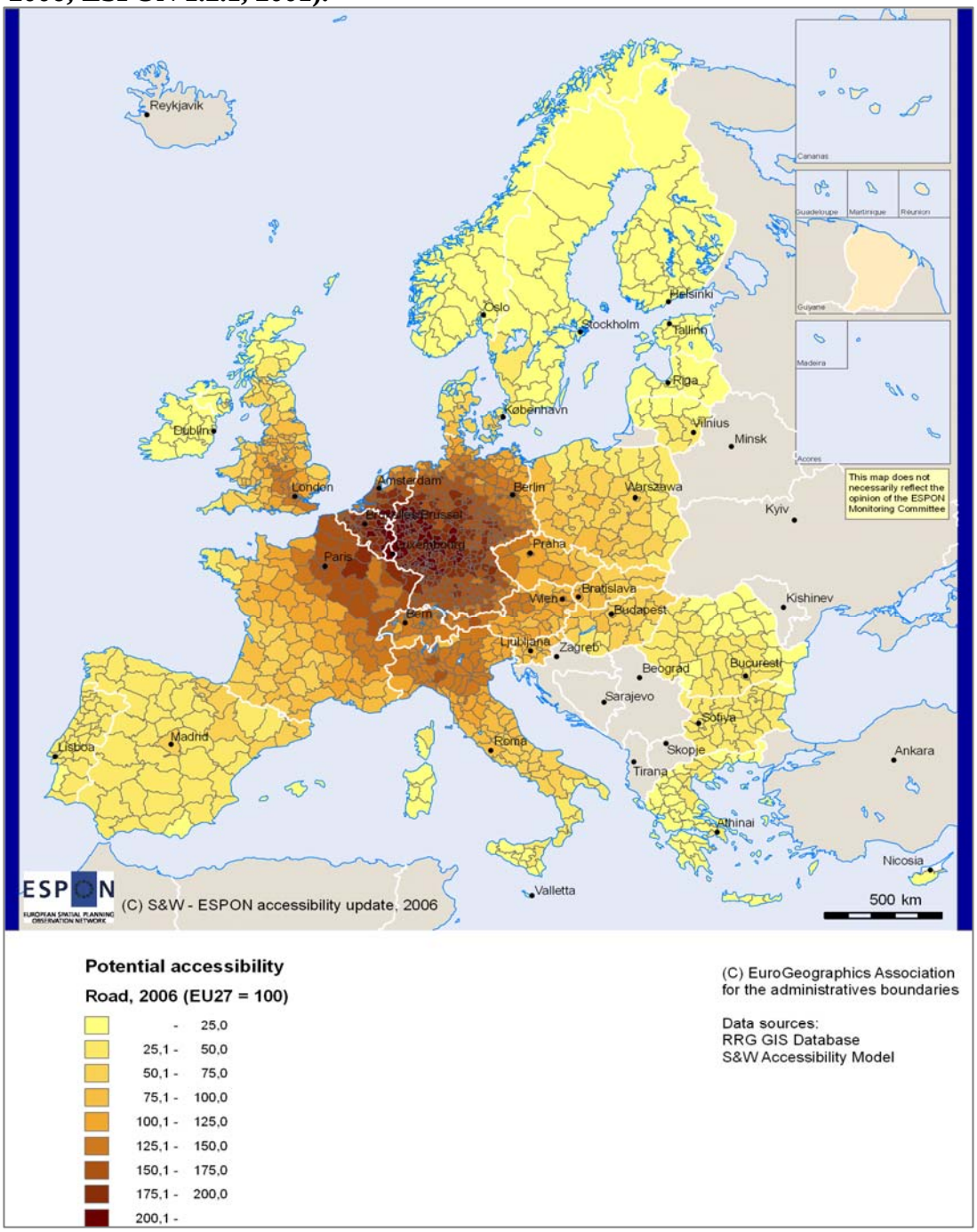
One can however improve the representation of potential accessibility by road, by measuring it continuously for every 2.5 x 2.5 km cell in Europe rather than using statistical regions (Maps 3.3. and 3.4). Such an approach shows how some regions are characterised by strong internal gradients, typically with a capital city or metropolitan area displaying values well above surrounding areas (e.g. Stockholm, Toulouse, Thessaloniki), while other regions have homogenously low or high potential accessibility.

Maps 3.5 and 3.6 display the average of all potential accessibility measures observed in each region, weighted by the population in each 2.5 x 2.5 km cell. This is quite different from the method previously applied in the context of ESPON (see figures 3.1. and 3.2), which only considered the accessibility of one (central) node in each region. These regional maps take into account the accessibility situation, considering the European territory as a whole and not dividing it into statistical units. This methodology is however clearly inadequate with respect of the creation of an approach to accessibility that is relevant for territorial cohesion.

Despite these methodological improvements, the regional maps provide an incomplete picture of accessibility levels in Europe. While the continuous maps (Maps 3.3 and 3.4) show a number of centres with accessibility levels above the European average, even in peripheral parts of Europe, only a few of these appear in the traditional regional maps (Maps 3.5 and 3.6) using the NUTS divisions. In other words, continuous representations of European space facilitate the identification of potential hubs across Europe.

[(20)] A locational advantage occurs when a place can lay claim to being the most favourable location for a given range of industrial or commercial activities. Typically, this implies that the combined cost of importing industrial inputs to this place and reaching markets from it is as small as possible, making it possible to maximise profits. Locational advantages are obviously only one of the many factors determining where economic activities are implemented, together with e.g. local institutional and fiscal conditions, labour force characteristics, wage levels and the entrepreneurial environment and industrial *milieu*.

Figure 3.2. Potential road accessibility (ESPON Update on Accessibility Maps, 2006; ESPON 1.2.1, 2001).



In terms of access to population, a continuous area with values over 200% of the European average extends from England to Northern Italy, separated only by the North Sea and the Alps. Moreover, it stretches from the Paris region in the West all the way to Berlin and Prague in the East. Further East, a second area with high values can be observed from Warsaw to Katowice and Rzeszow in Poland, with extensions around Vienna and Budapest. Finally, significant areas with high values can be observed around Porto, Madrid and Barcelona in the Iberian Peninsula, Rome and Naples in Italy, in a wide area centred on Bucharest in Romania and along the Glasgow-Edinburgh corridor in Scotland.

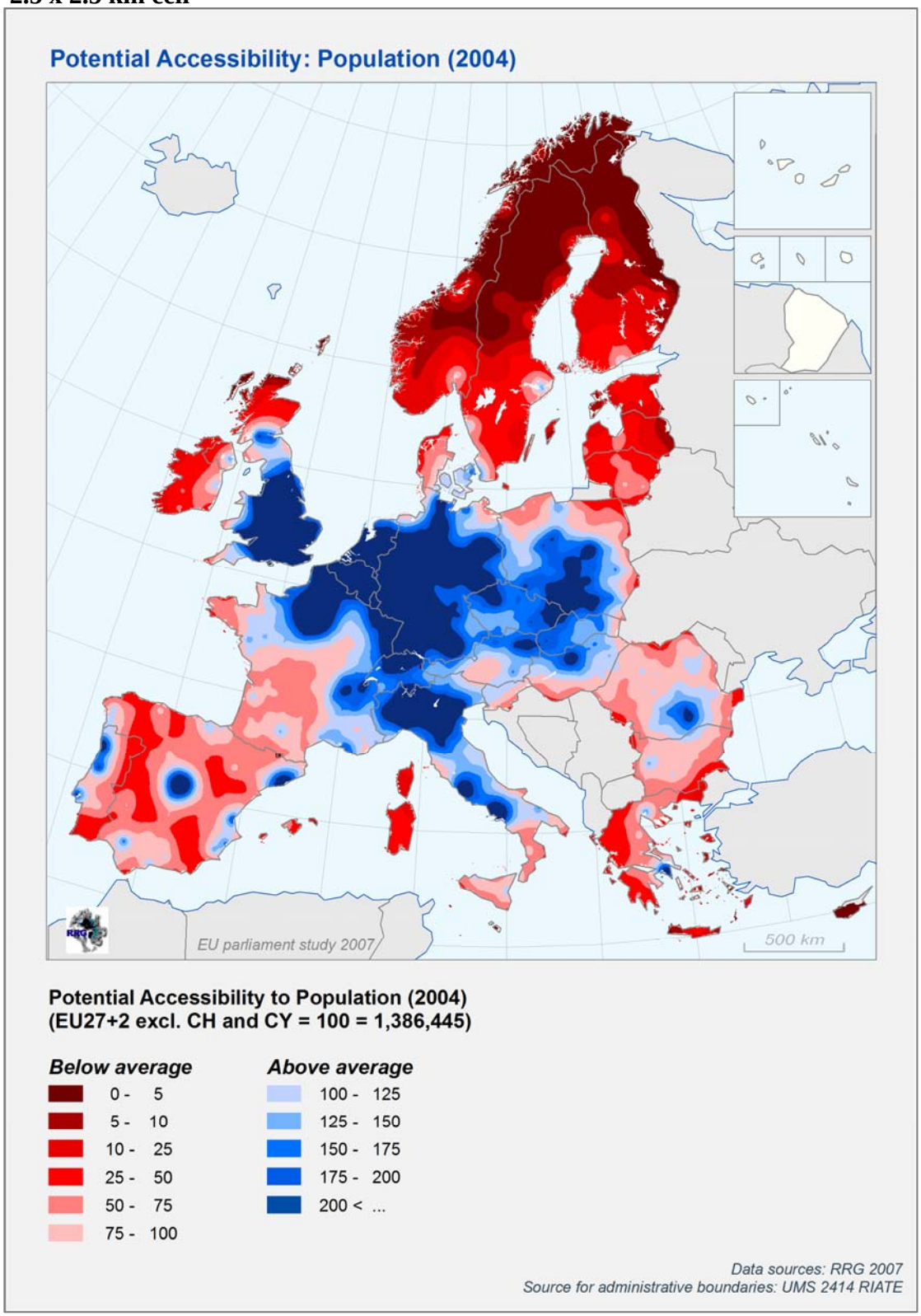
Performing the same exercise for access to GDP enables us to highlight interesting differences in the spatial pattern of accessibility. The most striking contrast with the map of potential accessibility to GDP is the almost complete absence of values above the European average in the New Member States, underlining the strong disparity between their demographic weight and their economic one. On the other hand, the Nordic capitals and Dublin display values over 175% of the European average, whereas the potential accessibility of Northern Portugal, or of cities such as Seville, Valencia and Thessaloniki, is considerably lower when considering GDP compared to population. The comparison of the two maps gives a good indication of where the challenge of reducing European disparities of wealth and income is greatest.

This however does not imply that either map can be assimilated to measures of economic potential. A low access to population or to GDP does not need to imply that a region cannot generate sufficient incomes for its inhabitants. Maps of potential accessibility mainly identify regions that can base their economic strategy on the development of 'hub' functions, i.e. by acting as a crossroads for businesses and entrepreneurs. 'Hub' functions should not be solely understood in the sense of transportation hubs, but may also include clusters of advanced business services, and all kinds of activities making interactions between economic actors possible.

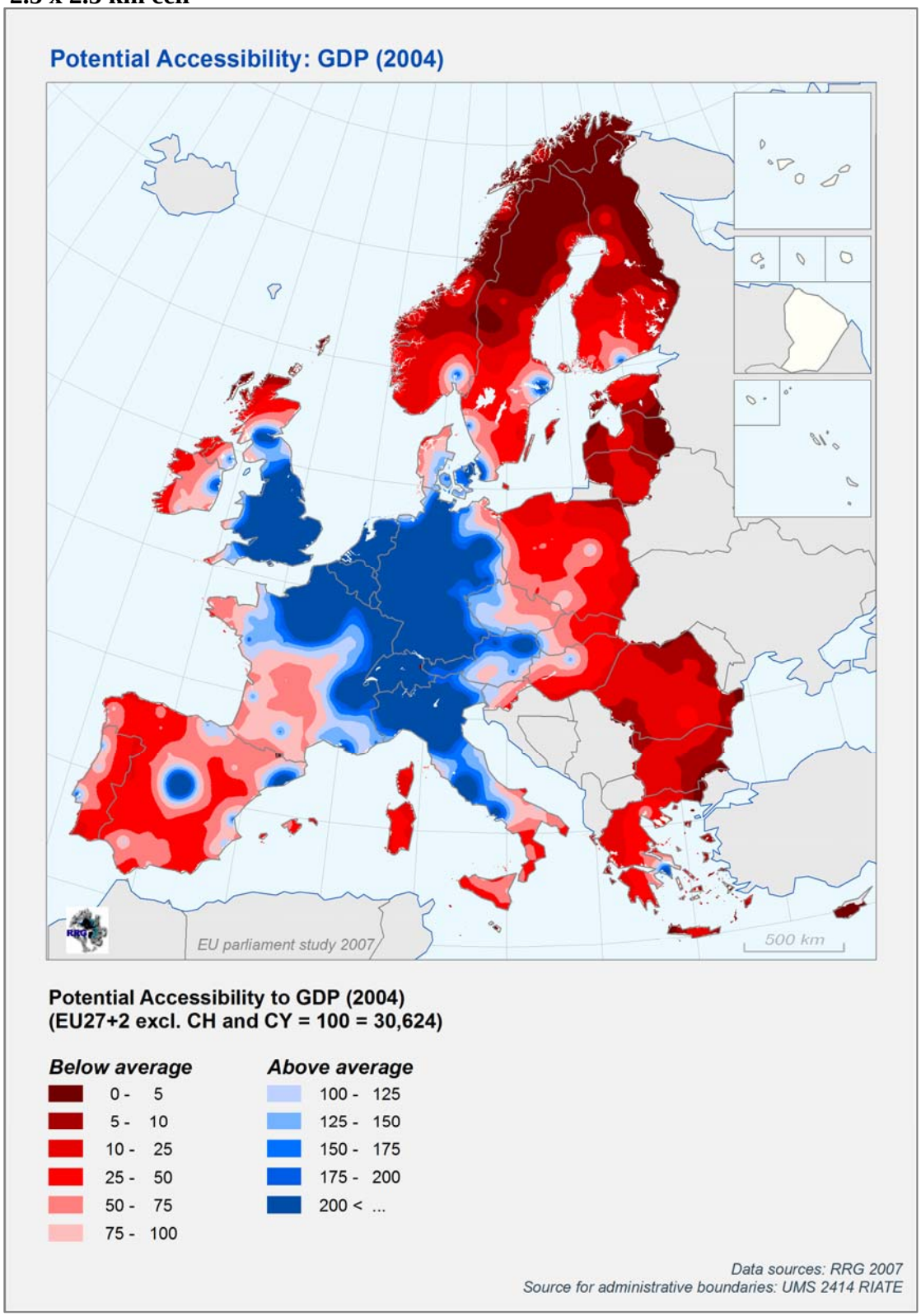
Accessibility challenges in remote regions are not necessarily reflected by a general index of peripherality, as they often relate to the industrial profile of each region. For instance, a region with a mining industry may need access to railways and seaports capable of handling high tonnage goods, while another focusing on agricultural production or fisheries will be dependent on reliable and fast modes of transportation for exporting their production. The capacity and reliability of transportation networks is not reflected by indicators of accessibility or peripherality. In addition, the main markets for industries in remote regions may not be European, but global. The paper and iron industries in the Northern parts of Sweden and Finland provide a typical example here of peripheral industries focusing on the global market. In these cases, the industrial challenge is not to connect the concerned areas to European core areas, but to enable them to cost-efficiently connect to their target markets in the global arena.

More generally, the impact of peripherality on the economic performance of each region can be questioned. As shown in the previous chapter, some of the most peripheral areas in Europe (i.e. the Nordic countries and Spain) count among Europe's fastest growing economies. It is generally not possible to quantify the additional costs generated by a peripheral location in Europe; this is mainly due to the fact that the economic activities that are developed in these remote areas are naturally less sensitive to transportation costs and not dependent on a rapid access to the largest European markets. In so far as such activities can provide employment to the local population and generate a sufficient production of wealth peripherality is, in economic development terms, not to be considered a problem.

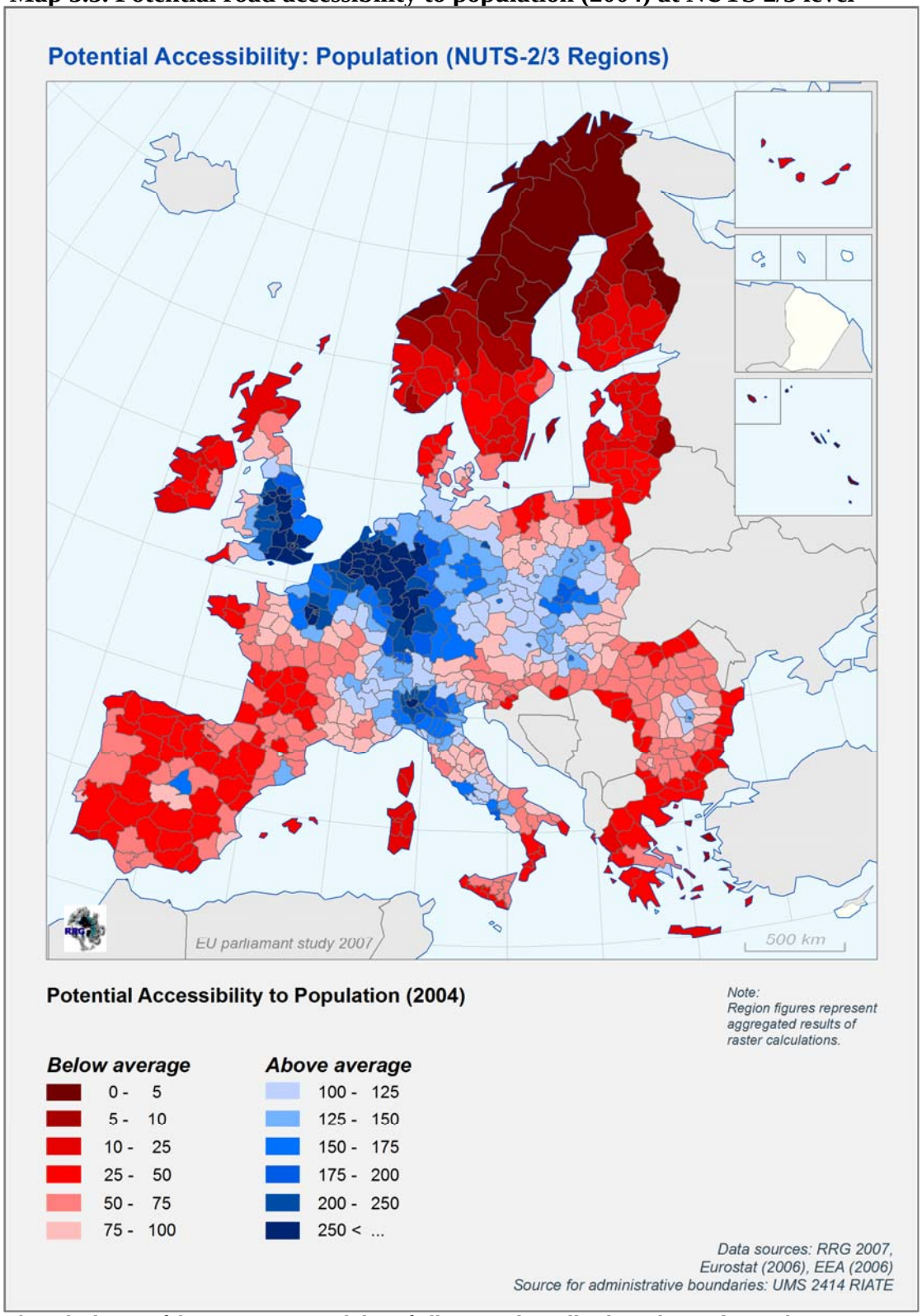
Map 3.3. Potential road accessibility to population (2004), measured for each 2.5 x 2.5 km cell



Map 3.4.Potential road accessibility to GDP (2004), measured for each 2.5 x 2.5 km cell

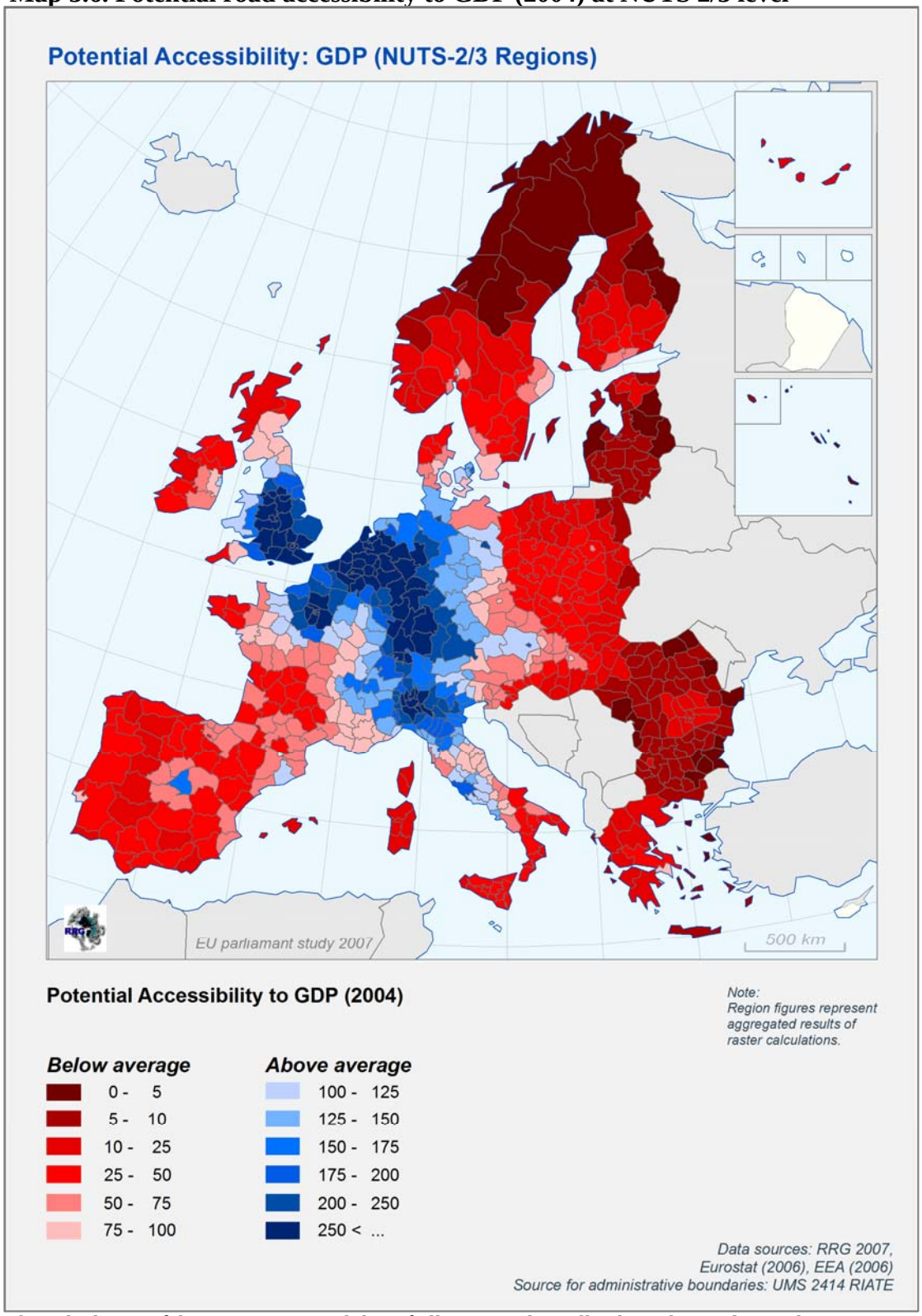


Map 3.5. Potential road accessibility to population (2004) at NUTS 2/3 level



The calculation of the average accessibility of all 2.5x2.5 km cell values observed in each region, weighted according to their respective population, provides a more balanced estimation of the accessibility situation in each region than the extrapolation from the situation in each region's main city (e.g. Figures 3.1 and 3.2).

Map 3.6. Potential road accessibility to GDP (2004) at NUTS 2/3 level



The calculation of the average accessibility of all 2.5 x 2.5 km cell values observed in each region, weighted according to their respective population, provides a more balanced estimation of the accessibility situation in each region than the extrapolation from the situation in each region's main city (e.g. Figures 3.1 and 3.2).

In terms of territorial development, the issue is not so much access to market as one of the existence of connections between regions with complementary profiles. The creation of wider integrated functional regions is indeed an important prerequisite for enhanced growth. This issue is particularly critical in the more sparsely populated parts of the European rim, where the lack of a critical mass is the most important challenge for local labour markets: integration with neighbouring regions becomes a way of compensating for the low local demographic potential. European accessibility studies have thus far provided little empirical evidence on how Cohesion policy can best address these issues of inter-regional accessibility and integration.

In conclusion, European indexes of peripherality or centrality provide an indication of the challenges to European integration rather than to regional economic development. Admittedly, certain types of activities are only possible in central parts of Europe, activities which we have designated as “hub functions”. A wide range of other activities will be less sensitive to distance between production sites and markets. When there are challenges linked to peripherality, these may be related to issues of transport quality, capacity or reliability rather than to travel times or costs. Maps of potential accessibility, identifying the most central and peripheral regions of Europe, therefore provide a synthetic representation of how the European continent is organised, rather than a vision of how its regions could interact.

Other measures of accessibility have a more immediate political relevance. This concerns in particular the question of access to services for individuals and companies. As stated in the *Third Report on Economic and Social Cohesion* (European Commission, 2004), a core element of territorial cohesion is that “people should not be disadvantaged by wherever they happen to live or work in the Union”. Territorially balanced patterns of service provision are central in this respect.

3.2. Access to people as the main determinant of access to services

Cost-efficient service provision presupposes that the number of potential clients or users reaches a certain critical mass. Below this level, one has to consider whether there is a market for more highly priced services, or whether the additional costs are compensated by the generation of positive social or economic externalities which would justify public subsidies.

The distribution of the European population is therefore a critical parameter in assessing the levels of service provision, and in identifying potential problem areas. As highlighted later in this report (see sub-chapter 4.1), average population density figures are rather complex to handle in this respect, as the results are determined by the size of the regions or municipalities. Alternative methods capable of providing comparable results across Europe are therefore necessary.

Indicators of the regional endowment of service provision facilities can be as problematic as population density figures. For instance, regional ‘endowment’ in health-care services measured in ‘beds per inhabitants’ at the NUTS 2 level provides little indication of whether these facilities are concentrated in the regional capital, or organised in order to be accessible both to city and countryside dwellers. One can therefore argue that it makes more sense to look at the proportion of inhabitants in each region who have access to a given type of service within a reasonable travel time.

3.2.1. Population potential as an alternative to population density

The spatial extent of areas considered sparsely populated varies considerably depending on whether one looks at figures at the municipal or the regional scale. The challenges of demographic sparsity are however experienced daily across Europe: For example, with rural depopulation and an increased focus on cost efficiency among public and private service providers, post offices, schools and maternity units are closed down. The difficulty of spatially delimiting areas where this type of issue is susceptible to arising is important for European policy thinking around regional disparities and cohesion.

The closing down of a post office, school or maternity unit is not directly related to the number of persons living in the municipality or region concerned. The critical parameter is the number of persons who live within a reasonable distance of the service concerned. Different distances may be considered relevant, depending on the nature of the service and the type of area. Persons living in some peripheral areas are prepared to travel further to reach certain services; inversely, the longest daily commuting times can be observed among the suburban populations of Europe's major metropolitan regions. Overall, studies [(21)] have however shown that the number of commuters generally decreases sharply when travel time exceeds 45 minutes.

In consequence, we can consider that the total population present within 45 minutes of any point in Europe gives us an indication of the types of "daily life" type of service provision activities that could develop there, if that point were to become a centre of some kind. The actual 45 minute travel time from each point is difficult to calculate, especially if one has to take public transport into account. One can however translate this travel time to a 50 km radius, measured as the crow flies. By calculating the number of people living within this 50 km radius from each point [(22)] in Europe, one obtains their so-called *50 km population potential*. These values have then been standardised to the EU-27+2 [(23)] average in order to highlight the regions that are above or below this average. The resulting map (Map 3.7) provides us with a representation of settlement patterns which are comparable across Europe.

Not surprisingly, the map highlights the stronger population potential that lies in the most urbanised parts of the continent: the Benelux countries, Western Germany, Southern England and Northern Italy. More importantly, it highlights the fact that territories in the New Member States often enjoy a rather high population potential. This is especially the case for the major parts of Poland and the Czech Republic, and, to a lesser extent, Slovakia and Hungary. Inversely, large parts of many EU-15 countries have a population potential below the European average with the interior parts of France and Spain being typical examples in this respect.

The largest continuous areas with population potential values below 5% of the European average are to be found in Northern Finland and Sweden. Their specificity has been recognised at the European level, as these areas benefit from specific Structural Funds support due to low population density. Other smaller areas with equally low values can be found in the Scottish Highland and Islands and in the Spanish interior. Interestingly, one can also observe low values in other types of areas. This, on the one hand, concerns some of the major mountain areas of Europe. In Map 3.7, mountain areas such as the Alps, the Pyrenees, the Carpathians, the

(21) See, for instance, BBR, 2000; Federal Ministry of Transport, Building and Urban Affairs, 2003; Barker and Connolly, 2006.

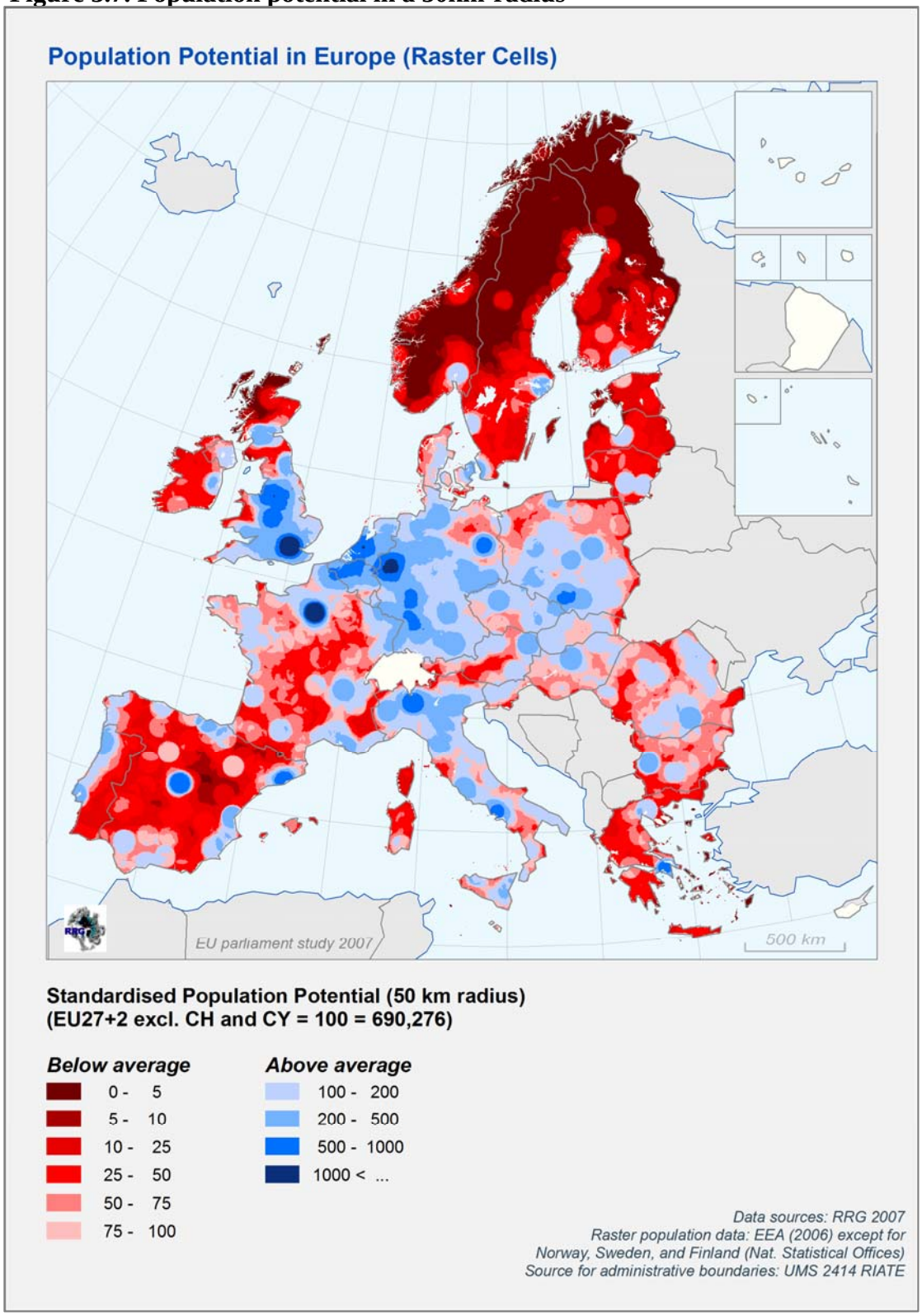
(22) For this indicator we have used 2.5 x 2.5 km grid cells for Europe, except for the Nordic countries, i.e. Norway, Sweden and Finland, where 1 x 1 km grid cells have been used.

(23) EU 27 *plus* Norway and Switzerland.

Cantabrian Mountains and the French *Massif Central* have significantly lower values than the surrounding lowland areas. Low values can furthermore also be observed in respect of most islands, both in the Mediterranean and the Baltic seas. This reflects a similarity between three of the so-called "permanent handicaps" referred to in relation to European Cohesion policy, namely population sparsity, 'mountainousness' and insularity. In all of these areas, the fundamental social and economic development challenge is the difficulty of reaching a critical population mass within the functional regions (e.g. labour markets).

In a situation of low population potential, the level of service provision depends upon factors such as local wealth, the social capacity of local communities and public policies. The comparison of service provision levels with population potential patterns therefore provides us with a method to assess the degree to which local initiatives and other regional, national or European policies have compensated for demographic challenges, and thereby promoted equality of opportunity in the concerned territories.

Figure 3.7. Population potential in a 50km-radius



3.2.2. Access to services

When it comes to service facilities, we have, in the context of this study, chosen to focus on access to airports, hospitals and universities. These three types of infrastructure are in different respects important assets for increased productivity, competitiveness and quality of life. We have however only taken into account service provision facilities of a certain level of importance: the airports considered have at least one direct scheduled flight running weekly, while the universities have over 1000 students and the hospitals over 300 beds. The reference year for all infrastructure data is 2001 [(24)].

Studies in the ESPON Programme have approached the quality of service provision in terms of endowment per region or per urban area (beds per inhabitants, students per region etc). Such approaches are useful for benchmarking purposes. As they do not take into consideration the location of the facility on the territory in relation to the settlement patterns and available transport infrastructures they however fail to reflect intra-regional disparities in service accessibility. Furthermore, they fail to reflect the potential importance of each region's infrastructure for neighbouring areas.

For Cohesion policy design, information on the territorial organisation of airports, hospitals and universities needs to be compiled and represented as points in space. In other words, it is not sufficient to look at the total service offer within a region or city; one must also be able to position each service provision facility in accordance with its precise geographical location.

Second, the travel time to the nearest service provision point needs to be calculated. For this purpose, we have focused on accessibility by road, as railway accessibility taking into account schedules is not currently available for Europe as a whole. From each point in Europe, we have calculated how long it takes to travel to the nearest airport, university or hospital (see respectively Maps 3.8, 3.9 and 3.10). In all three cases, the resulting figure was standardised to the corresponding EU-27+2 average.

The resulting territorial patterns should be compared with the previous population potential map (see Map 3.7), in order to identify areas with service provision levels which are either above or below what one could expect from the number of people living in the area. Overall, one can see a relatively good fit between the territorial spread of all three types of infrastructure and the corresponding population potential. There are however a number of exceptions. The high density of airports in the Northern periphery reflects active policies to promote this type of infrastructure in the peripheral regions [(25)]. A relatively high number of universities can be found

[(24)] The mentioned thresholds were mainly defined for reasons of data availability, in order to establish a harmonised and comparable pan-European database on airports, hospitals and universities. Nevertheless, as far as airports are concerned, airports without direct scheduled flights can be considered very small and of minor importance, and thus can be excluded from this analysis. As far as universities are concerned, the chosen set of universities also represents those facilities that have more than 1000 students.

[(25)] However, as recent studies have shown (Gløersen *et al.*, 2006; Schürmann and Spiekermann, 2006), the degree to which regional airports fulfil their functions depends on the number and type of destinations served through direct flights. For instance, most of the regional airports in the northernmost regions of Finland, Sweden and Norway are only connected to the capital cities, and no other destination is served. So other parts of Europe can only be reached by using connecting flights via the hubs Stockholm, Helsinki and Oslo. Other regional airports are dominated by one or two low-cost airlines, serving a limited number of destinations directly, but these airports are not really embedded into a *flight network* (i.e. limited number of destinations, flights are not synchronised, no possibilities for booking connected flights, limited possibilities to check in for connecting flights etc.).

in regions with low population potential in Western Ireland, Bulgaria and Romania as well as in the Northern periphery. The possibilities to implement regional development strategies based on higher education in these areas create a potential for improved territorial cohesion.

Inversely, the low density of airports and universities West and South of Paris reflects the polarising effects of the French capital. The new Member States of the Union also have an airport density which, seen in relation to the population potentials, is lower than in the rest of Europe. By comparison, hospitals of more than 300 beds are more equally spread across the European territory. One can only observe large continuous areas with more than one hour travel time to the nearest hospital in the Nordic countries.

Text box 3.1. Energy supply

For consumers (both households and firms) access to energy is not primarily a question of distance to the energy facilities, i.e. power plants, or even a question of a lack of technical infrastructure *per se* (electric lines) but remains first and foremost a question of prices and reliability in the power supply delivery. These issues have traditionally been dealt with at the national level. These nationally organised, monopolistic/oligopolistic energy markets lead to a strong disparity in terms of energy prices between countries. Moreover, many consumers, whether they are persons or businesses, are concerned about high energy prices which are seen as a limiting factor for further economic growth and in maintaining the welfare state.

The recent moves towards greater liberalisation of energy markets are expected to be pursued in the near future. For any concerned territorial level (European, national or regional), the main issues are to ensure a sustainable and reliable supply in the long term in a context of potential depletion of non-renewable energy sources, and to improve the European degree of self-sufficiency. Strategies focusing on the diversification of energy sources, including the boosting of renewable resources such as wind, biomass, solar cells and water power and on renewed efforts to promote more efficient use of energy can contribute to the attainment of these goals.

Although Member States still pursue predominantly nationally-centred policies in the energy sector, long term solutions require improved European co-operation. European environmental objectives need to be matched by equally ambitious EU energy policies. Indeed, EU leaders recently set a firm target of cutting 20% of the EU's greenhouse gas emissions by 2020 - the EU will be willing to raise this goal up to 30% if the US, China and India make similar commitments. EU leaders also set a binding overall goal of 20% for renewable energy sources by 2020, compared to the present 6.5%.

Source:
ESPON 2.1.4 (2005): *Territorial Trends of Energy Services and Networks and Territorial Impacts of EU Energy Policy*. Final Report. Lisbon: CEEETA.

Moreover, the population that can be serviced from each of these service provision points can be quantified. This presupposes that one defines a travel time below which the infrastructure is relevant for the local population. We have used one hour, considering that the accepted travel time to a specialised service provider tends to be longer than for daily commuting. The main purpose of such calculations is to identify the persons or communities who are not within one hour of the nearest service provider of each type. The population figures of these communities have then been aggregated at the regional level, for airports, universities and hospitals (see respectively Maps 3.11, 3.12 and 3.13). Our contention here is that this type of measure provides a better assessment of territorial cohesion levels across Europe than endowment indicators such as the number of airports per region.

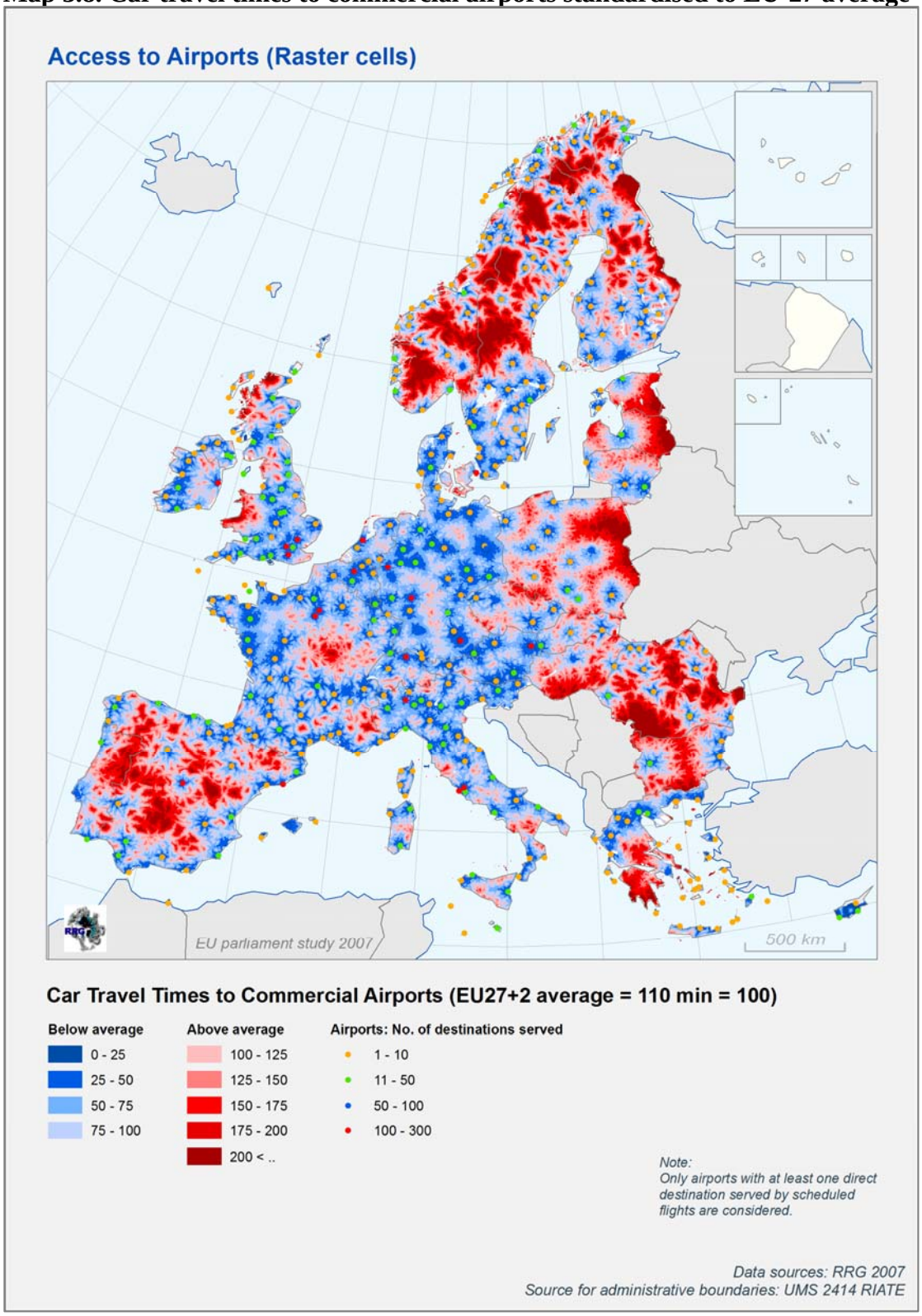
The concrete measures needed to improve access to services across Europe can follow three main paths. A first option is to improve the transportation network in order to connect a greater

share of the population to existing facilities. A second possibility is to have more explicit policies for the territorial spread of service provision facilities. Finally, a third alternative is to focus on border areas, where administrative 'stiffness' prevents people from benefiting from existing infrastructure in a neighbouring region or country.

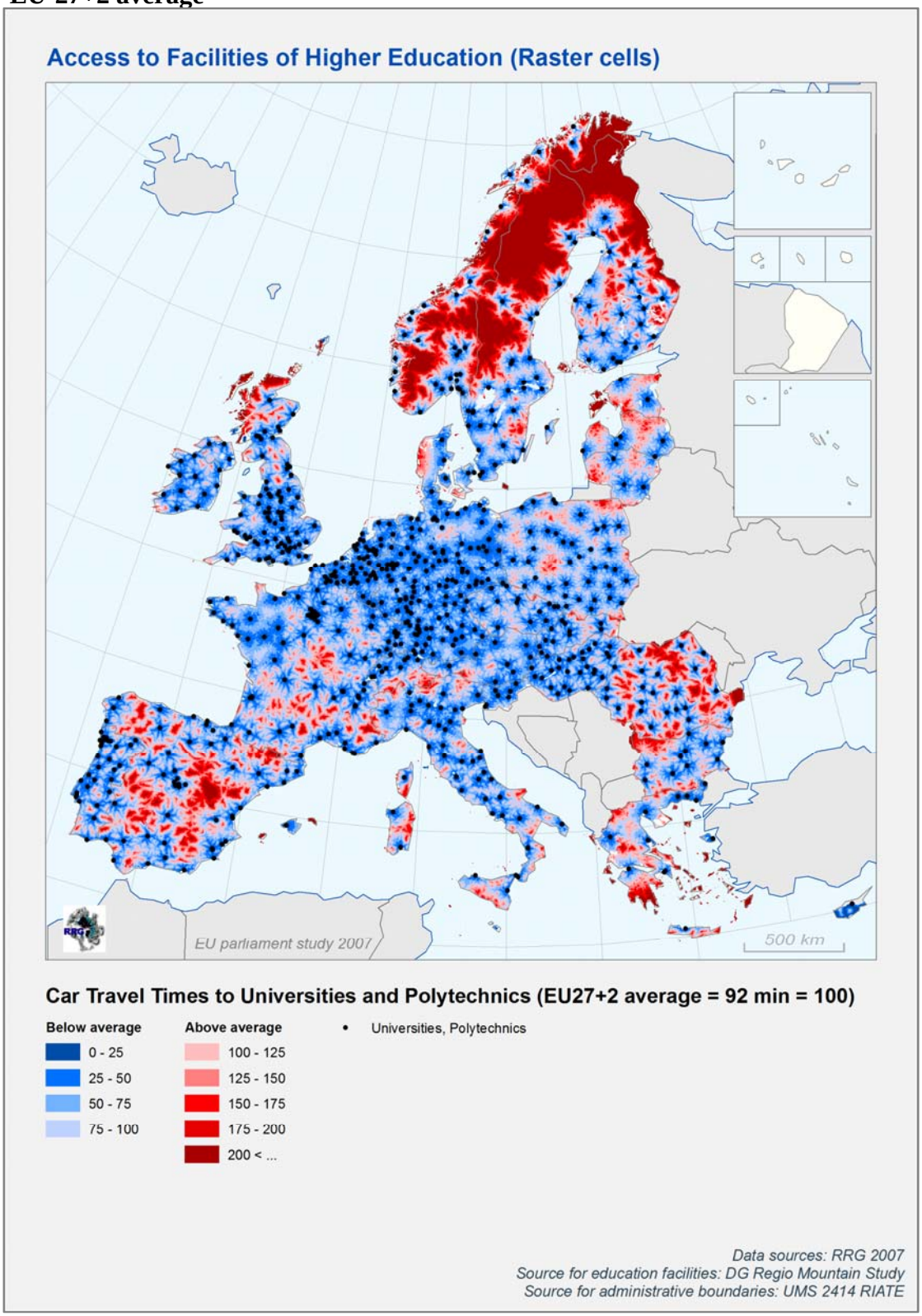
A general observation here is that most countries experience very wide disparities between regions when it comes to the proportion of the population within one hour from important services. In many countries, one can find both regions with very full coverage and others with no access at all. This especially concerns airports and universities, and highlights the fact that the preconditions for economic development remain diverse in all Member States of the Union.

In terms of policy design, this exercise demonstrates that the allocation of funding needs to relate to the way regions are organised, and not only to their overall performance. This is a prerequisite for understanding how territorial structures can impact on economic and social development strategies, and for improving the design of measures for balanced, sustainable growth. The examples presented here illustrate how this type of territorial measure can be aggregated at the regional level so as to fit with the institutional frameworks for territorial governance.

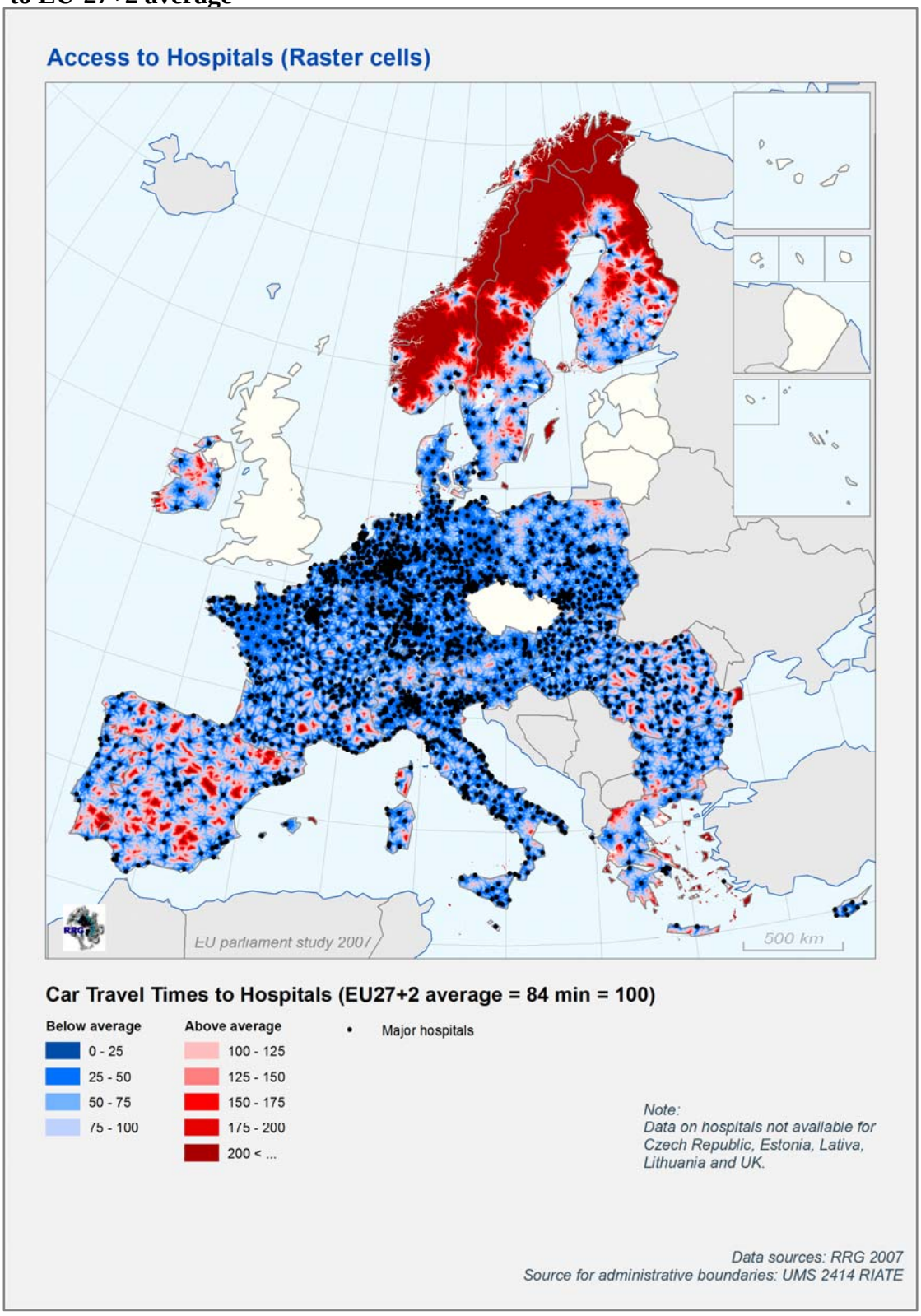
Map 3.8. Car travel times to commercial airports standardised to EU-27 average



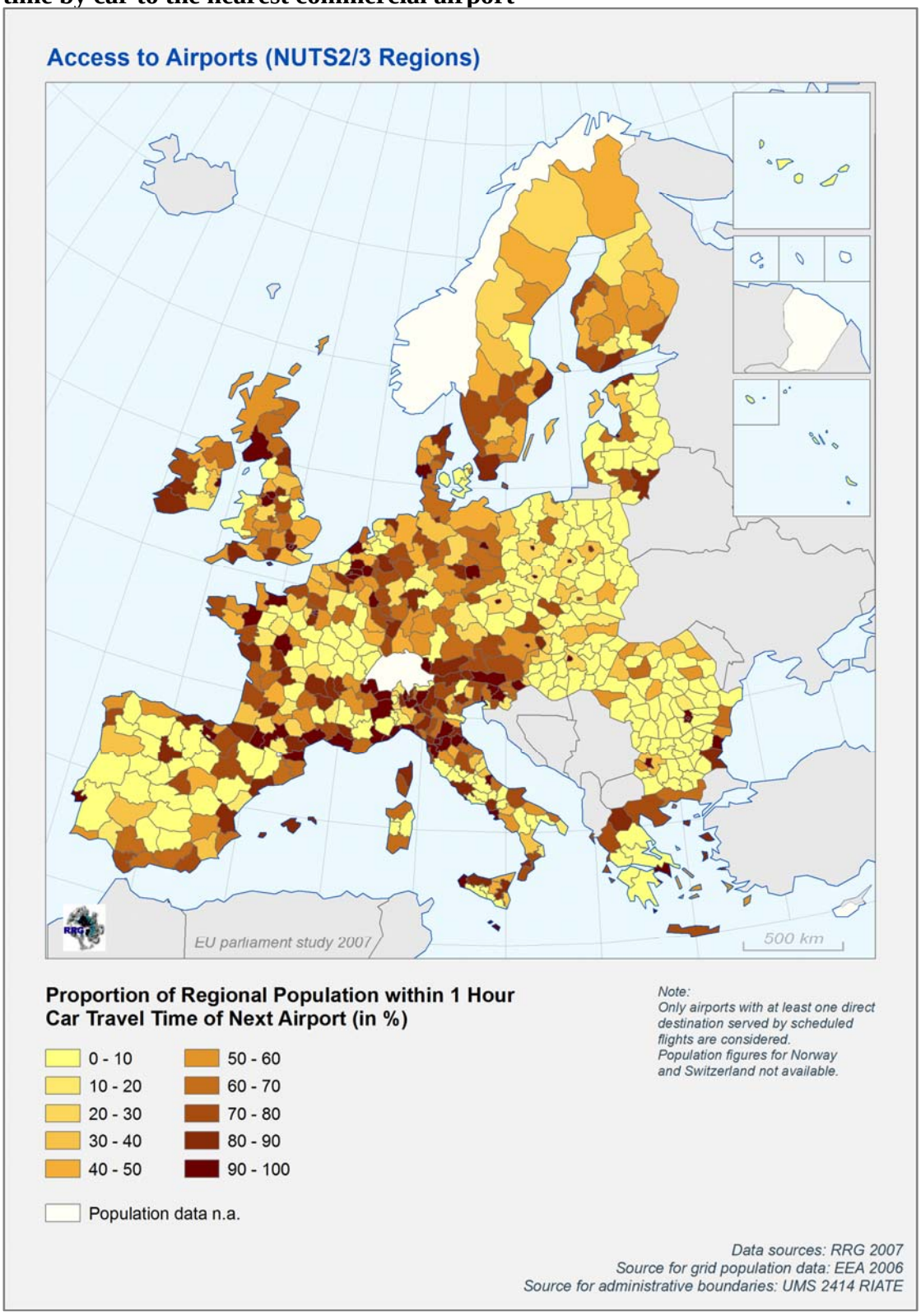
Map 3.9. Car travel times to universities and polytechnics standardised to EU-27+2 average



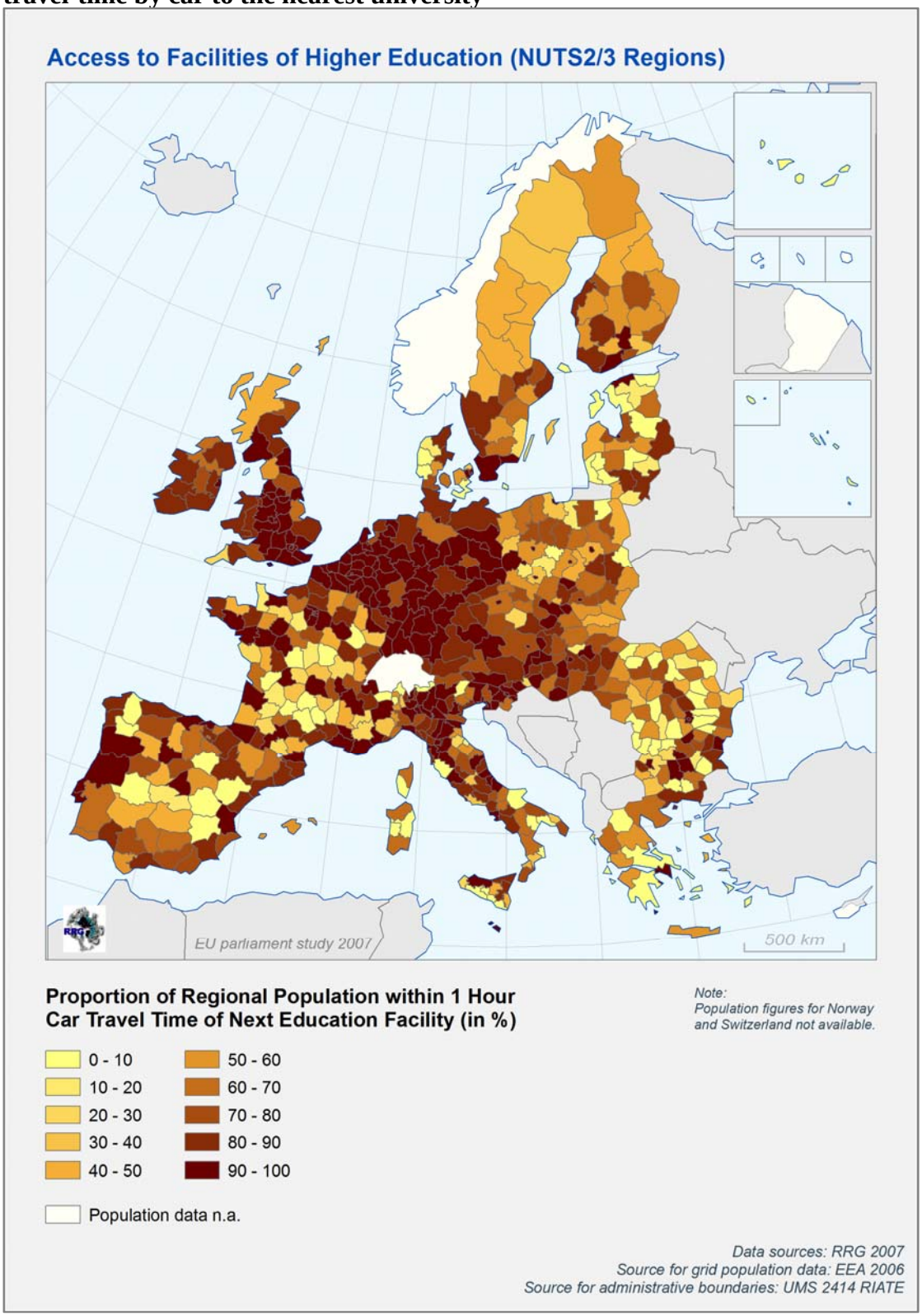
Map 3.10. Car travel times to airports, universities and hospitals standardised to EU-27+2 average



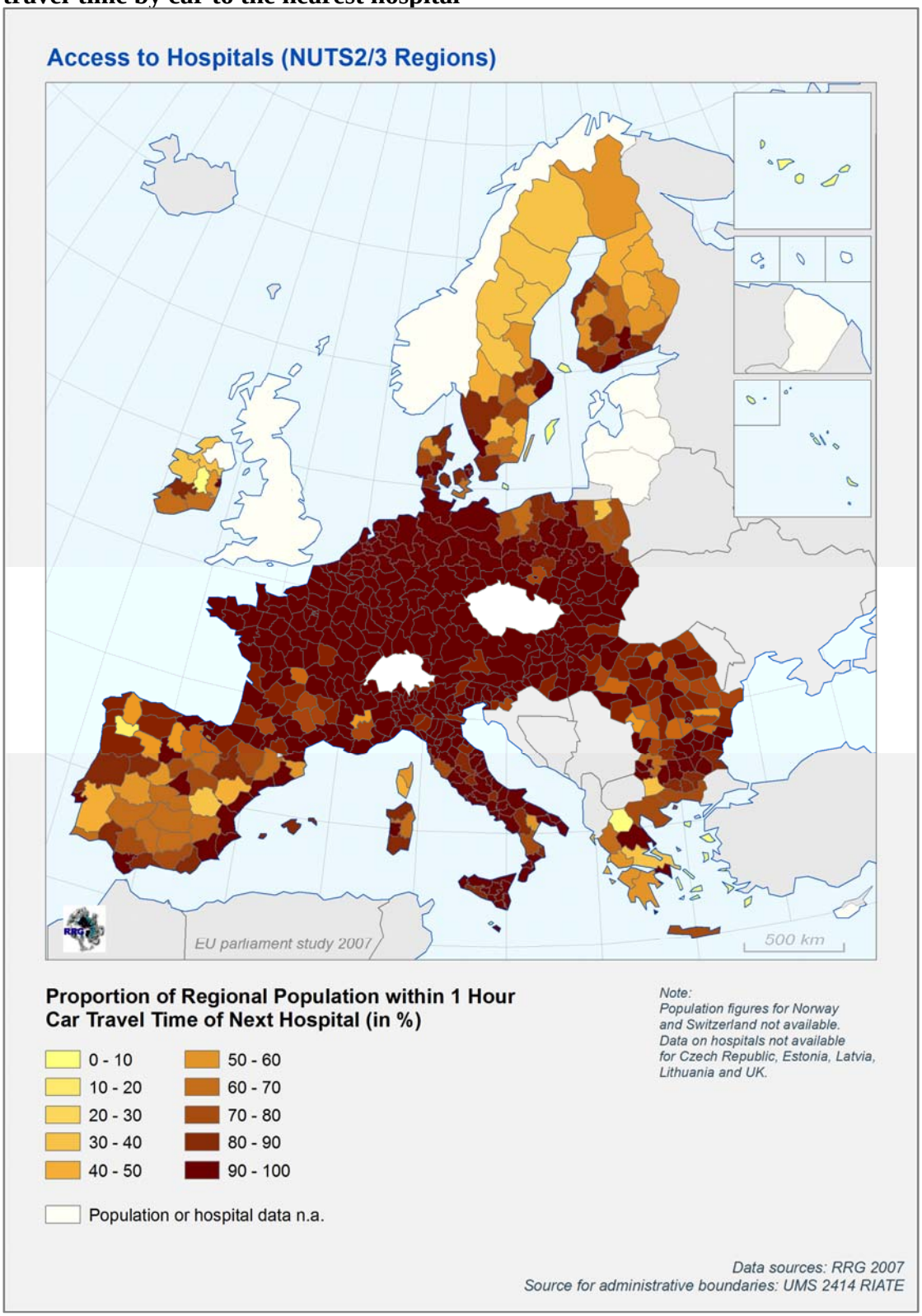
Map 3.11. Proportion of regional population (NUTS2/3) within a one-hour travel-time by car to the nearest commercial airport



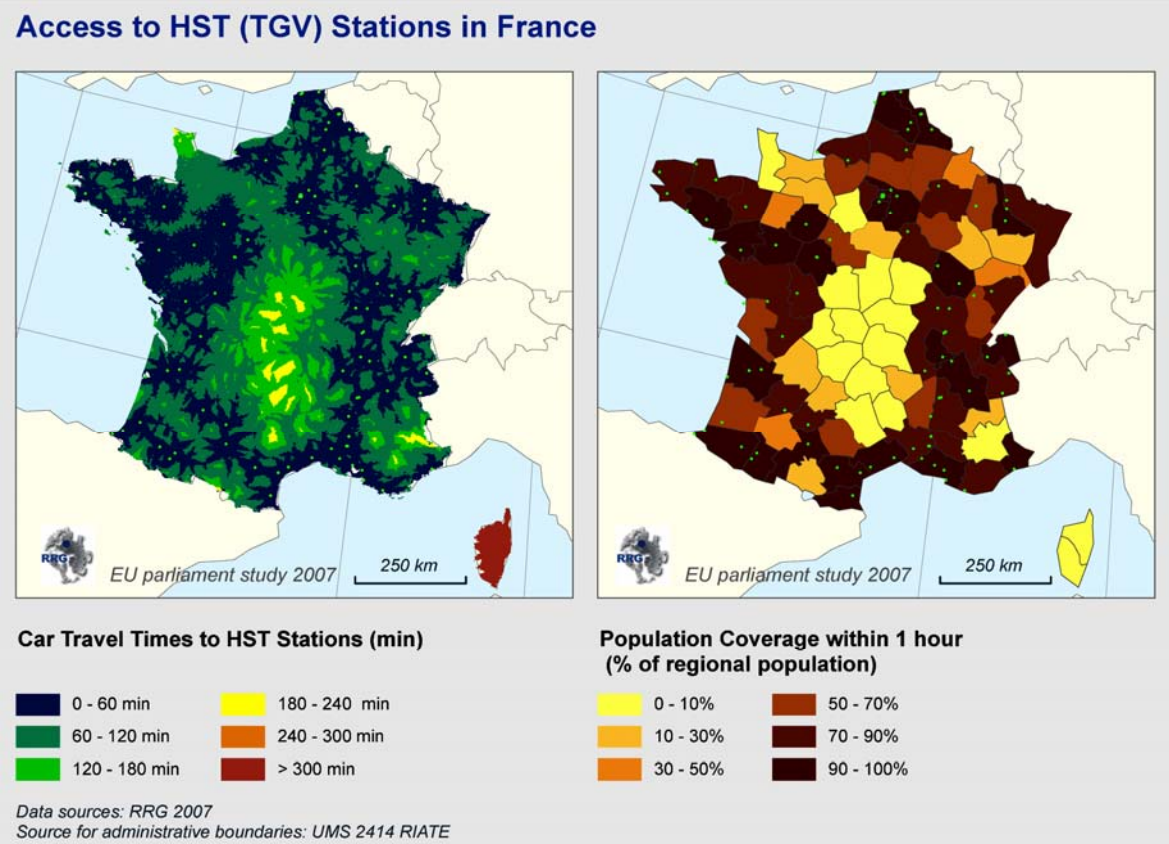
Map 3.12. Proportion of regional population (NUTS2/3) within a one-hour travel-time by car to the nearest university



Map 3.13. Proportion of regional population (NUTS2/3) within a one-hour travel-time by car to the nearest hospital



Text box 3.2. Access to High Speed Train services – The French case

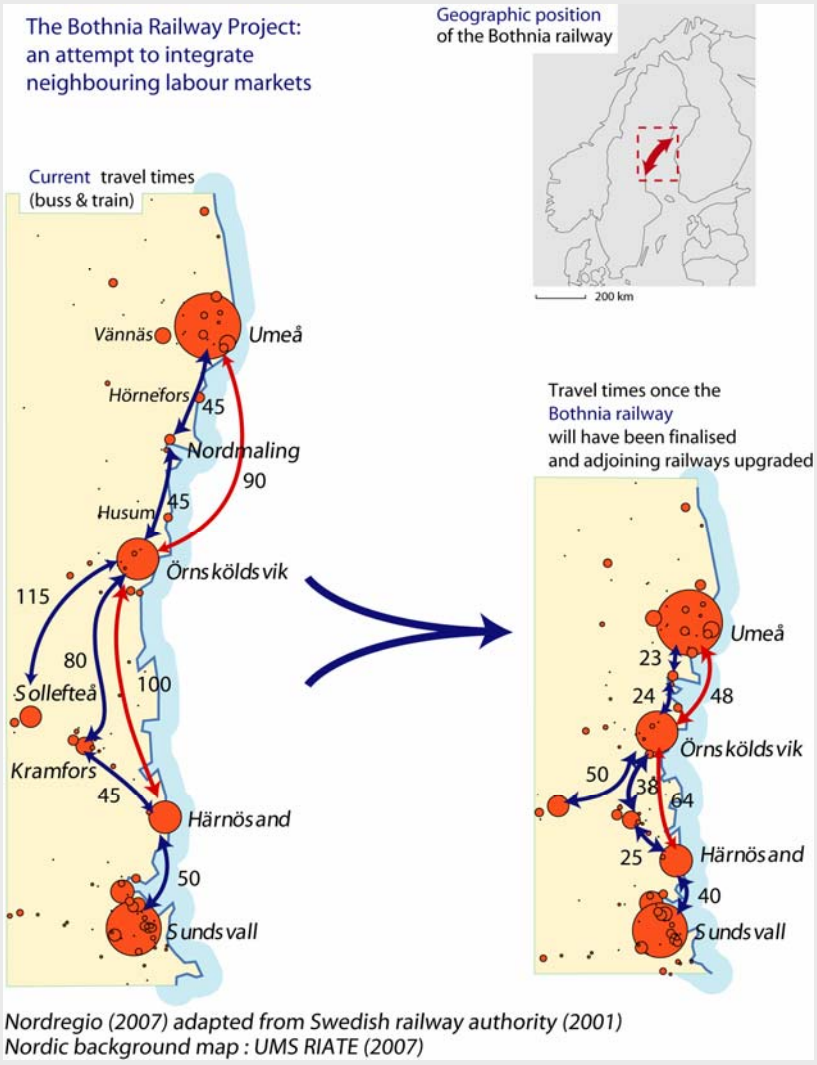


In recent years, many European countries have fostered the development of a High Speed Train (HST) system (railways and stations). Given however the limited nature of available financial resources, these investments are often made at the expense of conventional rail lines, with necessary maintenance and improvement work often suffering cutbacks. In that regard, the case of France is an interesting case in point. Indeed, to date, France is the only country in Europe with a fully inter-connected and specifically dedicated HST network.

Initially, the HST network was designed as an alternative to air traffic, with no intermediate stations between the main metropolitan areas. It was part of a national development strategy to create a star-shaped network centred on Paris. Access to the HST network has nonetheless been seen as way of improving regional development potentials. Progressively, as new lines were built through densely populated areas and as local politicians lobbied to connect their city or town, the number of intermediate stations increased. They are however often located between smaller cities, and not in their centres, to minimise travel times between the main metropolitan areas. In these cases, there are particularly poor connections between the HST system and local public transportation networks.

Lille is an exception in this respect, as the only major hub of the French HST system outside Paris. The city has actively used its position between London, Brussels and Paris in its development strategy. Overall, however, the HST system has increased the National and European accessibility of connected cities, sometimes at the expense of regional coherence. The risks of isolating the group of high speed connected cities from their respective territories have not been adequately addressed in infrastructure development strategies.

Text box 3.3. Access to High Speed Train services – The Swedish case



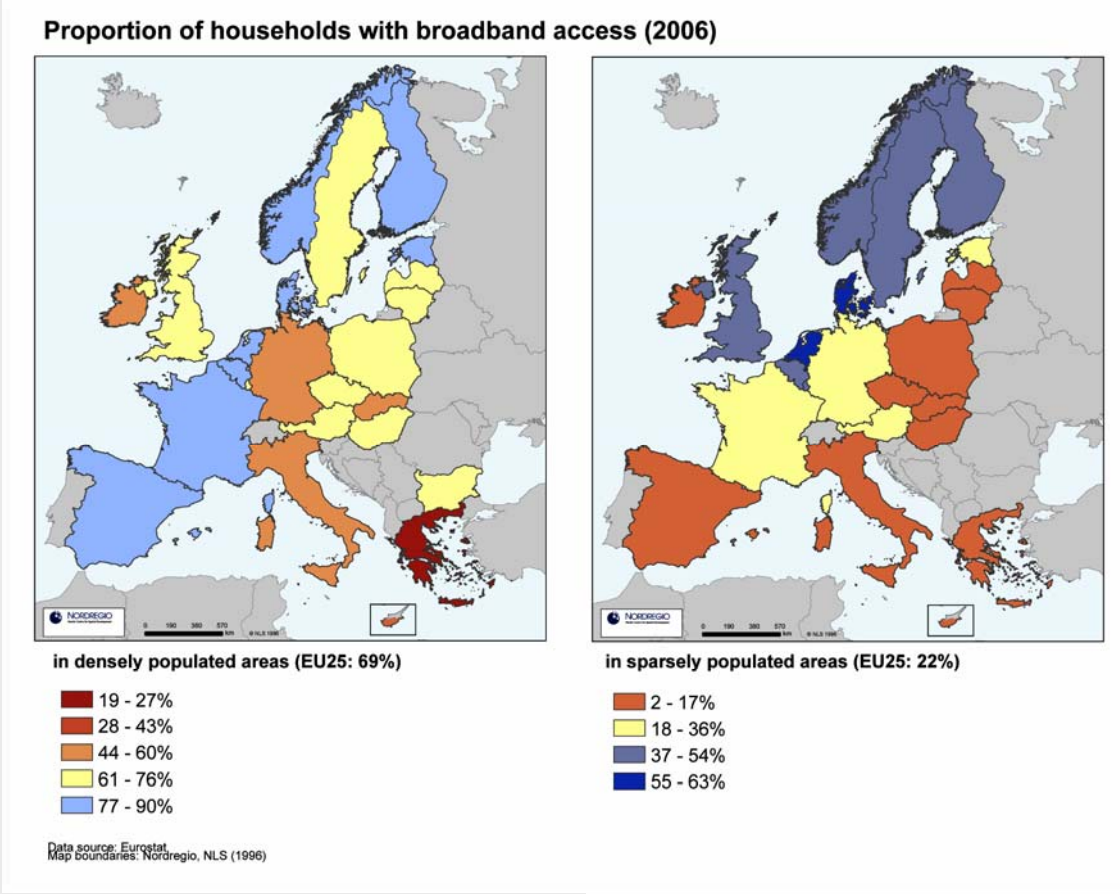
Nordregio (2007) adapted from Swedish railway authority (2001)
Nordic background map : UMS RIATE (2007)

The Swedish *Bothnia* line initiative offers an example of an alternative HST strategy. This line connects 9 towns and cities in Mid and Northern Sweden, the two largest of which have populations of 50 000 and 75 000 inhabitants respectively. The main aim of the project is to facilitate commuting between these urban areas, so as to create larger and more robust functional labour markets. All stations are located in the city centres, with the objective of organising local public transportation around them. The Bothnia Line is therefore an instrument in the creation of a more coherent, polycentric region.

The reduction of travel times to Stockholm is only a secondary output of the project. This however does not imply that the project will cater for intra-regional transport needs only. The *Bothnia* line has indeed been designed to facilitate exports, especially for the mining and forestry industries. These industries however do not primarily need access to the capital region.

By building a HST in Mid and Northern Sweden before one upgrades the existing rail line from Stockholm northwards, one may avoid the "*perverse 'pump' effects*" of increased accessibility, "*whereby the removal of the 'natural protection' of poor accessibility results in economic activity being siphoned away from the periphery to more accessible areas enjoying various agglomerative advantages*" (Copus, 2001). One allows some fragile labour markets to consolidate in interaction with their neighbours, before one connects them to major metropolitan areas. The *Bothnia* Line therefore illustrates how HST systems can be designed to support regional strategies focusing on balanced territorial development.

Text box 3.4. Access to broadband

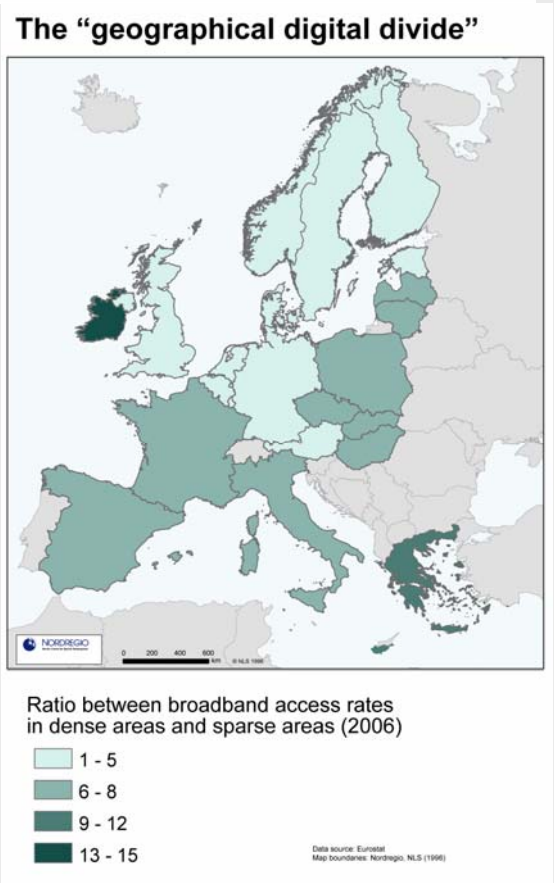


As illustrated by recent debates on the importance of *e*Inclusion, access to broadband is an important tool for economic integration and cost reduction.

There is a possibility of reducing contrasts between central and peripheral areas in terms of access to information and to services with the help of broadband technology. So far, however, broadband has primarily developed in densely populated areas, and therefore contributed to increasing the gap between core and periphery.

As illustrated, the largest contrasts between sparsely and densely populated areas are encountered in the West, South and East of Europe. Throughout Europe, however, differences in access to broadband give additional impetus to concentrating trends. The main challenge is therefore to address the fact that differences in broadband access further increase the economic development gap between densely and sparsely populated areas.

Only a few countries however currently have detailed plans for full broadband coverage of all urban and rural areas within the coming years.



3.3. Observing the structure of the European territory in relative terms

Whether they are defined on the basis of travel-to-work patterns or service provision areas, local functional regions interact at a number of different scales and construct hierarchical relations with each other. This organisation creates the basis for issues of accessibility and infrastructure improvements. Relations between localities are not so much determined by their absolute population figures as by their comparative demographic weight: an average town in the Netherlands (e.g. 50 000 inhabitants) would for example be a major structuring element in Northern Sweden or Finland.

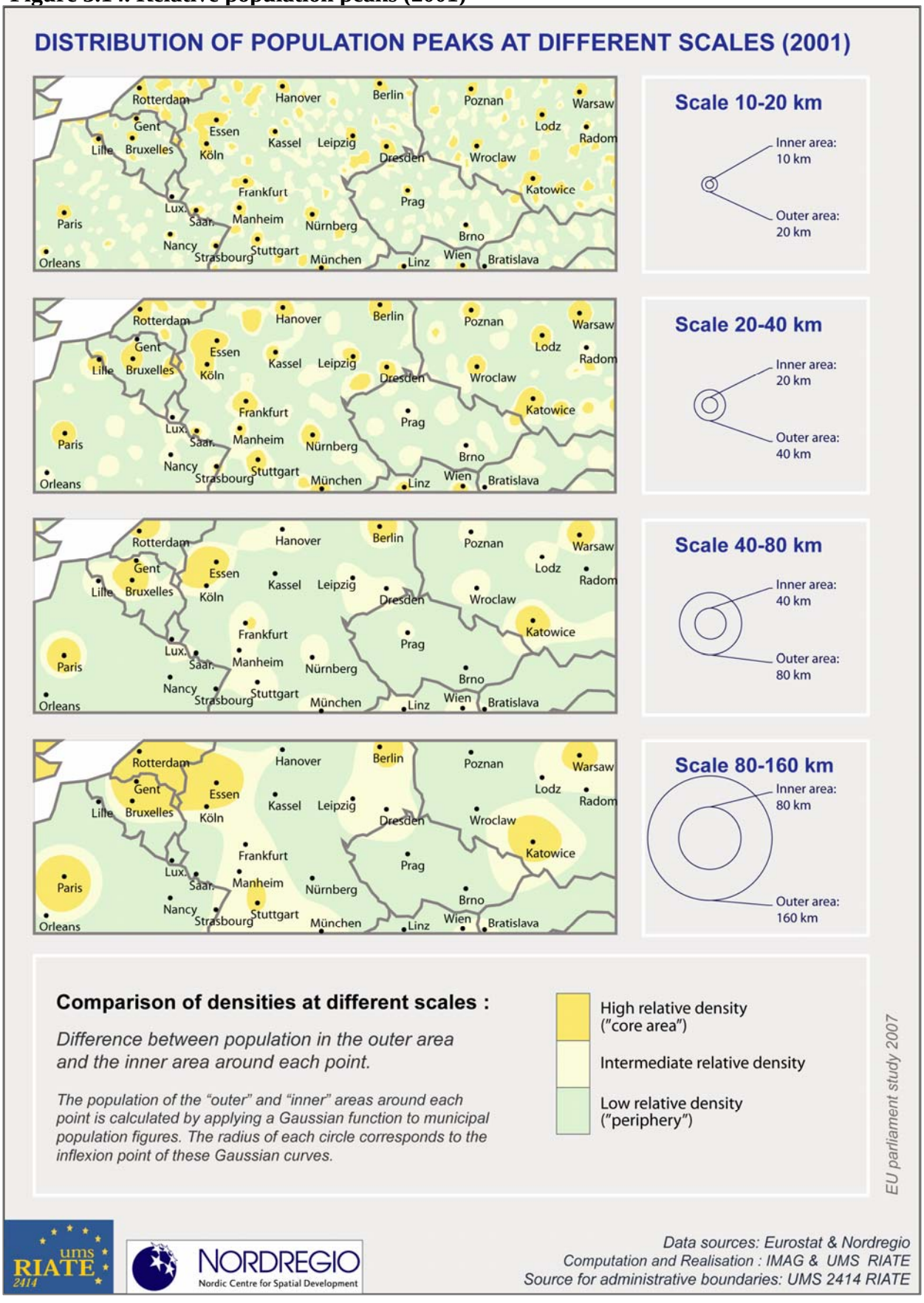
We have therefore elaborated a measure of "relative population peaks" which offers a better understanding of the organisation of the settlement pattern of the European territory than classical maps of regional population or the distribution of cities. The point of the method is to define centres at different scales and to examine how a cluster of isolated small cities can be considered at a more global level as a unique polycentric centre. The basic idea here is that a population centre is a place where the population densities decrease from its core area to its periphery. The importance of each point in space as a regional "centre" depends on the number of people concentrated in its immediate vicinity, compared to the population densities in its surroundings. In the perspective of policies seeking to identify potential "regional growth centres" or to promote "polycentric development", methodologies based on such "relative centrality" are easy to apply across Europe.

There is however no unique scale at which one can define the spatial extent of the "immediate vicinity" and the "surroundings": from a European point of view, cities within 100 km from each other are close. In an urban planning perspective on the other hand, a distance of 10 km is quite significant. Each type of economic and social interaction indeed spans specific geographic distances. The interplay of all these "threshold distances of functional interaction" shapes the European territory as we know it. Figure 3.14 provides an example of how the perspective on the structure of the territory changes with the scale. Each of these four scales can be relevant in a certain policy context.

Within the considered area, extending from Paris to Warsaw, one can observe a high number of such population peaks when comparing population numbers within inner circles of 10 and 20 km in radius, while there are only 6 when considering population numbers within 80 and 160 km. The centre of each peak is generally a city or a group of cities. Overall, these maps provide a tool to observe where population patterns create a core-periphery relationship at a given scale. They are primarily a way of assessing how cities structure the European territory at a regional, national or continental scale.

The notion of "relative population peaks" is essential to understand the organisation of the European territory. It is a way of assessing at what scales each city structures the European territory: regional (top map), national (middle maps) or continental (bottom map). As such, they are useful in assessing at what scale they could potentially act as "regional growth centres" or how they could contribute to a more polycentric development of the European territory.

Figure 3.14. Relative population peaks (2001)



3.4. Integrated approach of accessibility

As has been illustrated above accessibility is not an issue of transportation policy alone. While political stakeholders and public authorities act within their "area of jurisdiction" (e.g. the region, the country or Europe as a whole), social and economic dynamics are increasingly determined by flows rather than by the internal characteristics of each area. For this reason, the challenge for policies with a regulatory ambition may be that interventions within a given area address the symptom of an imbalance rather than its root cause. The ambition of an integrated approach to accessibility must be to provide an understanding of existing and potential interactions which can be used as leverage for more effective structural and cohesion policies.

At the European level, the main focus here has been on accessibility measures, which have been a major concern of the European Commission since the early 1980s. We have argued that these are indeed important for the development of Europe as an integrated market and have among other things been used to underpin the development of an EU Transport Policy in favour of the so-called Trans-European Networks. Their effect on regional economic development potentials is however generally overestimated. If accessibility measures are to be useful tools in strategic thinking, they need to reflect the specific needs of each region's industries, to take into account the geographical location of the markets they target and to focus on existing infrastructural obstacles to industrial development.

The core issue of territorial cohesion in the Union is the constitution of competitive and sustainable functional regions across the European territory. While activities tend to agglomerate to draw benefits from economies of scale and agglomeration. The policy issue is to weigh up the agglomerative gains of individual entrepreneurs against the social and economic costs of congestion, on the one hand, and of depopulation in peripheral areas, on the other. It is in this respect important to consider not only the immediate economic performance indicators, but also to look at the long-term robustness of the ongoing developments. Accepting the depopulation of some peripheral areas can be a reasonable policy option but may also imply that their natural or agricultural resources will be unavailable in case of a changing supply situation.

The contrasted territorial trends in areas of low European accessibility will be described in Chapter 4. Competitive and sustainable functional regions have emerged in some of these parts, with a satisfactory level of access to services and with a balanced regional economy. These either have an endogenous population potential which is sufficient to develop diversified and robust functional economic areas or they have successfully integrated with neighbouring areas. Accessibility measures can help in the identification of potentials for further integration between areas with complementary profiles, especially between peripheral regions.

Overall, we have shown that local accessibility values can be measured and compared across Europe. These scores in terms of local accessibility are distinct from the European accessibility indexes, which are more relevant for European integration than for regional economic development. In combination with an assessment of the service provision levels in each region, and of the accessibility challenges faced by local industries, these indicators can help in the design of new policy responses customised to each territory. Closer integration with major metropolitan areas is, in this respect, only one possible strategy among others.

Main findings on accessibility

- Pan-European measures of accessibility provide a picture of the general organisation of the continent. A high level of accessibility makes it possible for some regions to develop regional development strategies on 'hub' functions. However, for other regions, such measures do not provide any clear insight on regional development potentials.

- In terms of territorial development, the issue of accessibility relates more to the existence of connections between regions with complementary profiles than to access to large markets *per se*.

- For more peripheral regions, integration with surrounding regions represents a way to compensate for the low local demographic potential and to sustain an acceptable level of service provision.

- Measures of accessibility based on local access to structuring services provide a better understanding of the challenges and potentials faced by the local population and businesses. Disparities in terms of regional population coverage are significant in all parts of Europe.

- Strategies for improving local access to services can either build on a more adapted distribution of services accordingly to population distribution or on better connecting existing facilities to the population via an improved transport network.

4. Spatial disparities in Europe

The previous chapters have described the general pattern of economic trends within the EU. It has been emphasized throughout that no simple or overall pattern can be identified, as Europe is currently witnessing simultaneous processes of convergence and polarisation at different scales. The traditional static descriptions of European territorial organisation have been put in perspective and improved. It has been argued that indicators of accessibility have, up to now, largely ignored significant differences *within* regions and been excessively focused on the pan-European scale. The development potentials of a region are not only determined by its European accessibility, but also depend upon its ability to become a part of the emerging inter-regional, national, cross-border, transnational and global groups and networks. The objective of improved European territorial cohesion does not imply that the entire continent should unify around an existing core area (whether this be conceptualised as a "Blue banana" or as a "Pentagon"), as this would increase congestion problems and amplify relative differences in accessibility between core and peripheries.

An alternative scenario, according to which regions across Europe should strive to reproduce the type of development achieved in the core area, has been promoted in the ESDP and empirically tested by the ESPON. While some areas with equivalent urban densities in the New Member States may, in the long term, achieve similar concentrations of high level economic activities, overall, one must conclude that for most European regions this vision is completely unrealistic. Moreover it could also be argued that it will be unwise to attempt to pursue a strategy of "counter-weighing" the Pentagon. A sounder alternative would be to promote the integration of each area in the networks of cooperation and trade mentioned above, based on the individual area's social characteristics and economic profile.

Improving transport infrastructure, reducing institutional and administrative barriers, and bringing European countries closer together in terms of policy and trade cultures however implies a certain number of risks. We have for example previously described the potential "*perverse 'pump' effects*" of increased accessibility, "*whereby the removal of the 'natural protection' of poor accessibility results in economic activity being siphoned away from the periphery to more accessible areas enjoying various agglomerative advantages*" (Copus, 2001). More generally, a region develops a certain economic and social equilibrium, albeit at a low level of performance, in a situation of relative isolation from the outside world. Networks of cooperation and trade will only be mutually beneficial, and lead to territorial cohesion, *if* they are accompanied by appropriate policy measures.

As these networks should not primarily link the European peripheries to their core areas, but on the contrary concern all scales and territorial contexts, it is necessary to develop a scientific approach to the economic, social and environmental qualification of regions which is not exclusively focused on the "European average" and the "European territory". The current chapter suggests methods to assess a region's potential by considering multiple scales, territorial contexts and indicators.

This chapter will be divided into two main parts: an analytical part followed by a prospective one. First, using the indicator of GDP *per capita* in pps, we will demonstrate that benchmarking the level of development of regions in different territorial contexts enhances the comprehension of their challenges they face and the span of European territorial imbalances. The territorial contexts considered are the European (EU-27 level), the national, the inter-regional and the

cross-border. As a second step, the chapter challenges the general perception of what constitutes a 'lagging' region. Whether one considers one indicator or another, the perception of 'lagging' regions reveals rather different patterns. This is important in the current EU Regional policy context where the use of economic indicators is the rule. The latter emphasises the fact that development should not solely be interpreted in terms of economic indices. Consequently, instead of summarizing the previous results, the chapter concludes by developing tentative or prospective ways of measuring regional disparities in Europe by using a broader approach to development using complementary criteria, such as those focussing on demographic or educational issues.

Indeed, most studies on regional disparities in Europe are based on the analysis of a single scale of territorial divisions (regions at either the NUTS2 or NUTS3 level), a single indicator (GDP *per capita* in pps, eventually combined with the unemployment rate) and a short time period (generally 1995 to the present because of the lack of longer time series data). As a result, the map of regional levels of GDP *per capita* in pps (index 100 = EU) is the basis for most political decisions concerning structural funds and Cohesion policy. The aim of this chapter is to demonstrate that this situation is not sustainable and that a better view of regional disparities can be elaborated with different tools derived – among others – from the results of the ESPON 2006 programme (See for instance projects 3.1, 3.2, 3.4.1, and 3.4.3).

4.1. Spatial disparities are influenced by the choice of scale, indicator and time-period

Disparities change in accordance with geographical scale. As an example, let us consider the differences between GDP *per capita* in pps at the upper scale of the world divided into states. Figure 4.1 (top) reveals that the territory of the EU-27 is generally characterised by very high economic levels (2 to 5 times greater than the world average) even if some new Member States are characterised by economic development lower than the world average (Romania, Bulgaria). Turkey has levels comparable to the new Member States. The spatial organisation of economic levels in the 'neighbourhood' of the EU is characterised by a regular decrease from West to East but by two lines of discontinuities in Southern direction: one located on the Mediterranean and the other on the line of the Sahara.

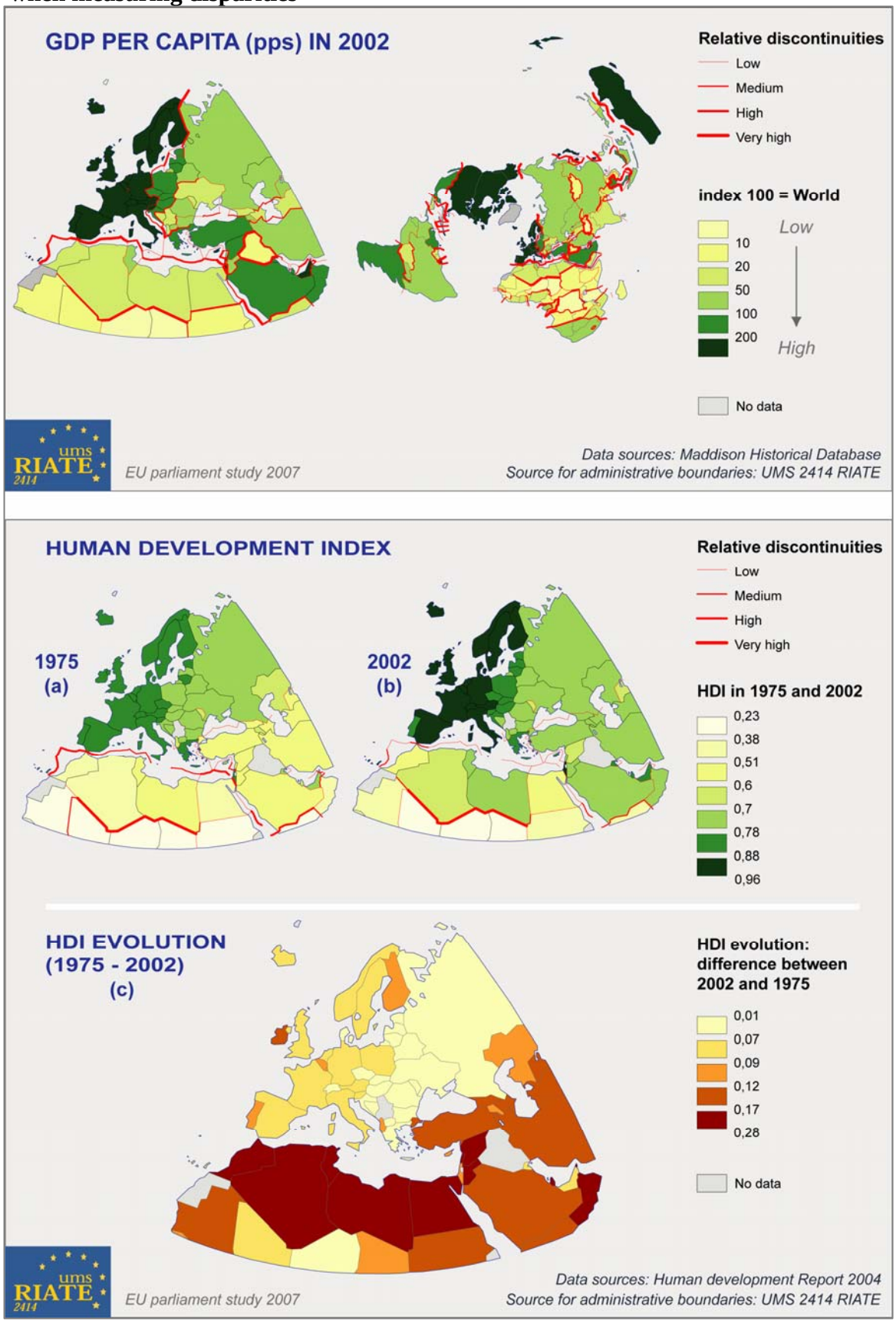
Looking, however, at disparities in the context of various geographically-based frameworks (world, Europe, nation) or at different territorial scales (country, region or municipality) gives a very different perspective on the extent of these disparities (See also text box 4.1).

Disparities change according to the indicator used. Since 1990, the United Nations Development Programme (UNDP) has developed an alternative measure to GDP *per capita* and considers it to provide a better evaluation of real levels of development. This Human Development Index (HDI) is a combination of life expectancy at birth, education level, and economic prosperity. This index is based on a political document (the Declaration of Human Rights of 10.12.1948) and tries to evaluate whether the minimum requirements for all dimensions of human welfare are fulfilled not only that of economic competitiveness. Looking at figure 4.1 (bottom), we can see that, in 2002, the spatial pattern of disparities is not the same for GDP *per capita* and HDI. Disparities between Western Europe and East-Central Europe are not as large under HDI as under GDP *per capita*. Moreover, the main discontinuities to the South are not of the same magnitude for the Mediterranean countries though for the sub-Sahara region the discontinuities remain vast.

Disparities can be measured by using different indicators. This potentially implies that very different perceptions of what constitutes the most 'lagging' regions will emerge. An attempt to transpose the HDI method to focus on disparities between European regions will be discussed at the end of this chapter.

Disparities change over time. Given the inevitable problems with data availability and ongoing changes in territorial administrative divisions, European Regional policy is based on short time series, generally less than 10 years. The consequence of this technical limitation is a focus on short term issues which may obscure the real structural changes taking place over longer periods of time. Figure 4.1 provides a good illustration of the dramatic change in conclusions that one can draw in respect of the Southern Mediterranean countries when the time focus is enlarged to a quarter of a century. According to the level of HDI a fundamental division existed between the Northern and Southern Mediterranean countries in 1975. The socialist countries of Eastern Europe were clearly better developed than the Southern Mediterranean countries at this time. The evolution of the period 1975-2002 (Figure 4.1, bottom) has however completely modified the spatial pattern of the European neighbourhood with a very positive evolution in the Southern direction (though not including the sub-Saharan countries) while stagnation or at best minor increases occurred in former socialist countries with, in the short run at least, the shock of transition to the market economy impacting their standing further.

Figure 4.1. Examples of the importance of geographical scale, indicators and time when measuring disparities



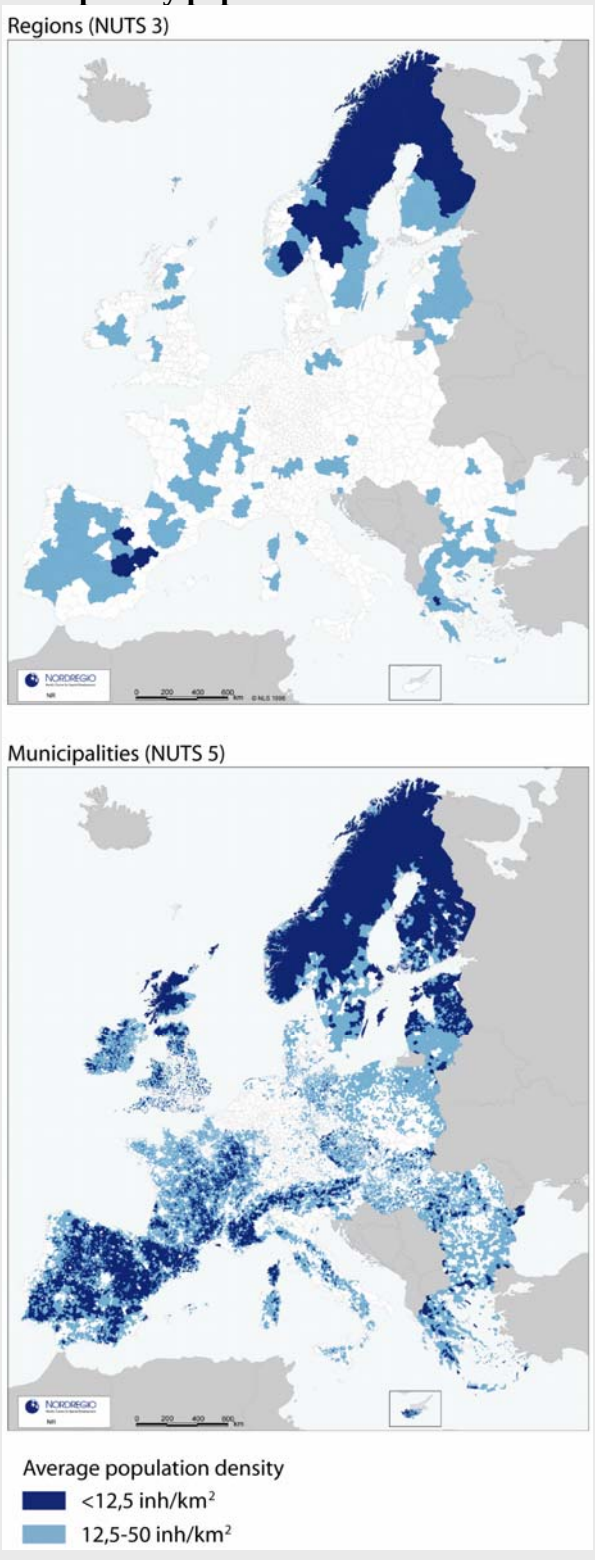
Text box 4.1. The role of scale - How to define sparsely populated areas?

Not only can the perspective of the European territory change when observed at different scales, the very nature of the social and economic phenomena one considers can be different.

This is particularly obvious in the case of population densities. Sparsely populated areas have long been a specific concern of European cohesion policies in addition to mountainous, insular and ultra- peripheral areas. Sparsely populated areas have generally been defined as regions with an average population density below a certain threshold level. The upper map to the right illustrates the geographical extent of sparsely populated areas with the thresholds of 12.5 and 50 inh/km^2 applied at the NUTS 3 scale.

Interestingly, applying these same thresholds at the municipal level (NUTS 5) (see bottom right) leads us to consider quite a different geographical area that can be deemed as "sparse". This does not imply that this more detailed level of analysis gives a "better" or "more exact" picture of sparsity in Europe. A suburban municipality with large natural leisure areas may for example have a low population density, but nonetheless does not consider itself to be "sparse".

Average population density figures are complex to handle as the results are largely determined by the size of the regions or municipalities. It is therefore important to relate the scale of statistical observation to the concrete policy issues at stake. Labour market policies will not have the same demographic sparsity issues as land use measures. As has been noted previously in chapter 3, there are however methods of analysis available that homogenise all data to the same scale across Europe. These can provide a better basis for the assessment of territorial challenges.

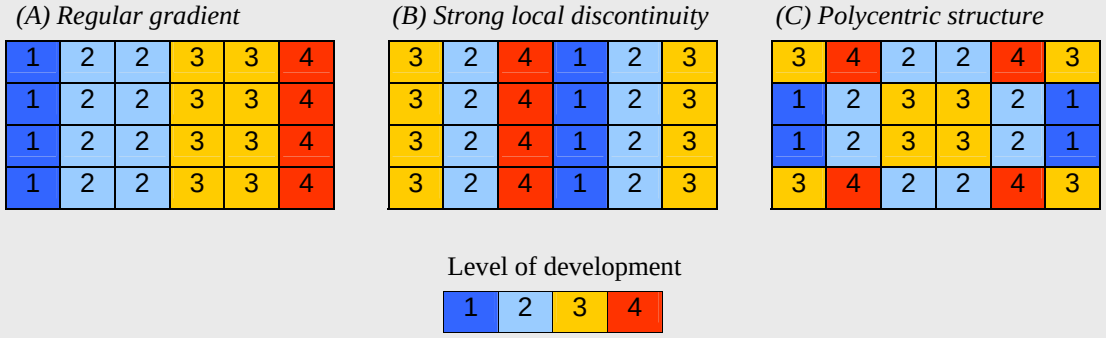


4.2. From European to local: a multiscalar analysis of disparities in Europe

The measurement of regional disparities in Europe has been, either in the policy or scientific contexts, reduced to the comparison of the level of performance of the regions with the European average. As the EU expanded, its average has fluctuated significantly, not lEast in the light of the two most recent enlargements. The Union of 27 Member States has become more complex to understand due to the widely differing national and regional situations existing within it. Analysing regional disparities in Europe in 2007 thus necessitates looking at the performance of the regions in a net of multiple territorial contexts. European regions are, by definition, anchored in the European context but this is not to say that they are no longer fundamentally shaped also by their relations with regions belonging to the same country or regions located in close proximity to them. This section will thus outline the ways in which regions relate to their multiple territorial contexts; from the European to the cross-border.

Text box 4.2. Space does matter

Many studies of regional disparities are based on econometric measures (*Gini* index, coefficient of variation). As economists, their authors consider the differences between regions without any interest in the spatial location of territorial units. But geographers and spatial planners does not agree with such approaches. The same level of global disparities does not however have the same social, economic and political consequences when regions of different levels are located at short or long distance. As an example, consider the theoretical situations presented in this text box.



Why space matters in the analysis of regional disparities.

In the three theoretical situations presented above, an economist would consider that statistical distributions of regional inequalities are equivalent with 4 regions at level 1, 8 regions at level 2, 8 regions at level 3 and 4 regions at level 4. Accordingly, most indexes of disparity (coefficient of variation, *Gini* index, entropy, etc.,) will produce the same values. The spatial configuration (i.e. the geographical location of regions with different levels of development) is however of great consequence from a social and economic point of view:

- **The regular gradient situation (type A)** introduces a low level of disparities at the local level (difference between contiguous regions are never greater than 1) but can induce migrations at long distance between regions of different levels. Typically, we can expect opposite flows of labour force and investments between regions located at each extremity of the area. Example: regional inequalities in Italy in the 1980's
- **The strong local discontinuity situation (type B)** introduces a very strong local level of differences along a line of contact between the less and the most developed regions. This implies very strong local imbalances. At the same time however no important differences exist at long distances; which means that the opposite flows of capital or labour will be very strong but also highly localised. Example: regions located along the former iron "curtain" (Germany/Czech or Austria/Hungary)
- **The polycentric structure situation (type C)** is a mixture of both previous situations with a combination of gradient and medium local discontinuities. The interesting aspect of this situation is that potential spillovers (migration of labour force and investments) will take place at medium distance and will take different directions, according to the existence of different poles of high development level (see ESPON 1.1.1). Example: Switzerland around Bern, Zurich, Geneva, Basel…

4.2.1. At European scale: huge differences exist between the regions of the new and the old Member States

A multiscalar analysis will be performed using the Gross Domestic Product indicator in Purchasing Power Standards (GDP *per capita* in pps). This indicator has been chosen, from among the many possible, in order to apply our methodology. The use of the indicator of GDP either in Euros or in PPS is debatable, but, GDP in pps has been extensively used in the context of EU Regional policy, particularly in relation to defining financial support, as well as in many scientific studies investigating the issue of regional disparities. In that sense the interest here for us is to be able to benchmark the results of our methodological approach with the ones produced in other contexts. When GDP is standardised to the EU-27 average, European regions seem to be divided into two distinct blocks: a Western block where the large majority of the regions have a performance superior to that of the Union as a whole, and an Eastern block where most of the regions are well below this same average. This West-East divide seems to be persistent. In the context of EU Cohesion policy, this fact was effectively translated into a stronger financial support for the New Member States (NMS12) when the new EU budget was finally agreed by the Member States in December 2005.

In respect of the spatial organisation of European disparities in 2003 a closer look at map 4.2 reveals that these blocks are however far from homogenous. Indeed, in the Western block, many regions have a degree of performance in GDP that is well below the EU-27 average, although not to the same extent as some in the Eastern block. In the former EU-15 countries, a clear North-South divide emerges. This is especially true when looking at, for instance, Portugal, Greece, and Southern regions of Spain and Italy, but also including East-Germany. It is also the case in territories such as the inland parts of France, Wallonia in Belgium, and Eastern Finland. In the same manner, a closer look at the Eastern block shows that most of the capital or metropolitan regions in the NMS12 are well above the EU-27 average. The comparison of regional performance to the EU-27 average reveals that the pattern of regional disparities goes beyond the simplistic East-West or North-South divisions, as there seem to be regions that could be defined as ‘lagging’ and ‘advanced’ in all corners of Europe.

In respect of recent trends, 1999-2003, the relative differences in GDP pps appear to have been globally reduced between 1999 and 2003. In 1999, the maximum difference between two regions was a ratio from 1 to 22 while it is only a ratio from 1 to 20 in 2003. The mean value of relative differences between two regions was 89% in 1999 against 80% in 2003 which indicates a small trend towards convergence. Looking in more detail (figure 4.3) we can observe that differences between the regions of old Member States (EU-15) are relatively low in 1999 (31%) and decreasing in 2003 (29%). This trend of convergence is also observed in the new Member States (NMS12) but the initial level of disparity is higher (decrease of relative differences from 71% to 65%). Finally, the differences between regions of the old Member States and those of the new Member States are the highest but follow the same path of convergence (a decrease from 190% to 167%).

***Key message**: Regional disparities in Europe based on GDP per capita pps are very large and would be even larger if they were measured in euros. The largest differences are those observed between the old and the new Member States though internal differences are also very important between regions of the new Member States and, to a lesser degree, between regions of the old Member States.*

Map 4.2. GDP per capita (pps) in EU regions, standardised to EU-27 average

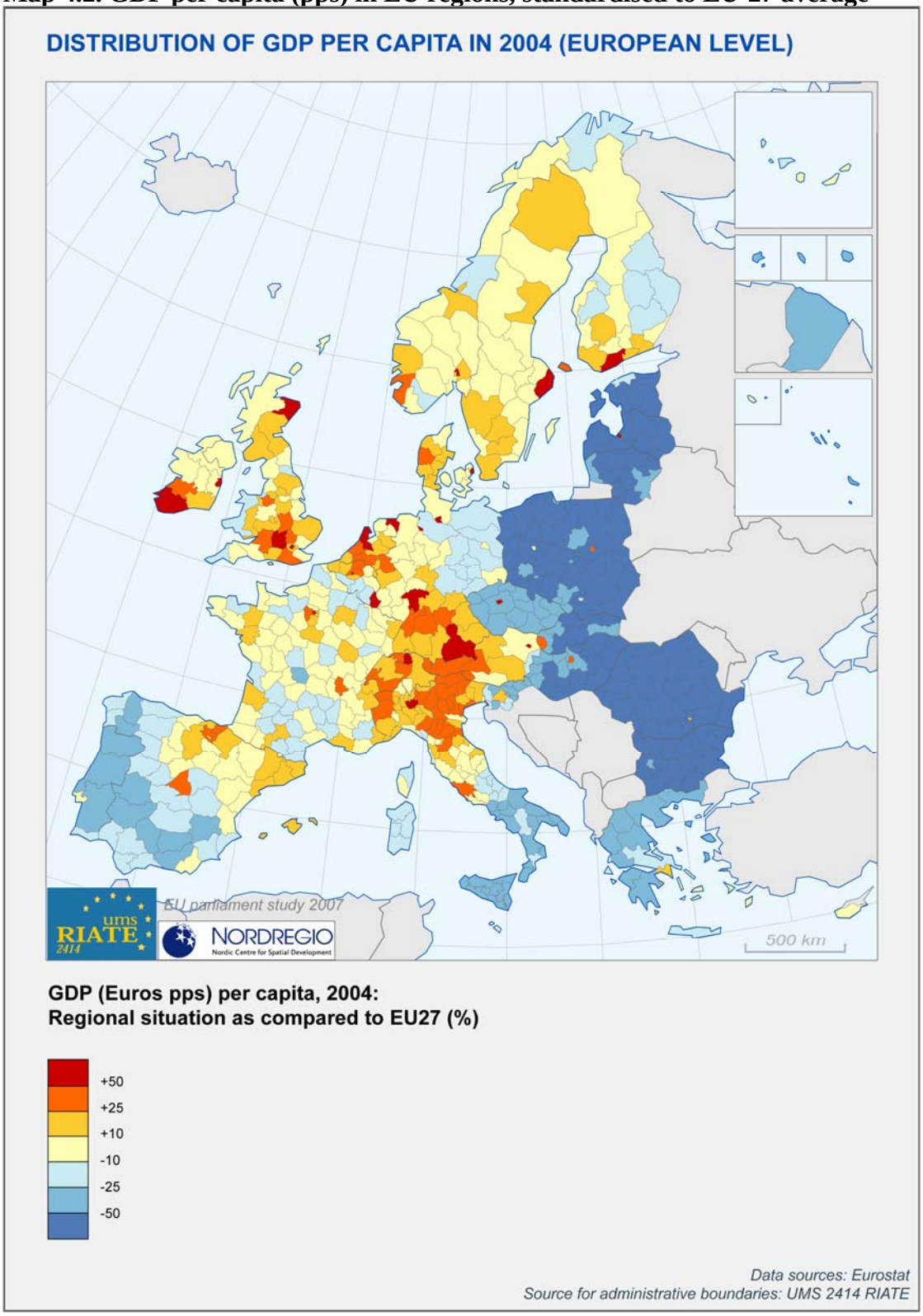


Figure 4.3. Level and evolution of disparities of GDP per capita in pps between new and old Member States (1999-2003)

	1999	2003	EVOLUTION
OMS x OMS	Low 0,39	Low 0,35	-10% Convergence
NMS x NMS	Medium 1,19	Medium 1,05	-12% Convergence
OMS x NMS	Very high 6,08	Very high 4,80	-21% Convergence
ALL x ALL	High 1,90	High 1,62	-15% Convergence

Figure 4.4. Level and evolution of disparities of GDP per capita according to spatial and political proximities (1999-2003)

		1999	2003	EVOLUTION
SAME STATE	NEIGHBOUR	Very low 0,19	Very low 0,19	0% Stability
	DISTANCE	Low 0,30	Low 0,29	-3% Stability
DIFFERENT STATE	NEIGHBOUR	Medium 0,64	Medium 0,60	-6% Convergence
	DISTANCE	High 2,12	High 1,79	-16% Convergence

Figures 4.3 and 4.4 present the evolution of disparities between regions according to a variant of the expansion method proposed by Jones & Casetti [(26)]. Differences between regions are not measured as difference to the European mean but directly as relative differences to each other. For example the difference between region A (15 000 € per capita) and region B (10 000 € per capita) is equal to 0.5 (+50%). Doing this computation for all couples of regions, it is possible to analyse in detail the disparities between couplets or pairs of regions belonging or otherwise to the same state, located or not in the EU-15 or the NMS12, located at short or long distance, etc. Looking at two time periods, we can see in each case whether disparity levels are growing or declining in each type of situation.

[(26)] Jones III J.P., Cassetti E., 1992, Applications of the expansion method, Routledge, Ohio State University

4.2.2. At the national scale: strong and stable internal disparities

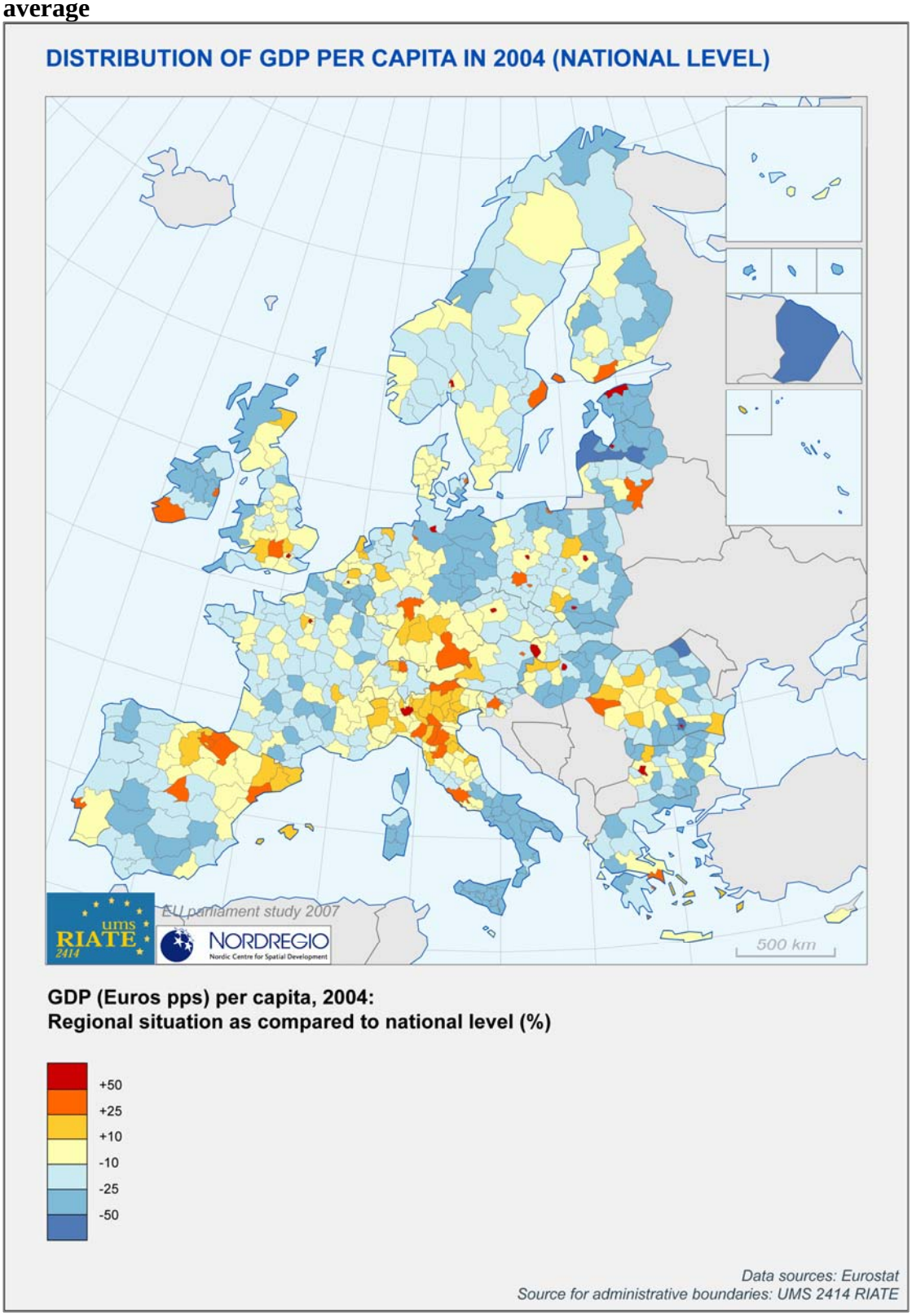
In Europe Regional policy is not exclusivity undertaken and financed by EU policy makers. Indeed, spending on Regional policy at the national level is often higher than that spent by the EU. More concretely a region in Europe can be eligible for financial support from both EU Regional policy and national Regional policy or other forms of internal redistribution. The main issue here is that eligibility for one does not systematically imply eligibility for the other, and also relating to the need of 'additionality' between European and national regional policies.

In respect of spatial organisation and national disparities in 2003 the analysis of regional performance in the national context (map 4.5) confirms that intra-national regional disparities are as wide as those in the European context and this is the case for almost all EU countries. It seems that the pattern is the same: few, often three to four, regions are well above the national average, and thus could be defined as 'advanced'; then a relatively limited number of regions are grouped around the average; the rest are below the national average, sometimes below 50% of the national average. As noted previously, this pattern can be observed beyond the previously identified blocks (East-West). Consequently, the level of performance in the national context shows a strong urban-rural divide, urban areas having a relatively higher level of development than the most rural ones. Moreover, it also highlights the existence of strong intra-national divisions. This is especially vivid in countries with a relatively high level of development such as Italy, between the Northern and Southern parts, Germany between West and East, and Belgium, between Flanders and Wallonia. In the New Member States, besides the prominence of the capital and metropolitan regions, the national context is shaped by a distinct West-East gradient, the Western regions performing better than their Eastern counterparts. One might explain this phenomenon by the closeness of the Western parts to the better performing EU-15 regions, while the Eastern regions share borders with poor, non-EU states such as Belarus and the Ukraine. In conclusion, the national context enables us to focus on disparities between different parts of countries, disparities that are hardly visible in the European context. The fact that these regions perform worse than their national counterparts may suggest that they have structural problems that need to be recognised at the European level.

Concerning recent trends, 1999-2003, the comparison of regional differences between regions located in the same state and regions located in different states reveals that the recent progress towards economic convergence has taken place mainly at the international level (figure 4.4). The relative difference, in terms of GDP *per capita* in *Euro,* between two regions located in different states was reduced from 95% to 86% between 1999 and 2003 while the differences between regions located *within* the same state remained low but stable at 29% in 1999 and 28% in 2003. Looking at this in more detail, we can note that internal differences within states are higher in NMS12 (and indeed increased from 33% in 1999 to 35% in 2003) than in EU-15 where they decreased (from 28% in 1999 to 27% in 2003). Indeed, the recent economic growth in NMS is not equally distributed in space and generally focuses on metropolitan areas (Warsaw, Prague, Budapest, etc.,) which attract the majority of foreign direct investments.

Key message: *Internal differences within countries according to the criterion of GDP per capita are always very important. Recent trends showing a convergence at the international level are not observed at the intra-national level where differences remain rather stable in the Old Member States and are increasing somewhat in NMS where the metropolitan regions capture the lion's share of foreign direct investments.*

Map 4.5. GDP per capita (pps) in EU regions, standardised to respective national average

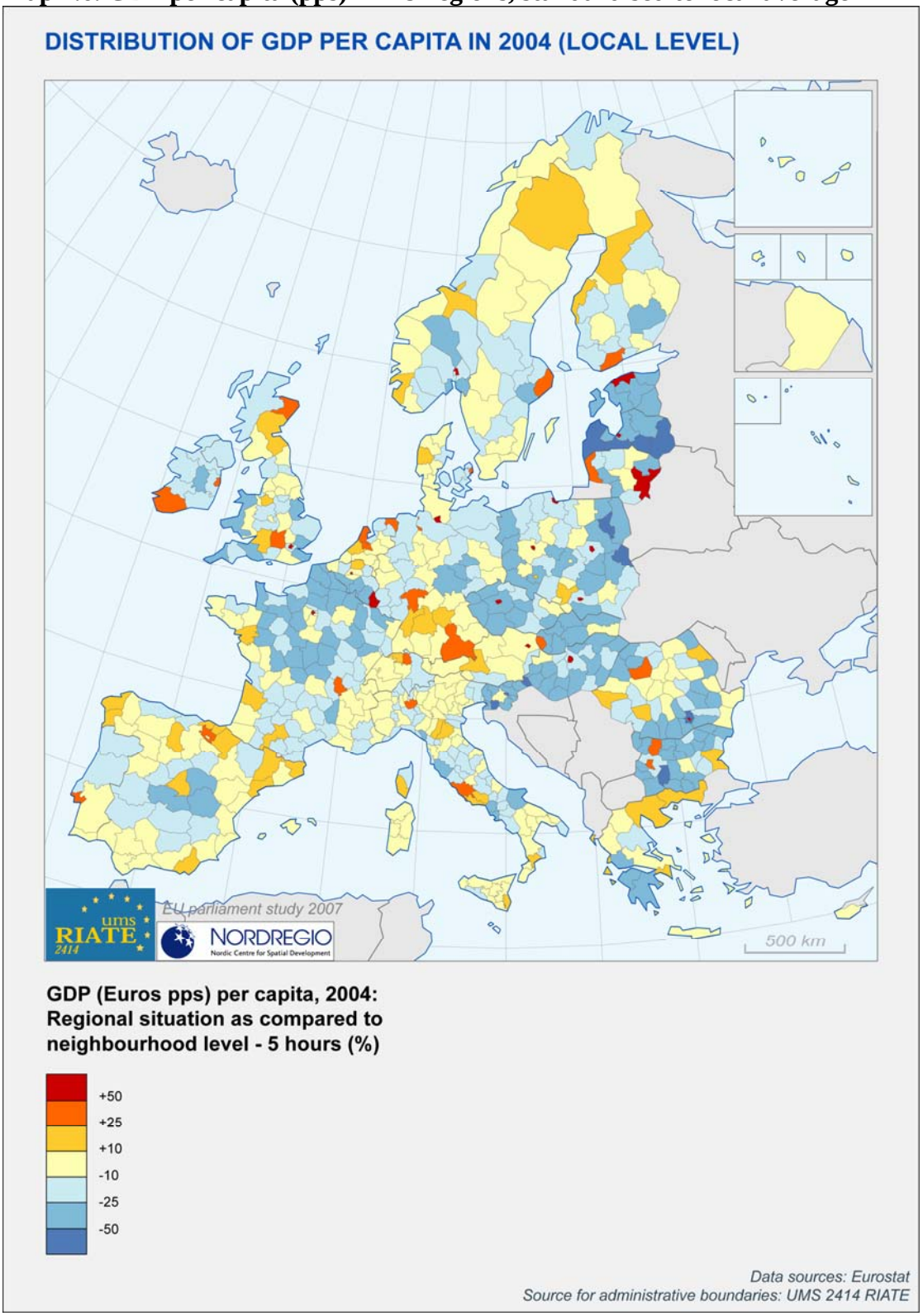


4.2.3. At the local scale: strong differences between neighbouring regions create both threats and opportunities

The neighbourhood of a region is an important determinant of its economic performance. In that sense, analysing the position of each European region compared to those in its immediate neighbourhood makes sense. This territorial dimension is especially important when adopting a labour-market approach as a large share of the flows in terms of goods, capital, and labour effectively take place in a relatively closely defined regional neighbourhood. This territorial context is important because it has a strong spatial connotation. In that sense, large neighbourhood disparities can be interpreted both as a threat and as an opportunity. Neighbourhood disparities stress the differences in terms of wealth in a rather limited geographical range, thus also highlighting large differences in socio-economic standards of living. In the context of a borderless Europe the existence of such local deviations places greater emphasis on labour market related issues such as the permeability of regional and national borders to flows of goods and labour.

In respect of the spatial organisation of local disparities, in 2002, we have produced a map (map 4.6) of differences between each region and the regions located at a distance of less than 5 hours travel time by car, based on the work done in the previous chapter on accessibility. This 'neighbourhood' of 5 hours distance involves all regions, whatever their location is, in the same state or across a border. We can therefore evaluate the situation of European regions in a borderless Europe and try to imagine what *could* happen with full freedom of movement for labour and capital. Regions which present a level of GDP lower than their neighbours (blue colours) are likely to export labour to regions located in their neighbourhood where wages are higher. But they are also likely to attract investments from companies looking for access to a cheaper labour force at short distance from their original location. Regions characterised by higher GDP than their surroundings present the opposite situation and could therefore attract labour from poorer regions of their neighbourhood but, at the same time, be subject to losing jobs through relocation at short distance. If this territorial context seems less intuitive than the previous ones, what is important is the fact that the joint location of blue/orange regions means opportunities for the movement of labour and capital. The main structure illustrated by this deviation is the strong disparities that exist between the main metropolitan areas and their surrounding hinterlands. This phenomenon can be seen across Europe, but it is especially marked in the Eastern countries, from Estonia to Bulgaria. Interesting cases here include Bratislava and Budapest each of which has a high score despite their close proximity to Vienna. The EU-15/NMS12 border-regions, especially those belonging to the NMS12 seem then to be between 'a rock and a hard place' as their position between the EU-15 regions, which often enjoy a higher degree of performance, and their respective capital regions, accentuates their position as 'lagging' regions.

Map 4.6. GDP per capita (pps) in EU regions, standardised to local average



When observing contrasts between metropolitan regions and their surrounding hinterlands in terms of GDP *per capita*, it is however important to compare the spatial extents of the statistical metropolitan region and the functional metropolitan labour market. Indeed, commuting patterns across statistical boundaries distort regional GDP *per capita* figures: all people who work in a metropolitan statistical region contribute to increase its levels of GDP. However, if they live in another statistical region, they will not be included among the "heads" by which this GDP is divided. Data on disposable income can help in assessing the extent of this distortion: if the differences between a metropolitan region and the surrounding areas are significantly smaller in terms of disposable income than in terms of GDP *per capita*, it is likely that commuting patterns are having distorting effects. Such effects also occur in areas with intense commuting across national borders. This is typically the case for Luxembourg and its surrounding Belgian, French and German regions. In cross border areas, the analysis of disparities based on GDP in *pps* are not relevant because it is the differences in terms of wages *in* ***euro*** and not in **parity** which explains peoples' interest in jobs located on the other side of the border or the interest shown by enterprises in the relocation of their activities (*see textbox 4.2*)

Key message: *Local differences remain crucial driving forces for the dynamic of economic convergence as they can induce opposite flows of labour or investment between regions of different levels located at short distance. Accessibility and disparities are thus interlinked questions.*

4.2.4. At cross-border scale: challenges for regions along the EU-15/NMS12 border

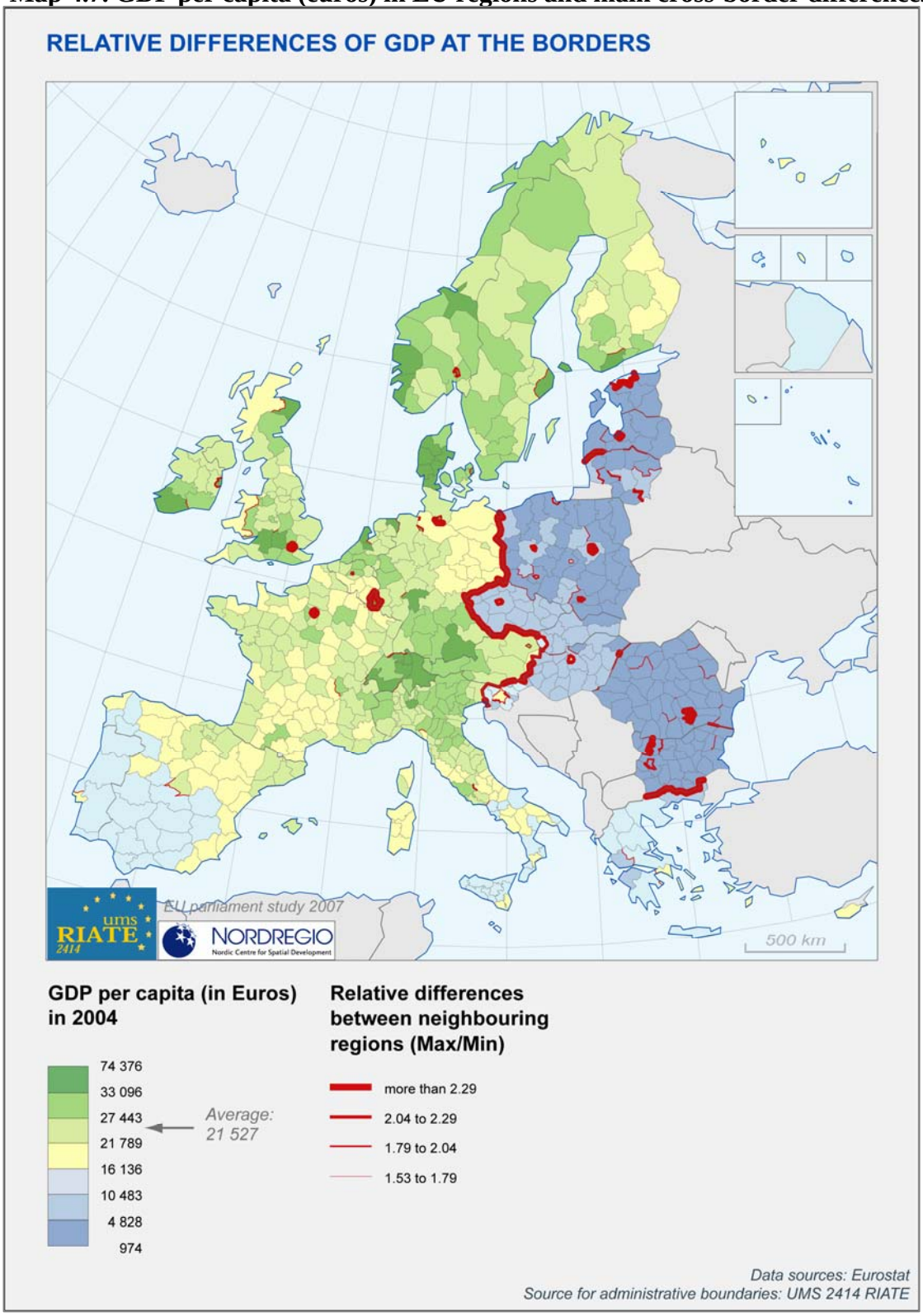
The analysis of local deviation has provided us with a picture of regions that are either richer or poorer than their neighbours but without precise indications of the exact spatial location of the main disparities of development. The radius of 5 hours that was used for the measure of regional situations at the local level is interesting in respect of providing a global overview but it should be complemented by a more localised analysis where we focus precisely on the borders between regions in order to discover which limits are the more likely to be crossed by flows of investment or labour at a local scale.

Border discontinuities can be categorised into different classes. The previous section has shown that important disparities exist between metropolitan areas and their contiguous regions. This is particularly so in the former EU-15 countries, where Paris, London and Hamburg are the most extreme examples, but also in the NMS12 (Tallinn, Riga, Bucharest, and Warsaw). Places offering specific financial advantages, typically Luxembourg, also show large border discontinuities with their neighbours, in this case France, Belgium and Germany. Regions enjoying a good endowment in natural resources, Aberdeen (Oil) in Scotland and Groningen (Gas) in the Netherlands, also show significant differences with their neighbouring regions. Nevertheless, the largest and most obvious disparities in relative terms (see map 4.7) can be found at the border between the old Member States (EU-15, including East Germany) and the New Member States, showing strong disparities in levels of economic development. This is particularly the case for the German-Polish, German-Czech and Austrian-Hungarian borders though it can even be observed at the border between Greece and Bulgaria. Behind its statistical measure, it is important to understand the dramatic social and economic effects that can produce such disparities. A good example of this is provided by the health situation at the border between Poland, the Czech Republic and Germany (see Text box 4.3.).

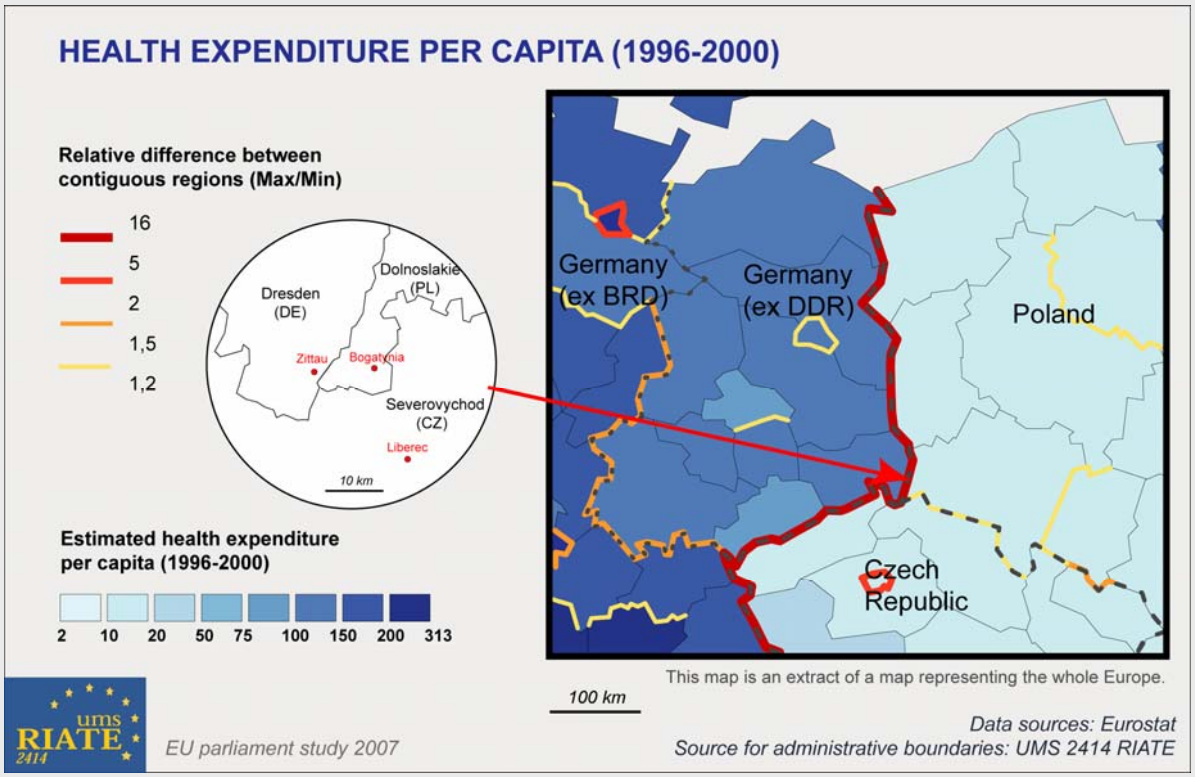
In respect of recent trends, 1996-2003, we can expect different scenarios in the development of disparities between contiguous regions if the predicted opposite flows of labour and capital has really taken place and if distance is an important factor in the development of positive spillover (diffusion of growth from richer to poorer regions at the local level) or negative spillover (concentration of growth in richer regions at the local level). If we consider the whole EU territory, the result is one of stability in respect of local disparities. Indeed, the differences between contiguous regions remained very stable at a level of 21% in 1999 and remained unchanged in 2003. Local disparities are changing significantly only at the border between the EU-15 and the NMS12. It is indeed along the former "iron curtain" that the largest discontinuities are observed with a mean level of 271% in 1999 and 229% in 2003. The good news for territorial cohesion is that the intensity of disparities along this symbolic border is rapidly decreasing but the bad news is that it nonetheless remains large (200% indicates a ratio of 1 to 3 between levels of GDP *per capita* in pps on both sides!)

Key message: *Discontinuities are crucial territorial imbalances. They are often observed between metropolitan regions and their surrounding areas. The largest discontinuity can be observed between the old and the new Member States.*

Map 4.7. GDP per capita (euros) in EU regions and main cross-border differences



Text box 4.3. An example of labour force flows across the border



The concrete effects of territorial discontinuities: the example of the Zittau Region

On May 1 2004, the leaders of the Czech Republic, Germany and Poland will meet near the Eastern German town of Zittau to celebrate the expansion of the European Union. Hospitals in the region have already started to look East across the border to deal with an acute shortage of doctors. In Zittau's regional hospital, administrators have long learned to spell the names of their new colleagues correctly. Agata Magdziarek is one of the names that have started to appear frequently on the work schedule. The 28-year-old assistant doctor from Lodz in Poland came to Germany because she couldn't find a job in her home town, where many doctors are unemployed. "I wanted to work in a hospital with high standards," she said. "It was impossible to find that in Lodz." Like Magdziarek, many Eastern European doctors are coming to Germany to work with patients. But before Polish and Czech doctors can come to work in Germany, the authorities check whether there are Germans available to do the job. As a result, it took six months before the hospital received permission to offer the job to Magdziarek. Young German doctors don't want to come here," said Gerald Gerlach, a radiologist at the hospital, where every sixth doctor now comes from Poland or the Czech Republic. "Without these colleagues, we would not be able to staff shifts adequately," Gerlach said. Eastern European doctors earn as much as their German counterparts -- more than three times as much as they would at home. They also have the opportunity to receive further training to become specialists. According to Magdziarek, German patients have no reservations receiving treatment from her. "I was worried about that, but it didn't happen," she said. Besides the border-crossing doctors, hospitals in this region have cooperated in other ways for several years. In 1997, a woman hurt in a motorcycle accident was driven from Bogatynia Poland to Zittau for a computer scan. Hospitals also exchange diagnostic findings and arrange for consultations with specialists. A Czech hospital in Liberec has joined the group. All three are now connected via a digital video line. But after the recent cuts in Germany's health care system, free computer scans to emergency patients from East of the border are something the radiologists in Zittau won't be able to offer any longer.

4.2.5. Multiscalar analysis brings new light to the identification of 'lagging' regions

Combining, in a synthetic manner, the results of the previous sections sheds new light on the possibility of defining what could be deemed a 'lagging' region. In December 2005, when the Member States agreed upon the EU budget for the 2007-2013 programming period, the threshold of 75% of the EU average was used when deciding the levels of financial support available within the context of the Structural Funds. In order to make our argumentation clearer to the policy makers, we will use this same threshold, even if its relevance can be debated. We have selected the regions that are below the 75% threshold for at least one territorial context (European, national or local/ neighbourhood). The result is shown in map 4.8.

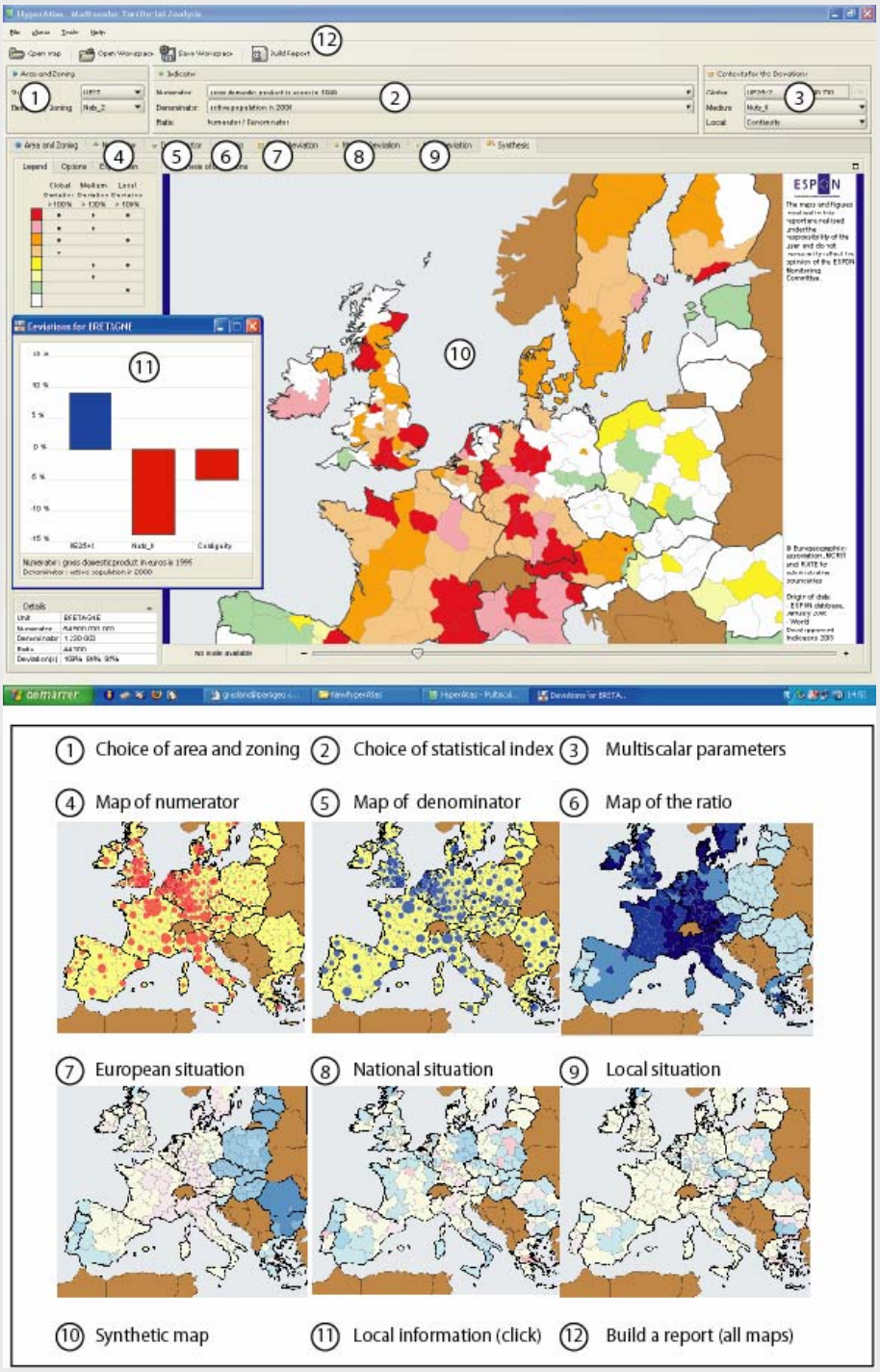
The synthetic map shows that in almost all EU-27 countries there are regions that can be defined as disadvantaged on at least one territorial context. Most of the regions that are below the 75% threshold in all three deviations (coloured in red in figure 4.8) are located in the Eastern countries, especially near the border with non-EU countries such as Belarus, Russia or Ukraine. The whole of Estonia and Latvia, with the exception of their capital regions, belong to this category. Interestingly, there are also a few regions in the former EU-15 countries that belong to this category, and these can be found in the interior parts of France, in Southern Italy and in the South-Western parts of Greece. Other regions that are below 75% of the EU average level can be found in the New Member States, as well as in the Southern parts of the EU-15 (in Italy, Spain and Greece) and the French ultra-peripheral territories.

The mosaic-like pattern of disadvantaged regions should be reflected in the way Regional policy is undertaken. Indeed, all of the regions seen as disadvantaged from the European point of view do not in fact share the same degree of 'backwardness' as some may be rather prosperous in the national or local context. A territorially differentiated type of Regional policy would ensure that regions get a fairer distribution of financial support. It seems that it is also of European concern that some regions are obviously lagging, maybe not at the European level, but at the national and local ones, showing that they too are disadvantaged to some extent. In that sense, the interlocking of different levels of 'backwardness' calls for greater synergies between Regional policy levels, especially between the European and national policy agendas. This can already be found, in part, in the notion of *additionality* in European policy making.

In our understanding, one could differentiate disadvantaged regions on at least two accounts. First, there are regions that have a rather low level of GDP *per capita*, while retaining a good potential for growth. These regions could be deemed to be economically lagging. This is typically the case of the metropolitan areas in the Eastern countries. Second, there are regions that have a rather low level of economic development, but that also face other structural deficiencies such as high unemployment, low rates of employment or ageing populations. These regions thus have a structural disadvantage that prevents them from developing. It becomes obvious that the latter regions should get more support from Regional policy than the former.

Multiscalar analysis is therefore a factor of progress for European spatial planning. But unfortunately, using GDP alone does not allow for such a refined analysis. We will demonstrate in the next section that more indicators are needed in order to go from a data-driven to an issue-driven type of Regional policy, and to get a better understanding of the challenges facing the regions. To test the limit of GDP, we can simply compare the results of the multiscalar analysis obtained via this criterion with that provided by another classical index of Regional policy: the unemployment rate.

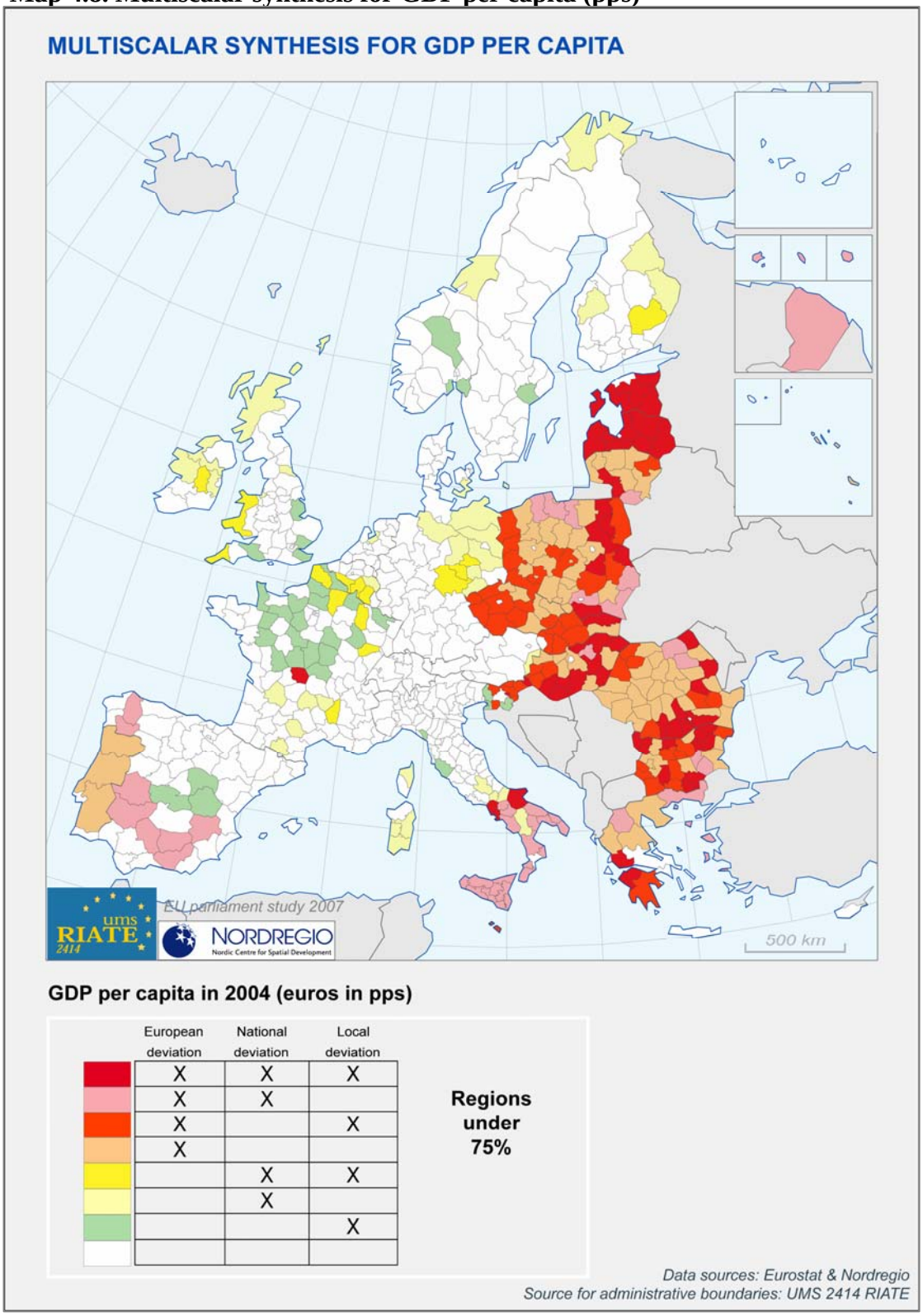
Text box 4.4. The HyperAtlas software – An interactive tool for regional benchmarking



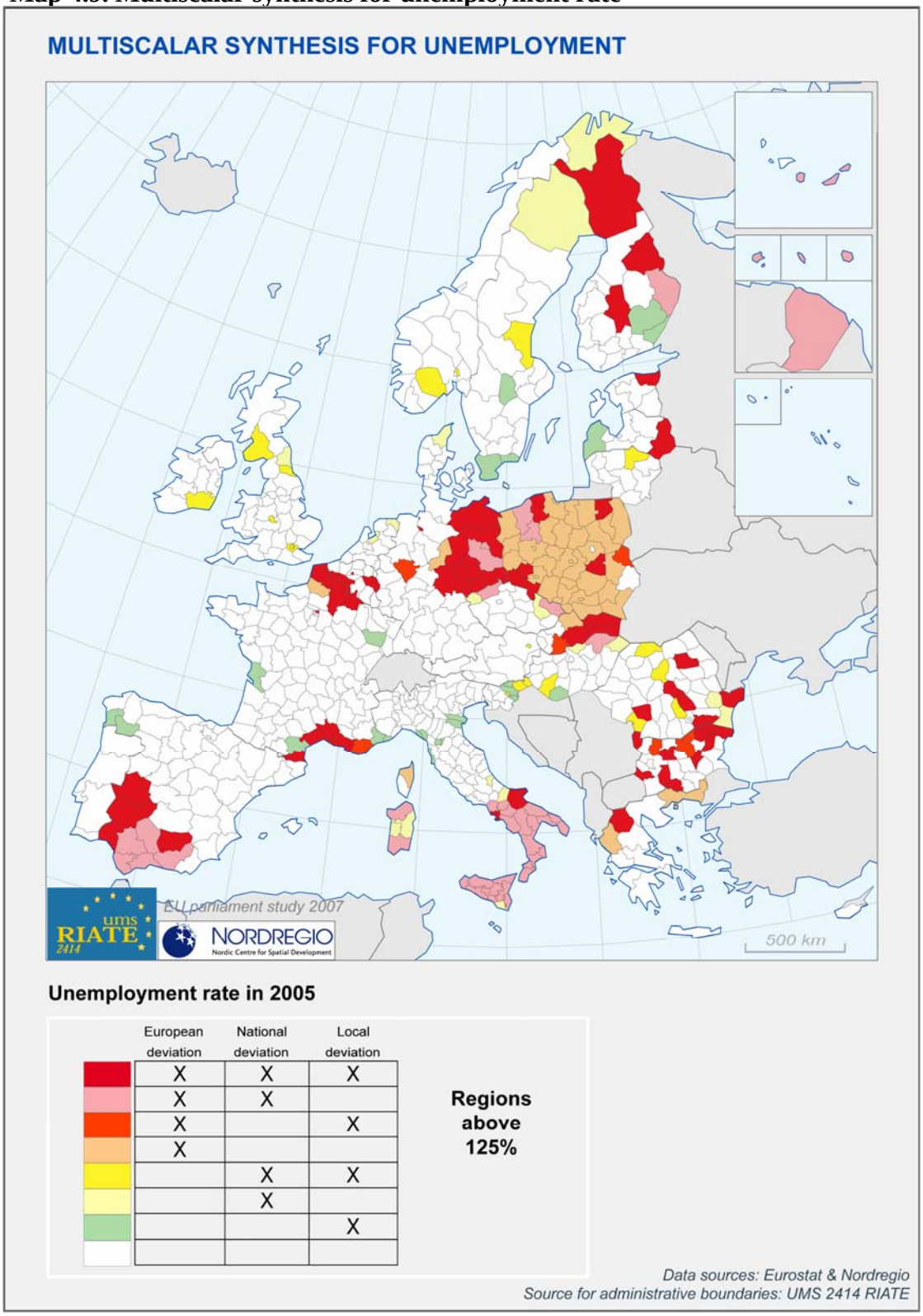
The synthesis of the results of the previous sections can be obtained through a simple method developed in the ESPON *HyperAtlas* project. The goal of a tool like the HyperAtlas is to provide global maps of the European situation which make the production of multiscalar analysis on a continental scale much easier. It is however also designed to help local decision-makers to more easily produce an analysis of the situation of the regions in which they are located. With a simple "click" on the synthesis map, it is possible to display the multiscalar profile of selected regions and to compare their respective situations at the European, national and local levels.

HyperAtlas is freely downloadable on the ESPON homepage:
http://www.espon.eu/mmp/online/website/content/tools/912/index_EN.html

Map 4.8. Multiscalar synthesis for GDP per capita (pps)



Map 4.9. Multiscalar synthesis for unemployment rate



In order to show the most disadvantaged regions with regard to the unemployment rate, the synthetic map (map 4.9) displays the regions that have a rate above the threshold of 125% in at least one territorial context. This synthesis shows a rather different pattern than the one with GDP *per capita*. Regions with a deviation above the 125% threshold for all three can essentially be found in East Germany, the Northern and Mediterranean coasts of France, Wallonia in Belgium, the interior parts of Finland, as well as in Slovakia, Poland, Bulgaria and Romania. In that sense, the East-West and North-South European divides emphasized by the analysis on GDP are not replicated in this case.

The unemployment indicator is not however a panacea in itself and certainly not any more so than the GDP or indeed any other indicator. It does however have the merit of stressing another facet of regional disparities. Even in countries that enjoy a rather good level of development, such as in Finland or France, there are many regions that are faced with structural deficiencies, such as a higher unemployment rate, for example. In that sense, these regions face a structural disadvantage that should be dealt with in the context of Regional policy, because these structural deficiencies do not enable these regions to fully exploit their potentials for regional development.

Key message: *Multiscalar analysis helps to produce synthetic maps of regional disparities that can be used at the global or local level to feed into political decision-making. Good tools cannot however produce good results when applied to single indicators which are often subject to significant criticism such as GDP per capita or the unemployment rate. It is therefore necessary to explore how more relevant indexes can be produced in the future.*

4.3. Looking for better measures of regional disparities

Political decisions are based on technical tools for the measurement of *ex-ante* and *ex-post* situations:

- ***Ex ante*****:** in the case of regional policies, it is not possible to build tailor-made policies without a precise evaluation of the location of territorial imbalances. These, in turn, require a careful formulation of hypotheses about the driving forces and trends that influence the reduction or increase in territorial disparities.
- ***Ex post*****:** the funds that are allocated by the European Union or by the Member States for the reduction of territorial imbalances can only be maintained in the long term if their efficiency and effectiveness can be proven.

The actual situation of Regional policy where the majority of funding is allocated on the basis of reference to a single and indeed highly debatable parameter (GDP *per capita*) with a unique threshold (75% of European average) is difficult to logically sustain in the longer term. The multi-scalar spatial approach developed in the previous sections can be used as an improved basis for the reconsideration of eligibility criteria. We should not however ignore any longer the inherent weakness of the current criteria and its implicit ideological orientation (focus on pure competitiveness without considering the social and environmental dimensions). In that sense, the inclusion of various dimensions in the design of Regional policy would make it a more efficient tool in the achievement of territorial cohesion. This is of utmost importance as Cohesion policy actually remains the sole concrete EU-level policy in respect of social justice with a direct and discernable impact on European citizens.

Consequently, the issue of eligibility criteria is tightly linked to the availability of data at the regional level in Europe. As the situation currently stands, regional statistics are but a crude indication of the EU's political orientations twenty years after the implementation of the single market. The ESPON 2006 programme has extensively explored the information available and produced thousands of pages of reports without being able to really break the monopoly of the GDP *per capita* and unemployment rate indicators which remain dominant in the proposals of all synthetic indexes of regional development produced in this context. As explained by Grasland and Hamez (2005) we are actually facing a vicious circle where (1) European policies are mainly economically-oriented because good social and environmental statistics and indicators are lacking at the regional level and (2) the collection of statistics focuses on economic parameters as they are requested by the European Commission and the Member States. Breaking this vicious circle entails the use of a two-step strategy linking tactical actions in the short term with strategic considerations in the long term.

4.3.1.Tactical actions: making better use of existing regional statistics

Let us consider, as an example, the four criteria that are actually available at the NUTS2 level for all European regions: GDP *per capita* (pps), the unemployment rate, the share of highly educated people and life expectancy at birth. The first two are classical measures of regional development regularly used in the Cohesion Reports, while life expectancy at birth is the only one which introduces something new as it is an indirect measure of social well-being which has often been used at the global level as a counterweight to the economic approach, particularly in the context of the United Nations' Human Development Index (HDI). The usefulness of the 'share of highly educated people' indicator is probably of doubtful value, as it was not easy to compare the educational systems of European states before the launch of the *Bologna process*, but it is at least a first approximation of the potentialities of territories in respect of the information society that the Lisbon strategy is trying to establish.

Having collected this information for all regions and for approximately the same time period (1999-2001) we can follow the method used by the United Nations Development Programme (UNPP) for the realisation of the HDI and transform each statistical indicator into a normalised index with values comprising between 0 (lowest European level) and 1 (highest European level). For easier interpretation, unemployment is transformed into an employment rate where 0 indicates the worse situation (high unemployment) and 1 the best situation (low unemployment) in terms of the labour market.

Table 4.1. Example of synthetic index

Code	Name	GDP	ESP	EDU	EMP	Mean
SK04	**Východné Slovensko**	0.14	0.13	0.04	0.02	**0.08**
BG06	**Yugoiztochen**	0.07	0.00	0.36	0.05	**0.12**
HU01	**Közép-Magyarország**	0.34	0.09	0.54	0.97	**0.48**
FR25	**Basse-Normandie**	0.44	0.84	0.38	0.31	**0.49**
UKJ1	**Berkshire, Bucks and Oxfordshire**	0.89	0.78	0.96	0.99	**0.90**
SE01	**Stockholm**	0.91	0.97	0.91	0.88	**0.92**

Yet, if such synthetic indicators are able to display a certain level of development for the regions, they have an inherent tendency to hide the actual composition for each indicator. The table below shows that at equivalent levels of development, the combination of indicators displays varying potentials. For example, we can see in table 4.1 that the Hungarian region of Budapest (*Közép-Magyarország*) and the French region of *Basse-Normandie* obtain the same

global score (around 0.50) but for opposite reasons: a high level of employment and very low level of life expectancy level in Budapest, and a high level of life expectancy and rather low levels on all other criteria for *Basse Normandie*. Consequently when using synthetic indexes we need to take into consideration the fact that not only the final index but also its precise regional composition is important.

If building synthetic indexes and performing a classification of regions is a classical method it remains however potentially dangerous for scientific and political reasons.

From a scientific point of view, the problem rests on the fact that a synthetic index always neglects an important part of the initial information and generally focuses on the most trivial results. With adapted statistical methods [(27)], it is possible to summarize some degree of correlation between indicators, meaning that regions with high GDP are generally also those with high life expectancy, high levels of education and relatively low levels of unemployment. In that sense, the main component of the analysis can be interpreted as a global measure of regional performance, but one should not neglect the specific strengths and weaknesses which lie behind this global level result.

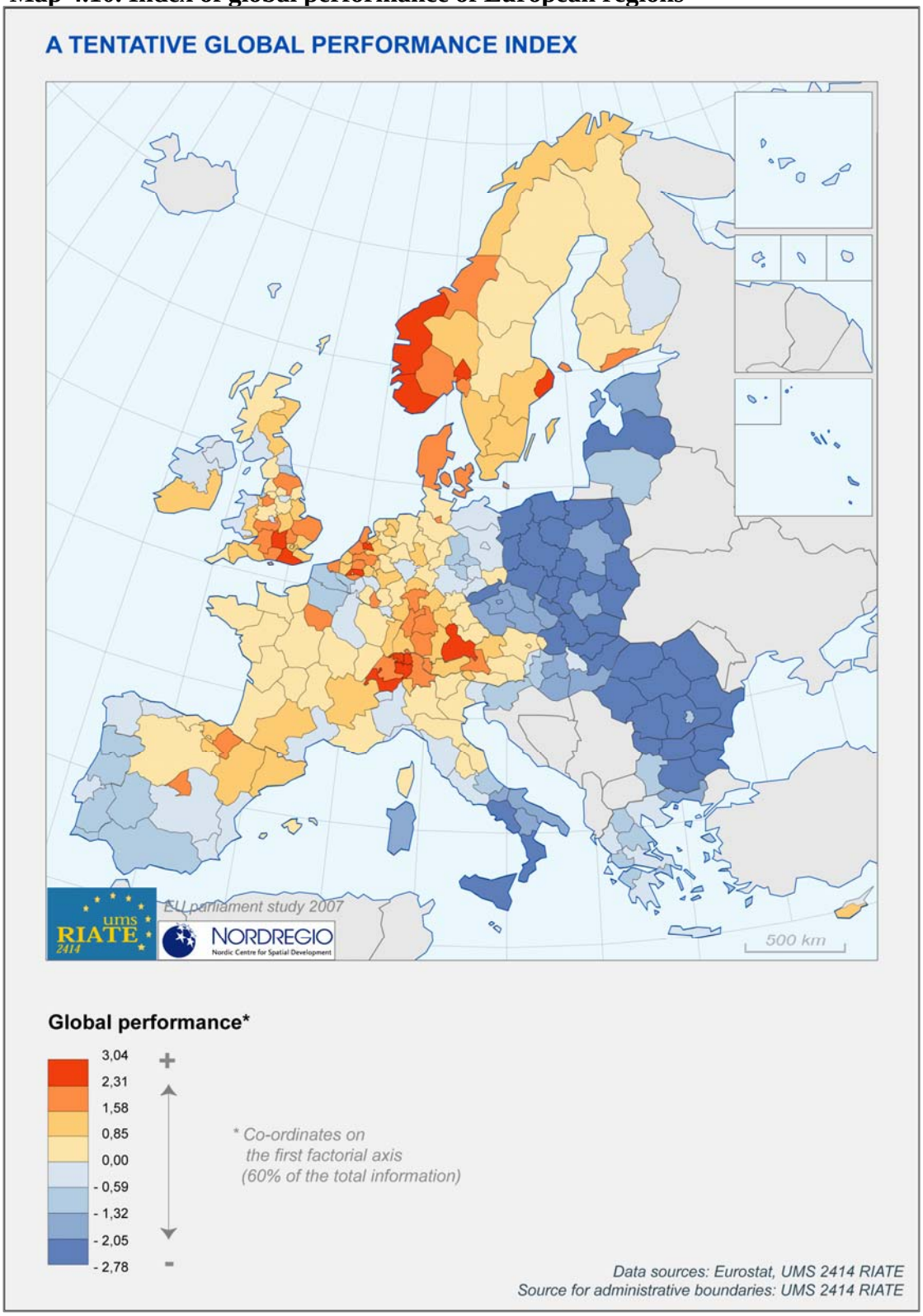
From a political point of view, it is important to highlight the fact that these composite indexes as such cannot be used, for instance, for allocating financial support (e.g. the Structural Funds), as different compositions of regional profiles require differentiated focuses for public interventions. Moreover, danger always lurks in the temptation to choose the index that maximizes the allocation of funds to a country's own regions. In ESPON Project 3.2, Grasland & Hamez (2005) demonstrated that it was really rather simple to propose alternative indexes based on political documents which produce a concentration of the structural funds in the new Member States in one case, or in Mediterranean countries in another. This ability to 'play' with these scientific indexes could undoubtedly lead to incomprehensible, if not conflicting, implications being forwarded.

The solution to the problem of the synthetic index is in fact however relatively simple, from a scientific point of view at least, while also producing very interesting results from a political point of view.

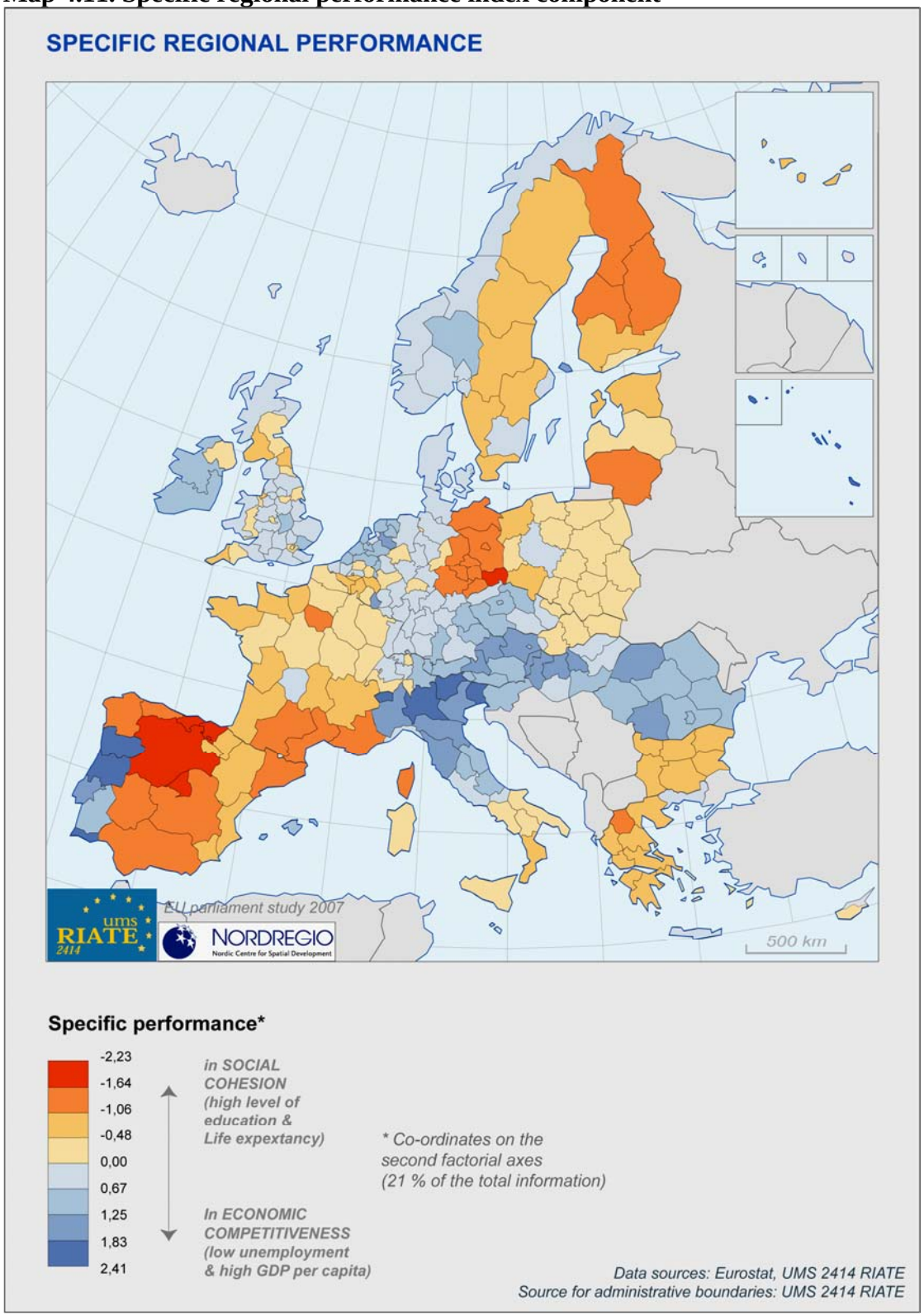
As explained in the previous section, the synthetic index of regional performance is equivalent, from a statistical point of view, to a first component which accounts for 60% of the total information on regional differences according to the four selected criteria. One can therefore consider the map of this first component as a global evaluation of regional disparities which is interesting as such (map 4.10) but is only a first step in the analysis. The spatial pattern of this map is relatively classical, as it shows the most advanced regions located in Northern and Western Europe while disadvantaged regions can be found essentially in the Eastern and Southern peripheries. Yet, this map is not a bare equivalent of the map displaying GDP *per capita*, as it also takes into consideration the other dimensions.

[(27)] A statistical method entitled Principal Component Analysis (PCA) helps to clarify the problem. What is at stake here is the fact that our four parameters are all more or less correlated which means that regions with high GDP generally have also high life expectancy, high levels of education and relatively low levels of unemployment. This correlation is not perfect and there are many exceptions, but we can demonstrate with PCA that about 60% of these regional differences can be summarised by a first component which is a kind of compromise between all parameters and is – in our example - precisely equal to the mean level of the four criteria (r=+0.999).

Map 4.10. Index of global performance of European regions



Map 4.11. Specific regional performance index component



The second component of the analysis, which accounts for 21% of the statistical information, reveals a completely different spatial pattern (map 4.11) which is related to the specific strengths and weaknesses of regions, notwithstanding their global level of performance. In our example these specificities are particularly interesting because they introduce an opposition between (1) regions which are performing rather well in terms of life expectancy and education, but relatively poorly in terms of GDP *per capita* and employment and (2) regions having the opposite profiles. More concretely, it displays differences between (1) regions which can be deemed to be performing better in respect of social cohesion (if we acknowledge that a high life expectancy is an indirect measure of a good level of public service provision and excellent educational infrastructures) and (2) regions which can be deemed to be performing better as regards economic competitiveness (if we acknowledge that low levels of unemployment and high GDP *per capita* are related to economic policies). In other words, this second component can be interpreted as the specific effects of policy options developed by countries or regions (liberalisation, welfare state, etc.,) and it suggests the existence of a real potential for choice for political decision makers between actions targeting social cohesion or actions in favour of economic competitiveness.

The spatial pattern of the second component is generally organised country by country, which means that regions within the same country tend to have the same policy inclination. This stresses the significant importance of national policy settings in the context of broader European policy objectives. For example most regions of France, Spain, Sweden, Poland, Finland, Greece, Bulgaria and the Baltic countries are characterised by specific strengths in respect of education or life expectancy but also systematic weaknesses in terms of GDP *per capita* and employment. The opposite conclusion can be made for most regions of Portugal, the UK, Ireland, the Netherlands, Austria, Hungary, the Czech Republic, Norway and Romania. In some countries both types of regions can appear as in Belgium (opposition between Flanders and Wallonia), Germany (opposition between the Eastern and Western parts) or Italy (opposition between the North and the South), though these are the countries that are particularly characterised by strong and persistent national dichotomies (See sub-chapter 4.1.2).

The previous paragraphs have shown the limitations of an approach to regional disparities solely based on the use of synthetic indexes, as the resulting measures are often too complex and too difficult to interpret to be thoroughly used in Regional policy context.

Indeed, what is really at stake here is the elaboration of a sound scientific basis for designing a territorially differentiated Regional policy, not only taking into account the overall level of performance of the regions, but also their specific strengths and weaknesses. For this purpose the best scientific solution is the use of objective classification methods applied to a limited number of regional indicators producing easily understandable regional typologies. In our example a hierarchical cluster analysis reveals the existence of 7 types of regions which are presented in map 4.12 and for which it is possible to briefly highlight the main characteristics.

- **Type Low-1** indicates a very negative situation on all parameters and clearly identifies the most lagging regions in Europe, characterised by very low GDP *per capita*, high unemployment, low life expectancy and relatively low levels of education. This situation is characteristic for regions in Poland, Slovakia, Bulgaria and Southern Italy.

- **Type Low-2** is very similar to previous type Low-1 but with one important difference which is the relatively good situation in respect of employment (more precisely, low level of unemployment rate).The counterpart to this advantage is generally however a lower performance in respect of education or life expectancy.

- **Type Medium-1** is characteristic of regions with low-medium situations across all criteria except education for which such regions generally show very good performance. They could base their development on this specific advantage of a highly skilled labour force which would improve the level of GDP *per capita* and reduce their high unemployment rate.

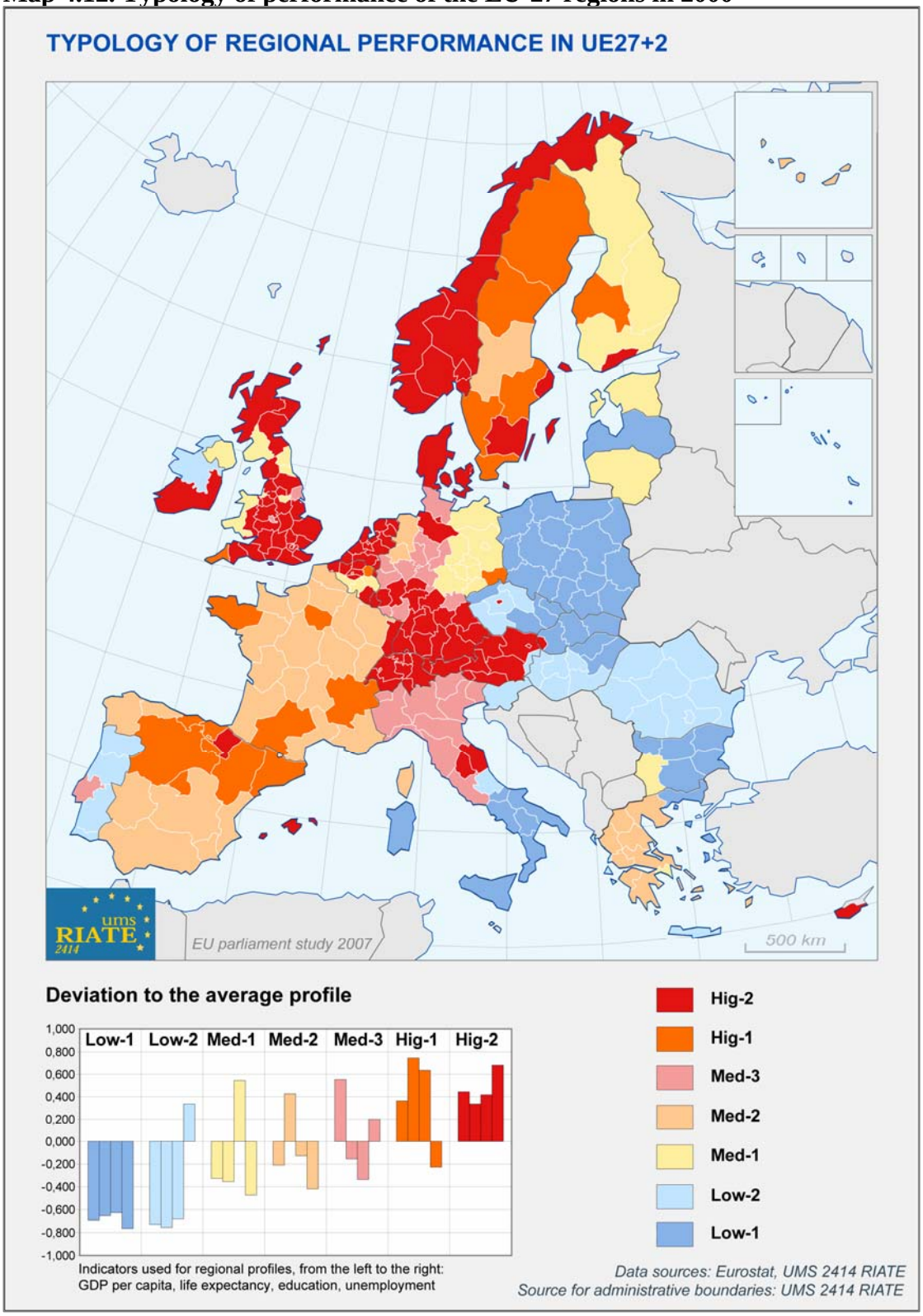
- **Type Medium-2** is also characteristic of regions with a medium situation in respect of GDP *per capita* and education, a specific strength in terms of life expectancy and a specific weakness relating to employment. Policies applied to these regions should therefore focus on the reduction of unemployment but without threatening the good level of social provision which is indirectly revealed by the good level of performance in relation to life expectancy.

- **Type Medium-3** is related to regions which are generally considered as being "without problems" by the EU's Regional policy as they are characterised by a very good level of GDP *per capita* and a relatively low level of unemployment. These regions are characterised by rather poor performances in respect of life expectancy and the share of people with a high level of education. Regional policy here should therefore probably focus on the development of infrastructures for health and education which seem to be weak.

- **Type High-1** is characteristic of regions with good global performance on all criteria, except employment, where the level of unemployment appears to be higher than the European mean. These regions can generally rely on good social conditions (high level of life expectancy, important share of people with higher education) and relatively good economic competitiveness. As in the case of type Medium-2 regions, their problem is how to reduce unemployment without breaking the good level of performance in respect of the other criteria.

- **Type High-2** is also characterised by good global performance on all criteria but with some differences as compared to type High-1. The situation is clearly better in terms of employment (low levels) and slightly better in terms of GDP *per capita*. Performance levels are clearly less good than type High-1 however in respect of life expectancy and education. In other words, the opposition between the type High-1 and High-2 is the same as that between the Medium-2 and Medium-3 revealing the existence of implicit or explicit political choices in favour of either social cohesion or economic competitiveness.

Map 4.12. Typology of performance of the EU-27 regions in 2000



4.3.2. Strategic choices: improved data-sets supporting renewed political visions

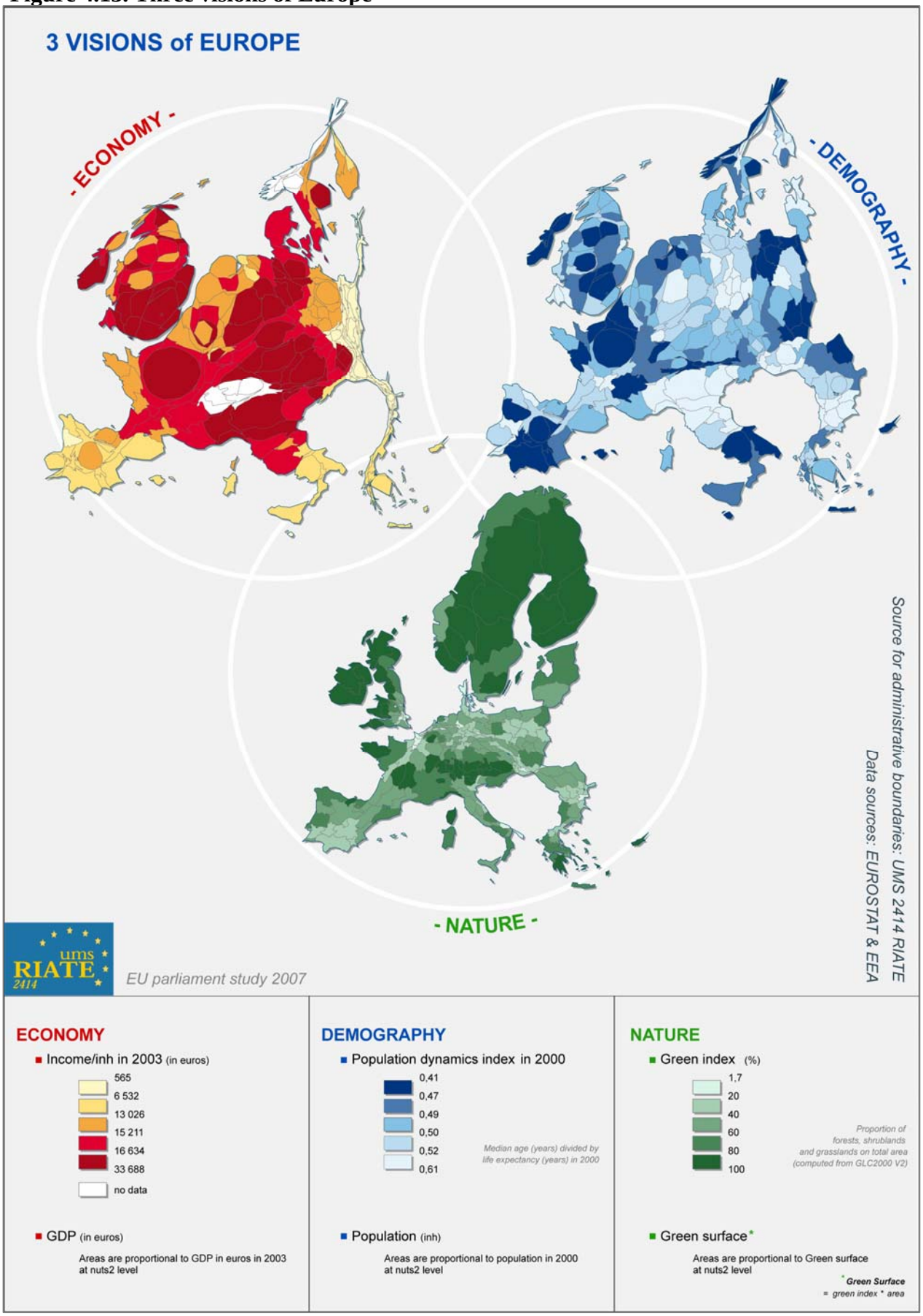
As described in the previous sub-chapter, it is possible, with the current range of regional data available, to work on regional typologies, using the combination of existing indicators in a more relevant way. If these methods are able to increase the understanding of the extent of regional disparities in Europe, they are still not able to provide relevant perspective on how to adapt the instruments of Regional policy to their structural challenges.

A necessary first step then is to consider that the measurement of regional disparities should be *problem-driven* rather than *data-driven*, as it is currently. In that sense, it is important to bear in mind that the search for new indicators should stem from clear political choices and values, and not from the scientific capacity to perform regional analysis. In so doing, the perception of regional disparities would have a greater impact as they reflect the degree to which each region has achieved the policy objectives driving EU Regional policy.

Consequently, in the long run, strategic choices are expected to be made with a view to steering the development of political visions of regional development in Europe towards greater territorial cohesion. At present, the desire for 'evidence based policies' coupled with the lack of available data, particularly as far as social and environmental dimensions are concerned, hampers the implementation of relevant political action specifically targeting those dimensions. Hence, the key message is that political vision and political objectives should rule the production of statistics and territorial information and not the other way around.

From the perspective of the policy makers, it is fundamental to identify the values that should be reflected by the notion of *regional development*. To exemplify this, if 'full employment' is considered a common objective for European regions, then it makes sense to develop and use appropriate indicators which allow for an adequate picture of the disparities between regions in that perspective. A possibility here would be to develop visions for the European territory based on the dimensions of economic competitiveness, social cohesion and sustainable environment. The problem however is that this choice does not really exist as the majority of statistics available at the EU level for Regional policy essentially focus on its economic dimension (*Lisbon strategy*). A less important, but growing range of data is produced on the environmental dimension (*Gothenburg Strategy*). However, indicators depicting the social dimension of development are currently seldom available at the regional scale, thus rendering European-level data collection unable to efficiently support policies in this field (*Social Agenda*). Figure 4.13 provides a cartographic illustration of the different visions of European regions that can be produced if decision makers choose to focus on economic, demographic or ecological facts. The transformation of the size of a region according to different criteria (GDP, population or natural areas) reveals very clearly that the regions and territories that do matter are not the same in each field.

Figure 4.13. Three visions of Europe



Grounding the measurement of regional disparities on concrete policy objectives and political choices enables us to enhance its relevance to act a sound basis for designing, monitoring and evaluating Regional policy instruments.

If the introduction of new indicators, based on policy objectives, is an important first step in such a long-term strategy, the qualitative aspects of data collection are equally important. In that respect, there are three dimensions that should be taken into consideration.

Firstly, it is clear that social and economic trends in the neighbourhood of the European Union affect and impact its regional development trends and perspectives through migratory movements and trade for example. Consequently, the identification of the main development trends occurring immediately beyond the EU border is of strategic importance in assessing the potentials for regional development within. Thus, an effective dataset collection should include those territories in the EU's so-called 'neighbourhood' area such as those on the Southern shore of the Mediterranean Sea (Tunisia, Algeria, Morocco etc.) and Eastern countries such as Russia, Ukraine and Belarus.

Secondly, the perception of intra-regional disparities in the EU is only possible if indicators are available and collected below the regional level (NUTS 2 or 3). In that respect, the collection of data at the local level (LAU-1, LAU-2) would considerably improve the understanding of spatial disparities across the EU. Indeed, the regional divisions currently used for Regional policy are generally too large for many subjects related to territorial cohesion and thus act as an inadequate basis for grounding efficient public intervention.

Thirdly, the capacity to use the indicators in a prospective, future-oriented manner is hampered by the lack of long term time series, for instance starting in 1980, as it is hardly possible to produce relevant projections or scenarios for the future without a good knowledge of previous trends. Consequently, it seems important to develop historical, long-term databases of European regional development indicators. Currently, the time series available for social and economic data are generally limited to 1995-2005 in the best case, which means that we are not able to construct good forecasts for longer periods than 2005-2015. The situation is better for climate change and other environmental topics where climatic data is available for the previous 100 years, thus making it possible to anticipate developments beyond the 21st century.

To conclude, developing reliable methodologies for the depiction of regional disparities in Europe should be closely linked to the policy objectives. Such methodologies are designed to monitor and evaluate. On a short-term basis, it is possible to develop scientific methodologies resulting in typologies that improve the perception of disparities in terms of regional development. Yet, a long-term strategy should be build around clear policy objectives and political values, enabling the indicators to reflect the extent to which regions achieve these goals.

Main conclusions on spatial disparities

- The comparison of the level of regional economic development to the European average reveals a strong territorial imbalance between EU-15 regions and the regions of the New Member States (the East-West gap).

- The analysis of regional disparities in economic development within countries reveals that some countries are exposed to persistent territorial dichotomies, for instance North-South in Italy or Flanders-Wallonia in Belgium. New Member States often witness a strong West-East gradient in economic development standards.

- Strong territorial imbalances exist between metropolitan areas and their surrounding regions, stressing the strong polarisation of the European territory.

- Analysing regional disparities with indicators other than those of a purely economic nature highlights the varying spatial distribution of 'lagging' regions. A more holistic perspective on what regional development entails (economic, social, demographic, environmental, educational and other dimensions) improves our understanding of the real extent of structural disparities in Europe.

5. What strategies for the future? The policy implications of the territorial analysis

The present section sumps up the policy implications that emerge from the methodological and empirical findings presented in the previous chapters. In view of the need to emphasise the relevance of these findings for policy making, the recommendations have been structured around a 'policy cycle' consisting of four main stages:

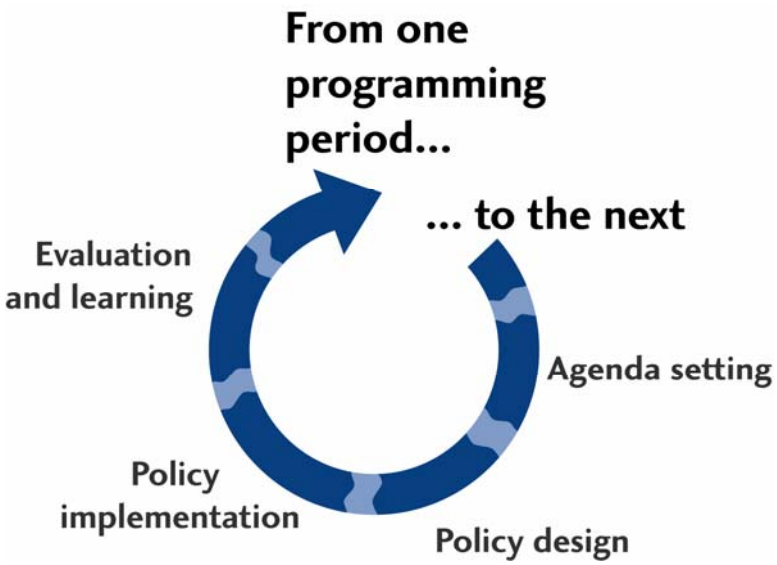
- The **Agenda setting** stage consists of the elaboration and utilisation of information from various sources and of different forms to identify relevant issues. In addition, public debate is also created around these issues. This stage of the process also involves the introduction of these issues into the public sphere *before* policy options are forged into a concrete policy design, as part of a legitimisation process that continues into the policy design stage.

- **Policy design** is the stage in which the policy problems are re-conceptualised as political options. Policy formulation includes the identification of participants with a legitimate role in the process and of political priorities, the analysis and structuring of the issues or challenges, the identification of options and prioritisation between objectives.

- **Policy implementation** is the rather more 'visible' side of the policy cycle, as it comprises interventions in the form of measures and actions on the ground, the allocation of funds and the formulation of laws and regulations. Monitoring, reporting and process analysis however also belong to this stage.

- **Evaluation and learning** from implemented policies. E*x post* evaluation ideally provides an assessment that can feed impulses back into the new agenda-setting and policy-design stages.

Figure 5.1. Main stages of the policy cycle



As any integrated process, the policy cycle is not, in practice, easily divided into these four distinct phases. There are some obvious overlaps between the different stages, as agenda-setting and the creation of the evidence base for the new programming period often takes place concurrently with the implementation stage. Similarly, with the introduction of different forms of process assessment and ongoing feedback, evaluation is also a factor during the implementation stage. *The model should therefore be seen as a heuristic instrument to improve our understanding of the policy process, rather than an empirical or operational guide.*

The retroactive dynamic of the model is based on the understanding of policy analysis as a process whereby policy makers need both *prospective* (*ex* ante, prior to the policy implementation) and *retrospective* (*ex post*, after the policy implementation) analysis (e.g. Majone 1989, 33). The path dependence of the current system for implementing Cohesion policy is obvious. As shown in our analysis, the current disparities are strongly linked to previous policy choices and to the strategic and regulative framework adopted. Breaking the vicious circle of defining territorial cohesion tautologically entails the utilisation of a more broadly-based strategy proposed below.

5.1. Recommendations for agenda setting

Involvement of regional stakeholders in the early stages of agenda settings

As outlined in the Strategic Guidelines for Structural Funds 2007-2013, Structural Fund policies are elaborated and implemented in a partnership between the Commission, the Member States, and regional and local authorities, as well as the EU's economic and social partners and civil society. This, the Strategic Guidelines argue, should embed policies and ensure that they are developed in line with the principles of subsidiarity, proportionality, independence and transparency. The involvement of regional stakeholders in the early stages of the policy cycle reflects the ambition to pursue tailor-made policies.

This means that an overall coherence of the evidence base used at all levels, from the local to the continental, is required. In the context of subsidiarity, a focus on local realities should prevail and thus guide the more aggregated descriptions of territorial structures and trends at wider scales. This for example implies a strictly limited use of regional or national average values as a basis for policy making, insofar as these fail to reflect the extent of variations between localities. Statistical methods focused on local realities would stimulate the inclusion of regional stakeholders in debates on the agenda of Cohesion policy. This should be seen as a continuous process in time, as updates on current trends and on the effects of existing policies change the perspective on policies to be implemented. It thus goes well beyond the seven year programming period perspective.

It is necessary for policy makers to take a leading role in questions related to statistical issues

The study has described how regional deviations in economic performance measured in terms of GDP emerge as central policy issues not so much because of their political relevance, but because there is data available to produce evidence on this specific point. This, however, should be a role for policy makers, rather than for statistical agencies, as it is not for such agencies to define the most relevant issues pertaining to regional development. A more pro-active European policy in terms of social, economic and environmental data collection is necessary in order to move from a *data-driven* to a *problem-driven* approach to Regional policy. Data collection

priorities should be dealt with at the agenda setting stage of the policy cycle in order to ensure that the initial political priorities, rather than compromises due to poor data availability, prevail at the design, implementation and evaluation phases.

More generally, the lack of appropriate social, environmental and economic data jeopardises the European Union's ability to maintain a territorial policy in the longer term. While the probable approval by the Member States in Leipzig in May 2007, of a "*Territorial Agenda of the European Union*" can be seen as an indication of growing interest in territorial cohesion issues, the relative position of the territorial dimension in European Union policies continually appears under threat because of the lack of evidence on its usefulness and impact. The present study argues that this is mainly due to poor data availability particularly in respect of social and environmental issues.

Moreover, the lack of political impetus to provide appropriate data is somewhat paradoxical in a context of increasing political-level focus on sustainability. The sustainable development perspective implies the need for a holistic perspective on economic, social and environmental challenges, which cannot emerge from dissociated sectoral policies. The 'territorial synthesis' of all policies within each region is a resource-efficient way of achieving this holistic perspective (as compared to top-down coordination). It does however presuppose a better identification of current challenges in each territory, and a statistical monitoring system which allows authorities at all scales to assess the progress made. In the wake of the launching of the ESPON 2013 programme, it is therefore important that statistical agencies and other data producers are encouraged to provide data corresponding to the requirements of the European policy agenda.

The sustainable development perspective also implies a greater emphasis on long term evolutions. The reliability of forecasts and scenarios among other things depends on the ability to observe and understand previous trends, and is therefore contingent upon the availability of historical time series data. The ESPON programme has in this respect made little progress, and has failed to lay the groundwork for the progressive constitution of coherent and statistically sound time series at the regional and local scales [(28)]. Remedying this situation should be a priority for ESPON 2013.

The territorial dimension of disparities should be highlighted

The present study suggests a number of innovative analytical methods designed to improve the general understanding of territorial disparity. It has been shown that a focus on territories and on the relative strengths and weaknesses of each region or municipality provides synthetic and politically relevant information on the combined effects of general economic and social policies (whether they have an explicit territorial dimension or not).

Looking at both recent efforts in respect of Cohesion policy and the territorial and spatial effects of sector policies in a more integrated way however also presupposes that one departs from the vision of Europe's regions as independent entities whose performance is summarised by individual indicators such as the GDP *per capita*. As illustrated throughout this report, one needs to combine various thematic approaches to obtain an appropriate picture of regional

[(28)] ESPON project 3.2 'Spatial Scenarios and Orientations in relation to the ESDP and Cohesion policy' admittedly provides a theoretical framework for the constitution of coherent time series in its Third interim report (under Volume 4, "Elements of support for the scenario building process"). The principles advocated in this report have however not been applied in the data gathering processes.

contrasts in Europe. It is, in this respect, particularly urgent to incorporate the social and environmental dimensions.

The territory is, in other words, a useful filter to assess the degree of compliance between the politically defined strategic objectives, and the concrete effects of implemented policies. An appropriate use of this 'filter' however presupposes continuous critical debates in respect of all "territorial evidence", as conclusions change dramatically depending on the spatial scale and the time-span considered. Making territorial data accessible to all stakeholders, and encouraging them to use it pro-actively in the elaboration of their strategic targets and in debates is a way of progressively allowing a balanced vision of the European territorial structures and trends to emerge. A more widely shared knowledge of how to make an informed and critical judgement on regional and local data is a precondition for a more participatory, democratic and dynamic debate on territorial Cohesion policy.

The *HyperAtlas* project is an interactive tool developed specifically to facilitate access to regional data for all stakeholders and to enable them to produce maps reflecting their own perspective on territorial structures and trends.

5.2. Recommendations for policy design and implementation

The knowledge base for Cohesion policy needs to be diversified: towards a territorially differentiated Regional policy

The present study has shown that the statistical evidence currently used to justify and implement European Cohesion policy is unable to reflect the diversity and complexity of regional disparities in Europe. The underlying hypotheses have been described as the 'monolithic' approach to regional disparities, according to which deviations from European average values would be sufficient to identify areas where territorial cohesion is an issue. The obsoleteness of this 'monolithic' approach has been rendered particularly obvious with the recent extensions of the Union to 27 Member States, as the range of regional situations encountered in Europe has increased dramatically. Based on its scientific findings, the present study advocates the need to develop a territorially differentiated approach to Regional policy, adapted to the particular structural needs and socio-economic profiles of each region [(29)].

In terms of the overall analytical perspective there is a need to better understand the dynamics behind regional diversity and territorial cohesion. The present study uses the territorial approach as a central element of analysis and suggests that this method is used in a more systematic way as a basis for policy making and as a complement to the currently prevailing economic and sectoral perspectives. This can for example take the form of a Territorial Impact Assessment (TIA), which is an umbrella concept for procedures assessing the impacts of policies and proposed developments against spatial policy objectives [(30)].

(29) In this respect our recommendations correspond to the approach adopted by the "Territorial Agenda of the European Union: Towards a More Competitive and Sustainable Europe of Diverse Regions" (draft of 27 March 2007), which explicitly calls for a territorial policy in line with the diversity of European regions.

(30) The "Territorial Agenda of the European Union" suggests that the European institutions should, together with the Member States, engage in a closer dialogue on the effects of European legislation on sustainable urban and territorial development and planning (Territorial Agenda, op. cit, p.6).

The *ex ante* assessment of spatial and territorial effects is a potential evidence base for agenda-setting and policy formulation which remains to be fully exploited.

Eligibility criteria need to be re-considered and adapted

The delimitation of eligible areas and the choice of criteria to be used for this purpose are central in debates over territorial cohesion. The present study has shown that regional deviations from continental average values do not provide a satisfactory image of how European regions relate to each other in terms of social and economic performance. The diversity of situations encountered in terms of contrasts *within* countries and *between* neighbouring regions should be reflected more generally in the process of policy formulation. The multiscalar analysis developed in Chapter 4 has, for example, showed that there is a need to look beyond the East-West divide, because of the internal heterogeneity of the two groups of countries.

The fact that eligibility criteria are *political* constructs of an instrumental and conventional nature is illustrated by their inability to incorporate the economic and social dynamics of each region. At present, the allocation of funding for the entire 7-years programming period is based on the recorded level of regional economic development statistics which are themselves already three or four years old. The level of funding received by a region in, say, 2013 is thus based on its level of GDP *per capita* from 2003. In the meantime, the region has probably witnessed many changes in its socio-economic profile, which may make the funding it receives poorly suited to its current challenges.

Furthermore, analysing regional disparities with structural indicators other than purely economic ones (e.g. encompassing the economic, social, demographic, environmental and educational dimensions) reveals the existence of different regional territorial patterns that could be deemed as 'lagging'. When constructed in a scientifically sound manner, aggregated indicators combining multiple regional indicators, provide a synthetic picture of the level of regional performance with spatial patterns that diverge significantly from those observed in terms of GDP *per capita*. A more holistic perspective on regional development would provide a more nuanced picture of regionally-based structural disparities across Europe.

Integrating Territorial cohesion objectives with policies for increased competitiveness

The current focus on economic performance and the consequent disregard of social and environmental dimensions, can be seen as being in contradiction with the sustainable development imperative of the Gothenburg Agenda. In order to contribute to a more sustainable regional development, Cohesion policy needs to link the social, economic and environmental dimensions of regional development together. Cohesion policy can in other words be designed as a framework within which local and regional authorities are guided and encouraged in the formulation of policies seeking to overcome contradictions between the different dimensions of sustainable and economic development.

Cohesion policy can also play a significant role in the framework of the Lisbon agenda. Instead of opposing territorial cohesion and the promotion of European competitiveness, the study argues that territorial cohesion could be developed into a framework within which the principles of the Lisbon agenda are operationalised at the regional level and adapted to the spatial and territorial configurations of Europe. Consequently, Regional policy, the main policy aiming explicitly at greater territorial cohesion, should not be perceived from the simple *redistributive*

point of view, i.e. as either a process of the distribution of financial aid from the European level to the regional one or between Member States. It should rather be perceived from a *contributory* point of view, i.e. in light of the contribution that various regions make to both European and national development.

This implies that Cohesion policies need to incorporate more explicitly the underlying dynamics of territorial convergence trends identified in the present study and seek to exploit them when designing strategies to compensate for unwanted polarising trends at other scales. The careful identification of existing economic and social dynamics contributing to increased territorial cohesion is necessary to maximise the 'added value' of public expenditure incurred under the "Cohesion policy" heading. As an example of such dynamics, one can mention the positive diffusion effects that can develop in areas with major contrasts between neighbouring regions. In a similar way, a greater complementariness between Regional policy formulation and design at different levels is needed, in particular between the European and national policy agendas, in respect of the application of the EU principle of 'additionality'.

The main challenge of cohesion: improving access to services

As described in Chapter 3, the provision of services is a key dimension of territorial cohesion. Access to structuring services, for instance airports, universities or hospitals, is of critical importance when assessing regional development perspectives. The lack of such services seriously reduces the perspectives for economically and socially sustainable local development. Measures of accessibility based on local access to services have been able to provide for an improved understanding of the local and regional challenges and potentials faced by the local population and businesses. Strategies for improving local access to services can either build on a pattern of service distribution better adapted to the population distribution across the territory or on better connections between the existing service centres and the population via improved transport networks. It is also important to highlight the significant potentials in respect of improving access to services through stronger co-operation at the cross-border level, thus optimizing the use of already existing structures.

5.3. Recommendations related to policy evaluation and learning

New tools for assessing the efficiency of policies are needed

EU sector policies provide significant potential leverage in respect of achieving territorial cohesion. Greater coordination and increased policy coherence between different policy sectors and measures across these sectors is however essential in targeting territorial cohesion. The synergies between sector policies and Cohesion policy, i.e. their combined territorial impacts, need to be assessed more thoroughly.

Regions function as policy test-beds, and their experiences and the policy impacts they are faced with should feed directly into the policy cycle. Attempts to benchmark the respective impacts of sectoral or territorial investment in each region are therefore contingent upon the availability of detailed statistics to isolate the effects of public policies from other causal processes. By improving the capacity of regions themselves to engage in these assessment and evaluation efforts, policies can be improved and stakeholders empowered. This also implies the need to develop indicators in relation to the policy effects that have been perceived by local

stakeholders. Such innovative territorial approaches should feed into the European debate. This would help to ensure that the statistical tools used are driven by wider policy objectives.

The measurement of the territorial impacts of both Cohesion policy and of the relevant sectoral policies should be implemented within the areas of eligibility, for instance through the inclusion of Territorial Impact Assessment (TIA) exercises or by performing 'regional audits', enabling an assessment to be made of the adequacy between regional challenges and the financial and human means invested. An understanding of the processes in these areas however also requires that one takes into account the corresponding functional territories (e.g. labour markets) and their changing geography. This creates a complex geography of evaluation and learning regions which do not necessarily correspond to the politically identified target areas. Analyses produced to assess the effects of policy interventions however tend to focus on target areas only rather than seeking to understand the dynamics of these functional territories.

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Annex 1. Table of selected indicators

This annex table regroups some of the indicators used in the present study. The indicators gathered here are the ones that are available for the combination of NUTS2 and NUTS3 regions that we have used throughout the chapters.

The choice of the NUTS2/3 combination was based on the need to use statistical regions that are comparable between countries, especially in terms of size.

Other indicators have also been used in the study but they have not been included in the present annex as they are only available at the NUTS2 level.

Countries represented by NUTS2 regions:
Austria (AT), Belgium (BE), Switzerland (CH), Germany (DE), Greece (GR), the Netherlands (NL), Portugal (PT) and the United Kingdom (UK)

Countries represented by NUTS3 regions:
Bulgaria (BG), Cyprus (CY), Czech Republic (CZ), Denmark (DK), Estonia (EE), Spain (ES), Finland (FI), France (FR), Hungary (HU), Ireland (IE), Italy (IT), Latvia (LT), Luxembourg (LU), Malta (MT), Norway (NO), Poland (PL), Romania (RO), Sweden (SE), Slovenia (SI) and Slovakia (SK)

Accessibility indicators
POP_AIR_% = Share of region population living within 1 hour car driving time from next airport (in %)
POP_UNIV_% = Share of region population living within 1 hour car driving time from next university (in %)
POP_HOSP_% = Share of region population living within 1 hour car driving time from next hospital (in %)
ACC_POP = Potential accessibility to population, standardized at EU-27+2 average
ACC_GDP = Potential accessibility to GDP, standardized at EU-27+2 average

Source: RRG calculations; Eurostat ; EEA

Economic indicators
GDP_2004 = Total regional GDP in 2004 (in pps)
GDP_CAP_2004 = GDP per capita in 2004 (in pps)

Source: Eurostat

Labour market indicators
UNEMP_2005 = Unemployment rate in 2005
EMP_2005 = Employment rate in 2005

Source: Calculations based on Eurostat data

REGIONAL ENTITIES (NUTS2/3)		ACCESSIBILITY					ECONOMY		LABOUR MARKET	
Code	**Name**	**POP_AIR_%**	**POP_UNIV_%**	**POP_HOSP_%**	**ACC_POP**	**ACC_GDP**	**GDP_2004**	**GDP_CAP_2004**	**UNEMP_2005**	**EMP_2005**
AT11	Burgenland	51,6	90,5	96,2	98,4	83,4	5356,6	19363,1	6,0	68,1
AT12	Niederösterreich	54,2	70,4	92,2	117,3	113,3	35085,1	22534,4	4,3	69,9
AT13	Wien	100,0	100,0	100,0	157,4	175,3	62305,4	38974,3	9,1	63,8
AT21	Kärnten	91,2	91,0	98,8	64,3	65,2	13069,6	23377,1	4,8	66,5
AT22	Steiermark	78,1	89,5	93,5	76,7	74,5	28468,8	23882,9	4,1	68,9
AT31	Oberösterreich	76,4	93,2	98,6	97,3	106,6	36017,1	25927,1	4,0	70,5
AT32	Salzburg	79,3	75,5	88,5	67,3	85,5	15996,1	30574,5	3,2	72,7
AT33	Tirol	83,3	87,9	97,3	90,9	125,6	19473,4	28369,9	3,5	71,0
AT34	Vorarlberg	96,1	85,9	99,7	112,2	158,5	10391,3	29022,5	5,3	70,8
BE10	Région de Bruxelles-Capitale/Brussels Hoofdstedelijk GeWest	100,0	100,0	100,0	329,2	425,9	53537	53542,4	16,3	54,8
BE21	Prov. Antwerpen	93,7	100,0	100,0	337,7	427,3	51970,9	31142,5	6,2	63,5
BE22	Prov. Limburg (B)	94,2	99,9	100,0	348,3	416,9	17625,2	21873,3	7,1	60,5
BE23	Prov. Oost-Vlaanderen	9,4	99,1	100,0	294,3	358,5	32836,4	23903,3	4,9	66,7
BE24	Prov. Vlaams Brabant	90,8	99,9	100,0	329,5	412,1	28935,6	28041,0	4,4	67,5
BE25	Prov. West-Vlaanderen	27,2	99,7	100,0	230,0	262,5	28314,7	24929,3	4,7	65,7
BE31	Prov. Brabant Wallon	98,4	100,0	100,0	306,2	372,7	9336,2	25882,3	9,0	60,0
BE32	Prov. Hainaut	80,8	98,9	99,0	247,0	284,1	22533,3	17560,2	14,0	52,9
BE33	Prov. Liège	53,6	97,4	100,0	272,0	314,6	20475,1	19886,4	11,9	56,1
BE34	Prov. Luxembourg (B)	47,3	94,9	98,4	168,1	195,5	4716,1	18558,6	7,9	61,1
BE35	Prov. Namur	58,0	91,1	96,6	219,8	251,3	8467,5	18698,0	10,4	59,1
BG111	Vidin	0,0	0,0	94,8	32,4	3,7	592,1	4829,2	22,6	47,0
BG112	Montana	0,0	0,0	92,3	47,7	5,9	829,2	3832,0	9,2	47,0
BG113	Vratsa	0,0	0,0	77,5	59,0	7,3	1541,4	8879,2	12,5	47,0
BG121	Pleven	0,0	0,0	84,7	63,9	7,2	1534,6	4868,2	7,1	53,4
BG122	Lovech	0,0	23,1	80,1	60,3	7,0	911,3	5579,1	19,0	53,4
BG123	Veliko Tarnovo	0,0	70,9	92,3	61,2	6,7	1585,8	5525,2	12,1	53,4
BG124	Gabrovo	0,0	97,3	97,9	59,2	6,3	945,8	6798,7	3,4	53,4
BG125	Ruse	0,0	96,1	99,1	77,8	9,9	1565,4	5995,2	12,3	53,4
BG131	Varna	91,5	97,0	97,8	45,8	5,0	3551,4	7743,0	9,5	53,9
BG132	Dobrich	56,4	66,7	93,3	45,5	5,3	1131,9	5429,6	17,0	53,9
BG133	Shumen	3,3	88,8	90,5	53,2	5,8	993,4	4949,7	16,4	53,9
BG134	Targovishte	0,0	74,6	94,6	59,0	6,4	646,5	4679,4	7,8	53,9
BG135	Razgrad	0,0	62,6	90,4	69,1	8,6	730,6	5131,1	19,1	53,9
BG136	Silistra	0,0	7,1	68,4	70,0	9,0	643	4678,9	16,8	53,9

BG211	Sofia (stolitsa)	98,9	98,1	98,1	79,9	13,0	16523,1	13667,5	7,6	61,5
BG212	Sofia	33,5	27,9	60,2	64,3	9,6	1845,1	6963,0	9,9	61,5
BG213	Blagoevgrad	0,0	32,5	32,7	42,3	9,6	1949,9	5809,5	2,2	61,5
BG214	Pernik	54,8	89,6	94,0	52,7	8,5	904	6273,2	7,5	61,5
BG215	Kyustendil	0,0	44,3	95,8	45,9	7,7	1063,9	6803,5	15,8	61,5
BG221	Plovdiv	0,0	92,3	93,9	59,3	7,1	4302,7	6052,0	7,2	54,7
BG222	Stara Zagora	0,0	95,3	98,3	53,5	5,7	2598,7	7138,3	5,3	54,7
BG223	Haskovo	0,0	67,8	88,2	34,3	3,9	1388,6	5141,1	9,3	54,7
BG224	Pazardzhik	0,0	68,7	93,8	57,2	8,2	1429,9	4715,3	17,7	54,7
BG225	Smolyan	0,0	5,3	84,0	44,8	7,8	734,9	5442,5	19,6	54,7
BG226	Kardzhali	0,0	1,2	89,7	34,8	5,0	825,2	5125,4	8,0	54,7
BG231	Burgas	82,1	87,4	88,2	32,1	3,3	2943,5	7009,6	6,2	54,2
BG232	Sliven	0,0	17,5	96,0	49,3	4,9	1071,1	5024,1	17,4	54,2
BG233	Yambol	0,1	0,8	93,2	34,3	3,4	726,9	4861,1	9,2	54,2
CH01	Région lémanique	n.a.	n.a.	n.a.	108,8	146,0	n.a.	n.a.	n.a.	71,9
CH02	Espace - Mittelland	n.a.	n.a.	n.a.	136,6	191,8	n.a.	n.a.	n.a.	76,9
CH03	NordWestschweiz	n.a.	n.a.	n.a.	183,2	270,6	n.a.	n.a.	n.a.	76,4
CH04	Zürich	n.a.	n.a.	n.a.	176,3	270,3	n.a.	n.a.	n.a.	81,1
CH05	Ostschweiz	n.a.	n.a.	n.a.	123,7	174,6	n.a.	n.a.	n.a.	79,0
CH06	Zentralschweiz	n.a.	n.a.	n.a.	147,1	219,2	n.a.	n.a.	n.a.	77,2
CH07	Ticino	n.a.	n.a.	n.a.	149,1	200,2	n.a.	n.a.	n.a.	67,3
CY	Zypern	n.a.	n.a.	n.a.	0,0	0,0	14535,9	19902,2	5,3	68,5
CZ010	Hlavní mesto Praha	93,5	99,5	n.a.	153,0	87,0	39427,1	33826,1	3,5	71,3
CZ020	Stredoceský	23,3	66,6	n.a.	123,4	68,3	17111	15065,2	5,2	67,0
CZ031	Jihocecký	0,2	76,7	n.a.	96,4	73,0	9012,3	14407,2	5,0	67,1
CZ032	Plzenský	3,9	82,5	n.a.	101,1	77,8	8559,7	15559,9	5,1	68,6
CZ041	Karlovarský	77,8	86,3	n.a.	119,5	90,5	3842,9	12630,8	10,9	65,4
CZ042	Ústecký	8,9	80,4	n.a.	146,8	90,0	10836,1	13200,8	14,5	60,1
CZ051	Liberecký	0,0	68,5	n.a.	116,7	56,7	5494,7	12846,4	6,5	65,1
CZ052	Královehradecký	0,0	71,3	n.a.	115,9	42,6	7912,5	14450,4	4,8	66,1
CZ053	Pardubický	0,0	61,4	n.a.	108,6	42,0	6838,9	13529,4	5,6	65,7
CZ061	Vysocina	6,9	22,5	n.a.	101,9	53,7	6916,6	13548,7	6,8	65,3
CZ062	Jihomoravský	74,2	87,9	n.a.	119,1	64,7	16817,3	14888,1	8,1	63,5
CZ071	Olomoucký	6,3	77,0	n.a.	123,1	40,9	8164,3	12743,2	10,0	61,8
CZ072	Zlínský	13,3	92,7	n.a.	137,4	48,2	7596,5	12834,8	9,4	62,4
CZ080	Moravskoslezský	70,5	92,2	n.a.	152,7	43,7	16529,2	13161,1	13,9	59,3
DE11	Stuttgart	59,0	98,1	99,7	240,1	315,4	121256,7	30355,1	7,3	70,1
DE12	Karlsruhe	56,3	96,4	99,9	274,4	356,2	78676,1	28897,9	7,6	69,0

DE13	Freiburg	45,5	92,9	98,9	212,4	280,7	53767,3	24677,3	6,4	71,0
DE14	Tübingen	50,2	98,5	98,8	189,0	253,8	46495,5	25880,0	6,8	70,2
DE21	Oberbayern	66,1	87,0	99,6	152,3	219,9	153010,5	36468,6	5,8	71,2
DE22	Niederbayern	27,7	92,0	97,3	105,7	127,3	29561,1	24748,3	6,5	71,6
DE23	Oberpfalz	19,9	88,0	91,4	114,4	127,3	27950,8	25647,0	6,5	70,3
DE24	Oberfranken	50,9	96,0	98,0	129,5	137,6	26931,3	24269,6	10,3	68,4
DE25	Mittelfranken	66,4	95,7	98,5	163,3	206,3	50368,3	29513,6	8,7	68,6
DE26	Unterfranken	9,8	94,6	99,0	177,0	216,6	33919	25223,5	8,2	69,0
DE27	Schwaben	5,2	92,1	97,4	154,1	210,9	46801,1	26257,6	6,5	70,0
DE30	Berlin	100,0	100,0	100,0	228,7	204,7	73694,3	21748,5	19,4	58,5
DE41	Brandenburg - Nordost	64,6	90,7	99,9	121,0	100,1	19096,4	16356,8	19,9	61,7
DE42	Brandenburg - SüdWest	60,5	96,0	99,4	147,5	122,8	25901,5	18408,7	16,8	63,6
DE50	Bremen	89,7	100,0	100,0	118,2	144,7	22217,4	33503,9	16,6	59,3
DE60	Hamburg	83,2	95,3	100,0	169,1	226,5	72785,5	41973,5	10,5	66,5
DE71	Darmstadt	87,6	99,2	99,8	273,6	345,8	127463,7	33872,9	8,2	67,2
DE72	Gießen	2,5	96,9	99,7	233,2	268,0	23765	22304,8	9,0	66,8
DE73	Kassel	14,6	96,2	99,8	184,5	200,6	30511,6	24197,0	9,3	65,9
DE80	Mecklenburg-Vorpommern	43,4	82,8	95,8	78,0	71,3	29153,8	16830,3	21,4	60,7
DE91	Braunschweig	62,2	98,1	99,8	168,8	172,8	37872,8	22779,3	11,6	62,3
DE92	Hannover	75,4	92,5	99,5	194,2	209,5	51154,8	23604,6	10,5	64,8
DE93	Lüneburg	37,5	62,3	95,5	138,0	161,3	30774,3	18119,2	9,7	65,3
DE94	Weser-Ems	40,4	83,8	97,7	147,8	164,8	52490,2	21292,2	10,2	64,8
DEA1	Düsseldorf	81,5	99,8	100,0	405,6	481,5	145603,2	27759,7	10,7	63,0
DEA2	Köln	70,2	97,4	100,0	375,0	438,9	112519,1	25864,3	9,5	63,6
DEA3	Münster	74,6	96,8	100,0	337,1	368,1	54012,4	20570,3	9,5	63,1
DEA4	Detmold	48,6	94,6	100,0	262,1	278,6	48623,6	23469,2	10,2	66,6
DEA5	Arnsberg	74,9	96,1	99,7	347,6	384,4	86202,1	22764,8	12,2	61,5
DEB1	Koblenz	27,1	79,6	98,8	270,1	314,1	31676,2	20731,6	8,8	68,0
DEB2	Trier	75,8	91,5	99,7	201,3	236,6	10536,5	20508,8	7,3	67,7
DEB3	Rheinhessen-Pfalz	61,1	98,6	100,0	251,2	314,3	47044,6	23324,0	9,3	66,0
DEC0	Saarland	77,7	99,2	100,0	185,6	219,2	24651,2	23225,7	10,8	62,1
DED1	Chemnitz	66,9	97,9	100,0	151,7	116,3	27191,8	17340,0	17,8	64,2
DED2	Dresden	65,3	90,2	99,9	133,9	91,4	32481	19399,3	18,3	62,8
DED3	Leipzig	91,5	97,6	100,0	162,9	131,9	19894,3	18438,7	20,5	60,9
DEE1	Dessau	61,7	75,5	99,9	159,4	135,0	8363,1	16173,3	21,3	60,7
DEE2	Halle	85,4	99,0	100,0	159,6	137,0	15015,4	18018,9	22,3	57,5
DEE3	Magdeburg	21,5	91,0	98,2	140,3	130,8	20490,2	17475,1	18,7	62,4
DEF0	Schleswig-Holstein	64,6	86,0	96,7	109,6	131,0	63233,8	22398,1	10,3	66,4

DEG0	Thüringen	53,6	89,1	99,4	145,6	135,8	41385,6	17439,0	17,2	62,4
DK001	København og Frederiksberg Kommuner	100,0	100,0	100,0	114,7	184,3	24600,3	41439,1	5,3	73,0
DK002	Københavns amt	55,0	100,0	100,0	110,0	178,0	21505,4	34790,1	4,1	77,8
DK003	Frederiksborg amt	0,0	32,8	92,8	86,1	134,3	8431,5	22508,5	3,4	79,9
DK004	Roskilde amt	5,3	99,8	100,0	92,7	140,2	4894,1	20563,5	3,5	80,5
DK005	Vestsjællands amt	0,0	51,8	83,7	76,7	106,9	6230,3	20525,7	5,0	75,2
DK006	Storstrøms amt	0,0	8,7	68,5	73,5	91,4	5151,7	19667,5	5,0	72,1
DK007	Bornholms amt	72,0	0,0	0,0	20,2	19,7	851,6	19532,3	8,3	69,8
DK008	Fyns amt	5,3	68,5	84,8	72,3	91,3	10672,2	22434,9	5,5	73,2
DK009	Sønderjyllands amt	68,2	74,7	89,0	56,7	71,4	6258,1	24746,6	4,7	75,5
DK00A	Ribe amt	98,2	0,0	99,2	37,6	51,6	5691,2	25354,7	3,9	77,3
DK00B	Vejle amt	68,4	53,0	97,1	55,6	76,5	9256,8	25945,9	4,4	78,0
DK00C	Ringkøbing amt	58,5	0,0	75,7	32,2	46,0	7466,3	27187,4	4,0	78,9
DK00D	Århus amt	77,3	87,6	89,6	51,9	72,8	16317,1	24896,9	5,2	75,3
DK00E	Viborg amt	43,7	14,9	58,2	32,2	45,6	5811,9	24786,3	4,0	78,2
DK00F	Nordjyllands amt	82,8	88,8	87,4	33,2	45,4	11509,6	23241,0	6,9	73,9
EE001	Põhja-Eesti	90,0	95,5	n.a.	29,5	24,7	9809,7	18813,8	7,6	70,2
EE004	Lääne-Eesti	39,7	0,1	n.a.	11,5	6,1	1354,4	8288,6	5,7	60,3
EE006	Kesk-Eesti	1,9	12,2	n.a.	20,6	13,3	1087,1	7650,7	5,9	63,3
EE007	Kirde-Eesti	0,0	0,0	n.a.	13,2	7,1	1253,6	7171,3	14,6	57,6
EE008	Lõuna-Eesti	0,0	65,5	n.a.	14,6	4,5	2736,7	7833,6	6,7	45,3
ES111	La Coruña	58,4	80,1	83,7	42,6	28,0	20143,3	17963,5	9,9	61,0
ES112	Lugo	0,3	5,9	51,2	34,6	22,2	5740	16013,3	6,7	64,9
ES113	Orense	1,1	5,5	12,4	47,2	28,1	5260,4	15460,0	10,5	58,9
ES114	Pontevedra	75,2	86,4	88,4	69,5	43,3	16037,9	17227,8	11,0	60,6
ES120	Asturias	54,9	85,9	87,7	35,7	25,5	19819,3	18457,8	10,2	55,8
ES130	Cantabria	88,1	96,1	96,2	40,1	35,5	11556,1	20829,9	8,5	62,0
ES211	Álava	93,2	81,4	98,3	61,9	61,5	8789,7	29704,5	7,1	65,6
ES212	Guipúzcoa	45,2	66,9	98,6	66,9	67,8	18681,8	27212,6	5,7	68,3
ES213	Vizcaya	80,1	99,2	99,3	71,2	70,2	29153,6	25734,5	8,5	63,8
ES220	Navarra	76,5	85,4	86,0	50,4	50,4	15719,9	26883,8	5,6	69,1
ES230	La Rioja	3,3	68,4	68,6	42,1	40,9	6853,1	23345,4	6,2	69,1
ES241	Huesca	0,0	57,3	71,5	38,9	37,4	4691,2	22034,7	6,9	65,3
ES242	Teruel	0,0	0,1	46,7	33,2	29,1	3034,4	21778,0	4,7	67,9
ES243	Zaragoza	70,9	80,8	81,3	37,6	35,1	20823,8	23205,9	5,8	68,9
ES300	Madrid	76,3	98,2	98,6	166,0	172,2	163771,6	28213,0	6,8	68,5
ES411	Avila	0,0	45,1	50,1	57,0	53,2	2843,9	17120,8	8,8	61,6

ES412	Burgos	3,0	60,1	61,8	42,5	40,0	8615,5	24171,2	6,7	67,0
ES413	León	0,0	71,2	80,9	33,2	24,0	8872,5	18007,2	10,8	58,7
ES414	Palencia	1,4	43,9	55,7	35,8	30,5	3641,7	20930,5	7,5	63,0
ES415	Salamanca	0,0	76,4	80,9	30,2	22,0	6324	18017,9	9,1	63,0
ES416	Segovia	0,4	76,0	76,0	71,7	70,7	3320,8	21755,8	6,8	70,1
ES417	Soria	0,0	0,0	60,4	36,2	35,2	1994,9	21766,0	5,2	66,3
ES418	Valladolid	81,8	90,4	90,8	44,9	39,0	11350	22217,3	9,2	62,7
ES419	Zamora	0,0	41,0	59,8	29,4	21,4	3332,1	16784,4	10,0	57,1
ES421	Albacete	59,1	9,5	66,9	38,2	28,2	6064,1	15981,4	10,0	62,2
ES422	Ciudad Real	0,0	44,2	61,4	38,0	29,6	8594,1	17435,3	10,6	57,2
ES423	Cuenca	1,4	0,4	33,3	47,4	43,2	3451,2	16872,5	6,5	62,1
ES424	Guadalajara	45,8	51,2	77,9	68,1	68,7	3582,8	18476,3	7,1	64,7
ES425	Toledo	0,0	10,1	62,1	77,2	73,4	9606,1	16617,8	9,1	63,0
ES431	Badajoz	35,8	47,6	61,8	35,2	21,8	9268,6	13960,9	17,5	53,1
ES432	Cáceres	0,0	1,7	53,4	30,7	20,0	6123,1	14883,9	13,0	56,4
ES511	Barcelona	61,7	88,6	99,5	126,2	122,8	128956,8	25197,3	7,0	68,8
ES512	Gerona	61,9	85,6	54,9	72,7	70,4	16513,7	25956,9	7,3	74,1
ES513	Lérida	0,6	67,8	68,5	52,9	51,9	10261,9	26647,9	5,9	69,6
ES514	Tarragona	87,6	84,2	97,0	63,4	61,6	18078,4	26816,8	7,1	68,2
ES521	Alicante	65,5	78,5	94,0	77,9	56,7	31068,9	18749,6	9,6	62,7
ES522	Castellón de la Plana	16,7	85,4	90,2	49,0	40,8	11730,4	22244,3	7,3	67,3
ES523	Valencia	84,6	90,2	92,4	70,6	54,4	47210,1	20013,4	8,6	65,2
ES530	Illes Balears	89,8	55,7	82,3	25,0	23,2	23224,2	24317,4	7,2	67,9
ES611	Almería	75,5	76,5	81,8	30,2	21,1	11779,1	20306,1	9,2	69,1
ES612	Cadiz	71,0	50,8	90,7	50,0	32,1	19247,7	16530,5	17,7	50,5
ES613	Córdoba	0,0	65,0	65,0	47,6	29,2	11330,1	14528,2	14,8	53,9
ES614	Granada	60,9	79,2	79,2	45,9	28,9	12837,6	15252,2	12,9	53,5
ES615	Huelva	13,6	82,6	82,5	46,6	29,8	8328,7	17471,3	15,9	52,0
ES616	Jaén	0,6	66,2	66,2	39,8	25,0	9422,2	14397,0	15,9	52,3
ES617	Málaga	68,8	81,2	84,9	57,3	36,5	23795,3	17021,9	11,7	56,5
ES618	Sevilla	68,5	76,0	76,2	64,7	41,1	30212,3	16855,6	13,9	56,7
ES620	Murcia	38,2	81,4	91,8	50,7	35,8	23273,7	17976,2	8,0	62,8
ES630	Ceuta (ES)	0,0	0,0	0,0	21,8	14,3	1387,6	18587,1	19,7	53,2
ES640	Melilla (ES)	100,0	0,0	0,0	6,1	4,3	1267,3	18632,4	13,9	51,3
ES701	Las Palmas	0,0	0,0	0,0	15,0	11,7	20364,5	20630,1	12,8	59,5
ES702	Santa Cruz De Tenerife	0,0	0,0	0,0	17,4	12,7	17277	18609,2	10,5	60,0
FI131	Etelä-Savo	56,9	53,9	56,0	10,7	11,1	2941,4	18177,8	10,1	63,4
FI132	Pohjois-Savo	49,7	74,1	49,4	7,4	7,1	4735	18850,6	10,0	63,5

FI133	Pohjois-Karjala	43,4	50,5	50,4	4,3	4,1	3101,6	18369,6	13,1	60,1
FI134	Kainuu	33,2	41,9	42,7	2,7	2,6	1472,4	17069,9	16,6	57,9
FI181	Uusimaa	88,9	99,6	95,6	38,3	53,6	45392,1	33815,5	6,2	74,1
FI182	Itä-Uusimaa	66,9	79,8	85,4	39,0	54,3	2252,8	24473,0	5,1	73,2
FI183	Varsinais-Suomi	79,8	84,1	81,7	19,1	24,1	11078,7	24455,3	6,9	71,3
FI184	Kanta-Häme	13,6	44,3	79,3	30,7	39,9	3440,3	20586,8	8,5	68,9
FI185	Päijät-Häme	0,1	91,5	90,8	24,9	30,7	4020,6	20252,4	8,8	66,4
FI186	Kymenlaakso	1,4	34,7	86,9	19,1	23,4	4520,1	24357,6	8,7	66,9
FI187	Etelä-Karjala	76,4	77,3	78,9	10,0	11,3	3137,9	23067,8	9,6	64,0
FI191	Satakunta	41,6	59,2	57,4	15,7	18,3	5083,8	21682,7	9,0	67,2
FI192	Pirkanmaa	54,9	81,9	82,1	20,1	23,7	11157,6	24292,3	8,9	68,0
FI193	Keski-Suomi	51,2	55,4	62,8	11,1	11,8	5450,6	20445,8	11,8	62,0
FI194	Etelä-Pohjanmaa	47,4	54,5	54,6	9,8	10,1	3476,9	17923,9	6,5	68,0
FI195	Pohjanmaa	71,0	81,0	80,8	8,8	9,4	3943,8	22764,5	6,1	70,7
FI1A1	Keski-Pohjanmaa	65,0	78,1	78,1	5,1	5,2	1356	19228,4	8,4	69,7
FI1A2	Pohjois-Pohjanmaa	13,5	45,6	44,6	5,1	5,6	8545,4	22887,2	10,3	65,5
FI1A3	Lappi	47,0	55,7	55,0	1,5	1,6	3877,3	20773,4	14,0	58,5
FI200	Åland	53,6	0,0	0,0	10,8	15,6	831,7	31461,4	3,3	77,2
FR101	Paris	100,0	100,0	100,0	458,5	822,7	145964,6	67465,8	10,6	64,3
FR102	Seine-et-Marne	59,5	94,4	99,8	244,9	391,0	26132	20796,3	7,9	64,5
FR103	Yvelines	25,2	97,1	100,0	309,6	509,0	37740,7	27148,3	7,3	65,1
FR104	Essonne	87,2	97,4	99,9	319,1	525,1	28909	24660,0	7,5	64,6
FR105	Hauts-de-Seine	98,3	100,0	100,0	442,5	782,3	93762,3	62747,9	8,9	65,0
FR106	Seine-Saint-Denis	100,0	100,0	100,0	425,1	745,8	34361,1	24256,1	13,3	60,7
FR107	Val-de-Marne	100,0	100,0	100,0	428,9	744,9	33458,3	26584,3	9,2	65,7
FR108	Val-d'Oise	78,5	99,6	100,0	344,6	569,5	25138,2	22074,0	9,8	64,0
FR211	Ardennes	5,0	64,9	96,7	128,9	151,2	5306,5	18390,2	13,0	58,2
FR212	Aube	0,1	91,6	94,0	88,2	118,0	6428,6	21861,2	10,1	63,4
FR213	Marne	64,8	87,8	98,4	110,2	147,6	14552,6	25799,3	8,7	63,2
FR214	Haute-Marne	3,3	8,0	94,9	72,6	83,9	3714,2	19584,8	9,4	62,4
FR221	Aisne	14,3	56,3	96,1	164,9	215,7	9220,8	17212,0	13,5	56,3
FR222	Oise	77,6	82,8	98,6	233,4	350,1	15915,3	20406,4	9,9	63,2
FR223	Somme	48,2	82,9	94,7	170,2	211,3	11379,2	20357,6	11,7	58,4
FR231	Eure	38,2	66,0	99,5	158,7	223,6	10503,7	18859,0	7,6	66,9
FR232	Seine-Maritime	70,5	83,0	93,6	133,2	176,7	28674,5	23023,3	8,8	63,3
FR241	Cher	0,0	14,8	94,9	60,9	71,2	6251,7	19966,1	8,1	64,3
FR242	Eure-et-Loir	0,0	19,7	93,7	166,1	245,5	8215	19809,2	7,6	67,3
FR243	Indre	0,2	5,9	95,2	51,4	55,2	4310,7	18626,8	7,2	67,7

FR244	Indre-et-Loire	93,2	97,0	99,3	70,8	78,3	12411,4	21855,8	7,3	64,8
FR245	Loir-et-Cher	53,6	67,6	95,4	90,3	114,0	6474,1	20181,7	7,1	69,2
FR246	Loiret	0,8	72,3	95,8	132,4	191,4	16310,6	25726,0	6,6	69,5
FR251	Calvados	90,8	93,3	100,0	95,3	110,4	14214,9	21423,8	8,4	63,0
FR252	Manche	55,1	19,8	99,7	60,7	67,2	9540,3	19625,0	7,1	65,2
FR253	Orne	3,3	28,2	99,3	95,3	117,7	5475,3	18738,5	7,7	63,5
FR261	Côte-d'Or	0,0	85,6	95,2	65,2	76,5	12658,1	24599,9	7,4	65,4
FR262	Nièvre	0,0	0,0	87,0	56,5	65,5	4085,2	18381,0	8,4	64,3
FR263	Saône-et-Loire	0,0	25,5	96,8	73,9	84,7	10857,6	19796,6	8,3	63,3
FR264	Yonne	0,0	46,4	96,0	88,6	120,3	6667,2	19723,9	8,5	63,7
FR301	Nord	59,3	93,5	97,1	208,7	232,2	53022,2	20571,2	13,3	57,7
FR302	Pas-de-Calais	35,9	96,6	99,1	173,8	196,7	23916	16491,4	12,9	57,7
FR411	Meurthe-et-Moselle	43,3	95,5	98,1	130,9	148,9	15058,1	20841,4	9,7	61,0
FR412	Meuse	2,9	46,1	96,7	101,7	117,1	3421	17752,7	10,2	62,2
FR413	Moselle	75,1	87,8	95,2	164,0	191,2	20370,6	19722,3	10,2	61,9
FR414	Vosges	41,8	37,2	91,3	118,4	138,0	7623,6	19935,1	11,0	64,2
FR421	Bas-Rhin	85,1	94,7	98,1	207,1	254,1	25872,2	24333,7	6,8	67,6
FR422	Haut-Rhin	72,3	97,3	97,6	177,8	229,1	15775,8	21591,9	7,4	67,6
FR431	Doubs	0,0	87,8	96,4	103,5	131,5	11764,4	23085,3	8,2	62,8
FR432	Jura	7,4	43,1	91,8	99,8	123,6	5115,4	20075,0	6,6	65,2
FR433	Haute-Saône	0,0	75,5	97,6	96,3	114,4	3960,9	16903,2	7,6	63,1
FR434	Territoire de Belfort	26,1	99,9	100,0	137,5	178,7	3055,1	21793,7	9,3	61,5
FR511	Loire-Atlantique	79,8	97,5	99,8	70,5	75,3	28930,3	24266,8	8,4	65,8
FR512	Maine-et-Loire	17,4	98,5	100,0	77,2	81,1	15270,4	20287,4	8,0	64,2
FR513	Mayenne	2,7	55,1	100,0	76,3	83,2	6377,1	21732,7	5,8	69,1
FR514	Sarthe	10,9	97,0	99,9	88,5	102,5	11923,1	21969,0	7,8	65,8
FR515	Vendée	87,2	24,9	96,7	63,4	64,5	11999,9	20803,4	6,9	68,2
FR521	Côte-du-Nord	58,2	47,5	99,9	45,7	45,4	10497,7	18717,0	7,3	63,5
FR522	Finistère	76,5	87,0	92,9	37,0	36,2	18551,9	21224,4	7,9	61,4
FR523	Ille-et-Vilaine	98,5	84,1	100,0	67,6	72,5	22041,7	24263,0	6,6	66,8
FR524	Morbihan	46,6	93,7	98,2	47,4	47,6	13435,5	19831,3	7,8	62,5
FR531	Charente	66,9	4,0	95,0	48,7	48,4	7300	21202,6	8,9	64,4
FR532	Charente-Maritime	61,2	65,2	88,2	49,6	49,5	10791,9	18368,4	9,9	62,9
FR533	Deux-Sèvres	50,0	43,2	95,6	58,5	59,2	7810,6	22191,5	6,3	69,9
FR534	Vienne	84,2	85,4	93,9	52,8	53,8	8458,6	20747,9	7,7	64,4
FR611	Dordogne	41,5	10,7	89,9	48,6	46,8	6750,1	16976,0	8,1	60,8
FR612	Gironde	78,5	94,6	96,3	53,7	57,3	33259,1	24461,2	8,9	62,5
FR613	Landes	37,7	49,9	83,5	44,1	45,1	7122,1	20505,2	7,7	63,9

FR614	Lot-et-Garonne	81,8	11,5	95,9	49,7	49,3	5968,6	18958,5	8,3	62,2
FR615	Pyrénées-Atlantiques	85,8	92,5	93,9	50,2	50,8	14114,8	22577,1	7,3	63,5
FR621	Ariège	14,6	25,0	87,2	48,8	48,8	2470,8	17344,7	8,4	63,7
FR622	Aveyron	56,7	1,6	72,9	48,6	46,1	5278,2	19392,7	4,5	69,7
FR623	Haute-Garonne	93,2	94,8	97,6	61,7	64,5	29597,5	26077,6	8,1	66,7
FR624	Gers	23,9	21,1	78,7	54,9	55,5	3263,3	18298,8	5,1	70,4
FR625	Lot	14,2	0,1	82,9	46,2	44,1	3046	18189,9	6,7	66,0
FR626	Hautes-Pyrénées	92,3	82,3	99,1	45,5	45,5	4430	19405,4	7,9	64,5
FR627	Tarn	28,5	83,7	94,7	60,0	59,0	6409,4	17905,9	8,2	62,4
FR628	Tarn-et-Garonne	59,4	64,7	95,1	60,2	60,1	4034,7	18388,5	8,2	62,7
FR631	Corrèze	7,7	34,9	86,1	40,4	38,8	4672,6	19736,4	5,8	69,2
FR632	Creuse	14,0	26,7	64,8	40,8	40,7	1986,5	15993,8	6,8	67,9
FR633	Haute-Vienne	83,6	92,1	95,6	44,1	43,1	7585,1	21030,9	6,6	66,9
FR711	Ain	53,5	71,5	98,9	129,6	158,6	11122,4	20326,7	6,3	67,9
FR712	Ardèche	14,0	17,6	82,6	79,6	82,1	5115,4	17134,8	9,7	62,0
FR713	Drôme	5,6	46,9	91,2	86,1	92,7	10389,5	22692,2	10,6	61,2
FR714	Isère	53,8	93,9	98,3	116,1	136,0	26675,9	23294,9	8,3	64,0
FR715	Loire	80,6	76,5	98,9	89,0	99,4	14293,8	19529,9	9,6	61,1
FR716	Rhône	89,9	95,3	98,6	120,6	143,0	49358,5	29980,6	8,9	63,8
FR717	Savoie	63,4	84,0	96,0	110,2	135,2	10215,6	26038,8	7,2	68,5
FR718	Haute-Savoie	93,3	90,7	95,8	123,1	161,6	16447,1	24312,6	6,7	69,6
FR721	Allier	21,1	30,1	91,5	53,0	56,3	6676,3	19397,5	8,3	66,1
FR722	Cantal	65,8	2,8	77,8	41,8	40,6	2598,1	17453,1	5,6	70,5
FR723	Haute-Loire	84,8	37,9	89,6	66,7	68,8	3695	17070,4	7,0	66,4
FR724	Puy-de-Dôme	89,1	90,7	96,3	55,2	57,8	13997,6	22690,1	7,4	66,4
FR811	Aude	87,3	44,3	92,9	53,5	51,5	5994,9	18199,6	10,9	57,6
FR812	Gard	70,2	89,4	96,9	77,5	74,7	12304,2	18503,4	12,6	55,9
FR813	Hérault	93,2	89,2	97,6	62,0	58,7	19324,3	19892,6	13,1	54,8
FR814	Lozère	0,9	0,0	77,9	51,8	50,0	1383	18320,3	5,2	62,7
FR815	Pyrénées-Orientales	94,5	95,1	95,1	54,5	51,8	7712,5	18311,6	12,1	54,3
FR821	Alpes-de-Haute-Provence	0,0	20,9	78,1	69,8	75,7	2768	19022,0	9,9	60,6
FR822	Hautes-Alpes	0,0	28,2	57,9	79,0	89,4	2870,1	22447,2	7,6	68,1
FR823	Alpes-Maritimes	96,6	97,7	98,3	78,6	87,7	25545,6	24168,8	9,7	60,8
FR824	Bouches-du-Rhône	95,9	97,2	99,7	96,0	99,0	45561,4	24071,8	12,2	56,0
FR825	Var	64,7	91,3	98,1	76,2	80,2	18981,5	19818,8	11,8	54,6
FR826	Vaucluse	86,0	93,5	94,4	80,3	82,2	10820,2	20739,1	10,8	58,4
FR831	Corse-du-Sud	70,5	7,1	49,4	11,8	11,6	2676	21473,1	10,6	52,8
FR832	Haute-Corse	85,2	61,9	57,2	17,4	17,9	2481,9	16720,0	11,2	52,8

FR910	Guadeloupe (FR)	n.a	n.a	n.a	n.a	n.a	6343,7	14379,9	25,9	n.a
FR920	Martinique (FR)	n.a	n.a	n.a	n.a	n.a	6289,1	15972,7	18,7	n.a
FR930	Guyane (FR)	n.a	n.a	n.a	n.a	n.a	2286,8	11689,7	24,8	n.a
FR940	Reunion (FR)	n.a	n.a	n.a	n.a	n.a	9981,1	13006,0	30,1	n.a
GR11	Anatoliki Makedonia, Thraki	63,4	83,8	75,1	27,5	7,7	7399,6	12219,3	11,8	59,5
GR12	Kentriki Makedonia	79,7	67,8	75,0	47,9	22,7	28013,9	14672,4	11,1	57,9
GR13	Dytiki Makedonia	81,4	0,5	0,8	26,2	13,2	3971,1	13485,6	18,0	52,1
GR14	Thessalia	1,3	55,2	91,6	38,7	21,7	10521,7	14269,8	9,4	60,4
GR21	Ipeiros	73,1	63,4	63,8	20,2	10,8	4958	14545,8	11,5	56,3
GR22	Ionia Nisia	75,8	0,0	47,4	12,3	6,6	3620,7	16563,6	8,5	64,1
GR23	Dytiki Ellada	3,7	56,7	57,5	29,0	15,8	8568,4	11733,7	10,6	56,6
GR24	Sterea Ellada	0,6	2,2	31,5	50,4	36,9	10348,6	18501,1	10,9	60,0
GR25	Peloponnisos	0,2	0,1	57,2	33,7	23,6	8890,7	14837,6	8,7	63,6
GR30	Attiki	90,6	96,9	97,9	106,7	90,0	95895	24338,2	8,8	61,4
GR41	Voreio Aigaio	81,1	48,5	0,0	6,5	3,8	2641	12999,0	10,2	56,8
GR42	Notio Aigaio	50,9	0,0	6,0	10,8	8,9	6634,4	21928,3	9,3	61,0
GR43	Kriti	73,9	58,0	75,8	10,8	6,7	10400,5	17336,3	7,1	64,9
HU101	Budapest	91,1	100,0	100,0	162,6	78,5	48031,2	28165,7	4,7	65,2
HU102	Pest	24,8	88,7	92,0	127,2	54,3	13883,5	12347,5	5,8	60,5
HU211	Fejér	0,0	94,8	97,4	103,4	46,1	5781,4	13489,7	6,2	59,1
HU212	Komárom-Esztergom	0,0	71,6	97,1	118,5	55,9	4873,5	15428,0	7,4	61,7
HU213	Veszprém	0,0	86,8	99,1	83,6	41,6	3964,6	10758,2	5,3	60,2
HU221	Gyor-Moson-Sopron	22,9	96,5	96,5	102,8	67,1	6994,5	15891,6	4,3	61,4
HU222	Vas	0,5	83,7	93,7	76,7	51,5	3686,3	13840,5	7,9	61,8
HU223	Zala	0,0	92,2	99,0	56,9	31,8	3703,5	12482,1	6,4	63,4
HU231	Baranya	0,0	90,8	94,6	42,4	14,2	4095,2	10180,5	8,4	53,2
HU232	Somogy	0,0	67,1	88,8	51,4	21,5	3138	9393,4	9,2	51,8
HU233	Tolna	0,0	88,8	96,5	61,9	23,0	2386,5	9650,7	8,8	55,9
HU311	Borsod-Abaúj-Zemplén	3,2	76,5	92,6	90,6	22,3	6777,8	9182,2	12,0	47,7
HU312	Heves	0,0	95,0	94,1	100,8	32,5	3259,9	10068,6	8,3	52,8
HU313	Nógrád	0,0	18,3	95,4	112,8	42,4	1618	7417,7	9,4	50,7
HU321	Hajdú-Bihar	5,8	84,6	90,9	77,8	17,5	5752,5	10454,1	8,4	51,5
HU322	Jász-Nagykun-Szolnok	0,0	80,1	86,5	85,8	26,5	3667,9	8877,4	8,2	52,2
HU323	Szabolcs-Szatmár-Bereg	4,2	61,6	94,3	67,6	13,4	4483,3	7682,6	10,3	47,6
HU331	Bács-Kiskun	0,0	79,0	92,1	67,0	23,5	5079,4	9378,8	8,5	55,0
HU332	Békés	0,1	70,9	79,5	66,7	15,3	3286,1	8364,9	8,4	50,6
HU333	Csongrád	0,0	87,0	96,5	60,3	16,4	4522,8	10622,3	7,5	55,2
IE011	Border	43,4	63,5	38,3	24,6	30,9	10123,5	22592,1	5,1	64,2

IE012	Midlands	0,0	76,1	2,3	37,1	51,8	4685,5	19786,7	3,8	67,3
IE013	West	71,6	85,6	31,0	19,6	24,5	8505,9	21572,2	4,0	67,5
IE021	Dublin	99,1	99,7	99,9	73,1	120,1	45945,6	40148,2	4,3	69,0
IE022	Mid-East	34,3	80,1	54,3	53,9	81,7	9731,7	22254,1	3,2	69,5
IE023	MidWest	81,6	85,3	83,4	27,1	38,5	9348,4	27065,4	4,7	68,5
IE024	South-East (IE)	18,4	82,4	64,8	34,9	50,4	11284,4	25623,1	5,8	65,7
IE025	South-West (IE)	80,0	81,7	60,3	17,2	29,5	23830,4	39910,2	3,8	67,2
ITC11	Torino	90,8	97,1	99,7	136,5	165,2	59311,6	27058,7	4,8	62,7
ITC12	Vercelli	29,9	56,3	97,3	170,9	216,9	4251,1	24010,9	4,7	64,3
ITC13	Biella	5,0	8,5	99,9	162,3	205,6	4653,2	24695,8	5,4	64,3
ITC14	Verbano-Cusio-Ossola	18,8	0,2	99,0	143,0	188,5	3568	22203,3	4,9	63,1
ITC15	Novara	88,5	34,4	100,0	214,9	279,0	8946,5	25511,2	4,6	65,3
ITC16	Cuneo	3,6	35,1	98,4	108,7	126,5	14239,7	25155,7	3,1	68,3
ITC17	Asti	3,3	59,8	99,8	164,3	198,7	4748,8	22376,9	5,1	63,9
ITC18	Alessandria	14,9	72,1	99,3	170,3	209,3	10809,3	25546,8	5,2	64,4
ITC20	Valle d'Aosta/Vallée d'Aoste	99,0	2,4	99,1	112,4	142,6	3376,9	27670,4	3,2	66,3
ITC31	Imperia	97,2	89,3	99,4	79,0	89,3	5012,3	24097,9	7,4	59,2
ITC32	Savona	94,0	68,2	100,0	106,5	123,3	6848	24497,8	5,3	62,9
ITC33	Genova	95,5	98,8	98,2	134,7	160,3	20514,6	23533,1	5,5	60,7
ITC34	La Spezia	84,8	86,0	99,3	112,5	131,8	5003,9	22931,7	5,8	62,3
ITC41	Varese	96,3	85,4	100,0	226,9	297,8	22191,5	26748,7	5,1	65,4
ITC42	Como	87,4	95,7	99,6	227,8	300,7	13731,8	24892,0	4,1	64,2
ITC43	Lecco	68,5	87,8	99,7	230,1	303,8	8937	28031,1	3,2	65,3
ITC44	Sondrio	0,0	0,0	86,6	131,3	172,6	4452,4	24958,4	4,0	61,2
ITC45	Milano	97,3	98,9	100,0	296,7	400,7	135878	35986,9	4,2	67,2
ITC46	Bergamo	95,1	95,7	97,1	218,2	285,5	27827	27721,4	3,2	64,7
ITC47	Brescia	86,7	90,2	97,6	184,7	236,7	33176,9	28855,3	4,2	63,4
ITC48	Pavia	35,7	97,5	99,2	227,1	294,6	12114,7	24000,9	4,3	64,9
ITC49	Lodi	91,3	98,7	100,0	249,4	327,2	4912,9	23913,0	3,5	62,3
ITC4A	Cremona	87,4	96,7	100,0	224,8	289,9	9047,8	26390,4	4,4	62,9
ITC4B	Mantova	68,6	95,4	98,2	186,3	232,8	11293,9	29266,4	3,9	66,2
ITD10	Bolzano-Bozen	84,0	70,9	95,2	86,5	113,0	14297,4	30314,5	2,7	69,2
ITD20	Trento	70,4	90,4	96,5	123,3	155,3	13487,3	27478,6	3,6	65,1
ITD31	Verona	80,9	93,9	99,9	180,6	224,0	23396	27524,7	4,4	64,9
ITD32	Vicenza	36,0	81,3	100,0	161,2	198,2	23250,1	28378,1	3,5	66,0
ITD33	Belluno	5,3	0,4	88,3	92,4	112,8	6031,9	28520,6	3,8	65,4
ITD34	Treviso	86,7	60,4	100,0	138,1	165,4	22111	26817,5	4,1	65,6
ITD35	Venezia	70,0	81,6	99,9	135,0	159,8	22812,9	27733,0	4,4	62,8

ITD36	Padova	67,0	97,6	100,0	170,0	206,3	24631,4	28273,3	4,4	63,9
ITD37	Rovigo	1,9	71,0	85,2	139,2	167,7	5697,2	23365,6	6,2	63,4
ITD41	Pordenone	38,4	69,9	96,0	95,4	110,6	7337,4	24923,7	3,4	64,7
ITD42	Udine	72,2	96,2	97,1	78,6	86,1	13031,6	24821,2	3,3	62,6
ITD43	Gorizia	99,6	98,5	100,0	82,5	85,6	3235,9	23211,9	4,9	60,8
ITD44	Trieste	90,3	100,0	100,0	73,4	73,4	6727,1	28103,8	6,5	63,9
ITD51	Piacenza	63,4	78,5	90,0	182,6	230,3	6637,4	24497,1	4,0	64,7
ITD52	Parma	88,1	88,7	88,7	156,7	193,6	11599,5	29017,8	4,0	67,7
ITD53	Reggio nell'Emilia	71,3	86,1	98,0	162,5	199,9	12985,4	27516,6	3,2	70,3
ITD54	Modena	66,5	92,0	91,8	161,4	198,4	19799,2	30367,1	3,7	69,8
ITD55	Bologna	90,1	95,9	98,5	152,5	187,0	29284,8	31321,2	2,7	69,3
ITD56	Ferrara	42,5	94,2	97,9	137,9	166,5	8228,4	23688,4	5,8	67,9
ITD57	Ravenna	89,2	57,8	99,7	120,0	143,4	9563,4	26909,2	4,1	68,8
ITD58	Forlì-Cesena	92,9	25,4	96,7	108,4	127,2	9865,6	26896,0	4,3	66,9
ITD59	Rimini	98,5	0,0	99,9	89,9	101,8	7422,9	26383,7	4,7	65,4
ITE11	Massa-Carrara	68,6	83,5	99,4	121,7	143,7	3726,2	18757,9	9,0	56,5
ITE12	Lucca	86,1	87,4	96,5	126,4	146,9	8680,1	23021,9	4,2	62,7
ITE13	Pistoia	94,4	94,4	100,0	137,5	162,3	6443,2	23501,0	6,8	66,7
ITE14	Firenze	96,3	97,4	99,1	127,1	151,0	28908	30177,0	4,5	66,7
ITE15	Prato	99,2	99,0	100,0	141,4	168,8	6169,9	26435,8	6,2	64,7
ITE16	Livorno	78,0	80,4	81,9	59,9	66,9	7774,2	23632,9	5,7	56,4
ITE17	Pisa	92,5	96,1	99,4	99,6	113,7	10144	25934,1	5,2	64,2
ITE18	Arezzo	46,1	69,7	97,0	98,8	112,2	7489,3	22686,4	5,3	63,4
ITE19	Siena	55,7	90,6	92,8	86,3	97,2	6400	24727,5	3,1	67,3
ITE1A	Grosseto	0,0	7,0	70,1	62,2	69,2	4283,3	19845,3	5,8	62,3
ITE21	Perugia	71,4	79,8	88,2	90,3	96,9	13826,4	22204,0	6,7	62,6
ITE22	Terni	0,7	81,8	95,1	99,7	110,4	4700,9	20862,9	4,3	58,9
ITE31	Pesaro e Urbino	63,5	50,1	89,9	82,8	91,5	8094	22396,6	3,1	63,9
ITE32	Ancona	67,0	69,1	90,6	73,3	77,7	11738,1	25650,8	4,0	63,8
ITE33	Macerata	36,3	96,6	96,9	77,6	80,2	6879	22226,7	5,2	63,5
ITE34	Ascoli Piceno	18,1	88,6	99,7	78,4	78,1	8234,5	21881,1	6,5	63,2
ITE41	Viterbo	1,3	90,6	93,2	95,4	110,3	6050,2	20460,5	9,0	52,3
ITE42	Rieti	6,1	30,3	87,1	119,5	131,9	3249,3	21407,7	7,8	57,9
ITE43	Roma	87,4	84,5	96,4	152,0	183,4	115849,7	30827,4	7,3	60,8
ITE44	Latina	5,6	31,3	98,0	118,5	122,0	12101,3	23629,1	9,5	53,9
ITE45	Frosinone	0,0	89,3	99,2	116,7	112,7	11209,8	22994,3	8,9	49,9
ITF11	L'Aquila	1,3	88,9	97,7	102,5	101,1	5047,7	16700,1	5,9	56,4
ITF12	Teramo	37,7	98,5	99,3	87,4	84,0	5461,7	18607,8	6,5	58,1

ITF13	Pescara	90,5	98,5	98,7	87,1	80,1	5640,4	18449,3	9,8	57,7
ITF14	Chieti	66,7	92,4	99,3	76,6	64,8	7434,7	19341,2	8,8	57,1
ITF21	Isernia	0,0	75,5	86,4	102,3	80,7	1562,9	17374,2	9,0	51,5
ITF22	Campobasso	9,0	64,2	95,9	87,6	64,3	3773,8	16284,5	10,5	51,1
ITF31	Caserta	82,1	88,0	98,7	152,7	109,9	12529,4	14426,2	12,3	43,0
ITF32	Benevento	6,0	60,7	98,3	141,8	97,6	4240,4	14746,0	12,8	49,7
ITF33	Napoli	98,4	98,9	99,2	188,8	127,3	44317,5	14363,4	17,1	42,0
ITF34	Avellino	33,8	87,2	98,3	134,4	90,8	6929,4	15891,3	13,1	47,8
ITF35	Salerno	55,4	87,3	97,7	93,3	62,9	16915,9	15622,7	12,2	48,6
ITF41	Foggia	76,5	1,3	92,3	72,5	49,7	9701,9	14101,6	18,5	41,0
ITF42	Bari	51,0	73,9	98,7	78,1	53,6	25238,4	16058,1	13,5	46,3
ITF43	Taranto	0,2	8,3	93,2	66,9	45,1	9142	15770,3	12,8	43,8
ITF44	Brindisi	67,3	38,6	100,0	61,7	40,6	5810,9	14506,6	16,3	43,5
ITF45	Lecce	12,8	72,8	99,4	45,9	28,9	10958,7	13680,7	14,4	45,3
ITF51	Potenza	7,6	60,0	82,4	66,7	45,4	6494,3	16535,3	12,4	50,2
ITF52	Matera	0,0	7,7	55,2	61,0	41,6	3182,1	15579,7	12,0	47,5
ITF61	Cosenza	36,7	67,6	74,8	44,8	29,8	10776,9	14681,0	12,3	44,7
ITF62	Crotone	18,7	0,0	80,7	36,4	24,0	2260,6	13056,5	15,5	39,7
ITF63	Catanzaro	76,4	33,4	91,1	45,6	30,5	6429,9	17426,6	15,4	45,2
ITF64	Vibo Valentia	83,3	49,4	97,6	44,6	29,3	2454,7	14448,5	13,1	43,5
ITF65	Reggio di Calabria	78,4	79,2	97,6	49,4	31,8	7686,3	13597,8	16,3	46,0
ITG11	Trapani	95,1	21,0	96,9	38,9	24,1	6088,3	14200,2	15,8	43,7
ITG12	Palermo	88,2	90,9	93,4	56,8	35,3	17809,5	14379,1	19,2	43,2
ITG13	Messina	49,9	85,0	94,4	54,6	34,8	10092,8	15317,1	13,1	47,9
ITG14	Agrigento	0,7	0,0	85,8	43,4	26,4	5757,2	12602,8	17,7	41,5
ITG15	Caltanissetta	0,0	0,0	98,2	48,3	30,1	3921	14211,3	19,2	42,3
ITG16	Enna	43,8	45,7	97,8	55,7	35,0	2419,6	13800,4	19,4	41,2
ITG17	Catania	86,1	88,0	98,9	62,6	39,8	15255,6	14293,5	15,3	43,8
ITG18	Ragusa	0,0	0,0	100,0	43,1	27,7	4818,2	15833,9	10,8	52,3
ITG19	Siracusa	35,7	43,4	97,6	54,3	35,0	6340,6	15956,7	14,6	41,0
ITG21	Sassari	66,2	60,5	81,2	18,2	14,9	8455,2	18353,6	15,2	52,2
ITG22	Nuoro	5,9	0,7	61,0	19,2	15,0	4554,6	17252,7	10,3	52,0
ITG23	Oristano	0,0	0,0	91,6	20,9	16,2	2625,4	17115,6	10,2	52,9
ITG24	Cagliari	68,7	65,6	88,2	23,1	17,5	13192,8	17244,9	12,9	50,7
LT001	Alytaus (Apskritis)	0,8	19,5	n.a.	31,1	6,7	1424,2	7706,4	8,2	59,7
LT002	Kauno (Apskritis)	77,0	85,9	n.a.	40,7	8,8	7239,2	10469,7	8,9	61,0
LT003	Klaipedos (Apskritis)	67,9	0,4	n.a.	29,3	5,4	4348,6	11346,6	7,0	62,2
LT004	Marijampoles (Apskritis)	13,1	40,4	n.a.	34,4	6,8	1338,7	7168,9	3,0	57,7

LT005	Panevezio (Apskritis)	0,0	1,6	n.a.	27,8	6,0	2772,2	9392,2	10,8	60,7
LT006	Siauliu (Apskritis)	0,0	68,3	n.a.	33,0	6,7	3088,2	8482,3	10,1	62,8
LT007	Taurages (Apskritis)	0,4	1,7	n.a.	27,8	5,2	763,7	5753,8	6,0	64,6
LT008	Telsiu (Apskritis)	0,6	2,4	n.a.	29,2	5,4	1730	9711,4	7,9	62,3
LT009	Utenos (Apskritis)	0,5	15,2	n.a.	25,2	5,6	1659	9160,0	6,0	62,4
LT00A	Vilniaus (Apskritis)	84,3	87,1	n.a.	35,3	9,2	13368,6	15757,4	8,6	65,0
LU000	Luxemburg (Grand-Duché)	95,2	99,0	100,0	168,0	203,7	24468,1	54180,9	4,5	63,6
LV003	Kurzeme	0,7	45,5	n.a.	21,1	3,9	2696,3	3667,2	11,0	60,5
LV005	Latgale	0,0	82,0	n.a.	8,7	1,6	1665,4	5743,0	13,1	53,3
LV006	Riga	100,0	100,0	n.a.	42,9	15,3	13145	35608,7	7,9	69,4
LV007	Pieriga	67,3	78,3	n.a.	25,9	7,7	2201,8	6060,8	8,0	66,3
LV008	Vidzeme	0,0	0,5	n.a.	12,8	3,2	1438,1	5794,0	8,4	62,0
LV009	Zemgale	6,5	52,4	n.a.	24,5	5,9	1461,2	4663,4	6,2	60,1
MT001	Malta	100,0	100,0	99,4	0,0	0,0			7,1	53,9
MT002	Gozo and Comino - Ghawdex u kemmuna	100,0	100,0	0,0	0,0	0,0			6,0	53,9
NL11	Groningen	82,1	99,2	99,9	106,7	127,0	18993,3	33067,3	6,6	69,4
NL12	Friesland	11,5	89,7	97,5	122,3	148,2	14588,7	22721,5	4,9	71,9
NL13	Drenthe	55,4	97,5	100,0	158,1	184,1	10473,1	21709,7	5,7	72,2
NL21	Overijssel	0,3	96,5	99,9	233,2	271,1	27011,5	24433,5	4,9	72,9
NL22	Gelderland	0,4	94,1	99,9	298,3	363,3	46972,5	23881,1	4,3	73,7
NL23	Flevoland	18,6	75,9	96,1	236,0	297,8	7521,9	20899,7	6,6	73,5
NL31	Utrecht	27,6	99,7	99,9	323,3	424,3	39546	34025,1	3,7	75,9
NL32	Noord-Holland	69,5	92,6	99,2	207,3	276,4	85661,7	33109,0	4,9	73,7
NL33	Zuid-Holland	90,0	95,7	97,7	308,5	403,8	98648,9	28577,8	4,9	73,0
NL34	Zeeland	0,0	91,7	99,8	261,5	326,8	9689,8	25564,9	3,3	73,1
NL41	Noord-Brabant	41,0	98,7	99,9	337,5	424,4	67193,1	27915,8	3,9	74,3
NL42	Limburg (NL)	74,9	99,8	100,0	355,7	425,6	28546,5	25055,4	5,4	70,1
NO011	Oslo	n.a.	n.a.	n.a.	54,6	100,0	n.a.	n.a.	5,5	74,8
NO012	Akershus	n.a.	n.a.	n.a.	39,4	68,6	n.a.	n.a.	3,6	77,1
NO021	Hedmark	n.a.	n.a.	n.a.	8,9	13,4	n.a.	n.a.	4,7	72,3
NO022	Oppland	n.a.	n.a.	n.a.	8,8	13,3	n.a.	n.a.	3,6	75,8
NO031	Østfold	n.a.	n.a.	n.a.	31,9	48,4	n.a.	n.a.	4,7	73,4
NO032	Buskerud	n.a.	n.a.	n.a.	17,9	29,5	n.a.	n.a.	3,7	76,8
NO033	Vestfold	n.a.	n.a.	n.a.	35,4	51,6	n.a.	n.a.	4,6	73,3
NO034	Telemark	n.a.	n.a.	n.a.	13,2	19,3	n.a.	n.a.	6,2	72,6
NO041	Aust-Agder	n.a.	n.a.	n.a.	10,5	14,2	n.a.	n.a.	4,4	71,4
NO042	Vest-Agder	n.a.	n.a.	n.a.	8,5	11,8	n.a.	n.a.	4,8	74,9

NO043	Rogaland	n.a.	n.a.	n.a.	10,6	16,3	n.a.	n.a.	3,8	75,4
NO051	Hordaland	n.a.	n.a.	n.a.	10,3	15,4	n.a.	n.a.	4,1	76,2
NO052	Sogn og Fjordane	n.a.	n.a.	n.a.	5,1	7,1	n.a.	n.a.	4,6	76,5
NO053	Møre og Romsdal	n.a.	n.a.	n.a.	4,9	6,6	n.a.	n.a.	3,9	74,8
NO061	Sør-Trøndelag	n.a.	n.a.	n.a.	5,1	6,8	n.a.	n.a.	3,6	75,3
NO062	Nord-Trøndelag	n.a.	n.a.	n.a.	3,4	4,1	n.a.	n.a.	3,1	70,7
NO071	Nordland	n.a.	n.a.	n.a.	1,7	2,0	n.a.	n.a.	5,4	73,6
NO072	Troms	n.a.	n.a.	n.a.	1,8	2,2	n.a.	n.a.	4,2	74,4
NO073	Finnmark	n.a.	n.a.	n.a.	0,5	0,5	n.a.	n.a.	5,9	72,1
PL111	Lódzki	23,5	55,5	95,8	132,1	31,3	7927,8	8443,7	16,5	49,9
PL112	Piotrkowsko-skierniewicki	1,3	48,6	94,4	139,0	33,8	7929,8	9043,9	17,3	48,4
PL113	Miasto Lódz	100,0	100,0	100,0	162,6	38,7	10192	13125,2	18,2	49,4
PL121	Ciechanowsko-plocki	0,0	65,4	93,0	93,0	27,0	7612,1	12100,1	19,8	57,5
PL122	Ostrolecko-siedlecki	0,0	61,4	72,7	72,5	21,0	5753,5	7634,7	16,2	59,9
PL124	Radomski	0,0	81,2	95,1	113,0	28,1	5807,3	7911,7	22,2	58,5
PL126	Warszawski	36,0	40,6	93,4	132,3	44,0	13792,5	10348,9	13,8	48,7
PL127	Miasto Warszawa	87,0	94,9	100,0	163,6	62,5	51973,3	30733,3	9,6	63,2
PL211	Krakowsko-tarnowski	15,1	80,0	99,6	154,4	34,7	10541,2	7553,7	15,0	60,2
PL212	Nowosadecki	0,3	58,4	99,5	132,0	28,9	7009,4	6352,8	16,3	51,2
PL213	Miasto Kraków	70,2	100,0	100,0	159,7	39,3	12812,6	16914,0	14,2	51,0
PL224	Czestochowski	14,4	93,9	96,4	150,8	35,9	5331,1	9882,6	21,5	44,1
PL225	Bielsko-bialski	0,6	92,5	98,5	166,8	43,7	7221,7	11190,2	15,7	42,9
PL226	Centralny slaski	32,3	88,5	99,8	190,2	48,4	37959,6	13179,7	19,5	41,6
PL227	Rybnicko-jastrzebski	0,3	49,7	100,0	195,1	51,9	7203,9	11210,0	17,5	42,3
PL311	Bialskopodlaski	0,0	9,9	86,4	59,2	11,8	2023,1	6481,5	17,8	51,4
PL312	Chelmsko-zamojski	0,0	50,8	97,4	51,8	8,8	4319,3	6527,2	10,8	61,8
PL313	Lubelski	0,0	88,9	97,0	86,0	17,8	10216,9	8414,7	15,4	54,1
PL321	Rzeszowsko-tarnobrzeski	44,8	77,6	99,7	102,0	18,5	9813,3	8486,6	15,9	53,2
PL322	Krosniensko-przemyski	9,3	51,1	97,7	77,5	13,3	6162,6	6547,9	17,6	51,2
PL330	Swietokrzyski	0,0	67,2	99,0	123,6	26,2	10892,1	8443,0	18,9	51,6
PL341	Bialostocko-suwalski	0,0	46,3	75,8	41,7	8,5	7621,7	8534,7	14,3	59,0
PL342	Lomzynski	0,0	73,1	72,7	52,2	12,0	2185,5	7034,5	14,6	50,7
PL411	Pilski	0,2	77,8	88,1	72,3	20,4	3727,3	9186,9	24,4	44,2
PL412	Poznanski	22,8	55,3	90,7	91,1	28,1	12126,8	10567,2	15,5	51,1
PL413	Kaliski	0,0	12,6	86,1	109,5	26,8	7040,4	8790,3	18,2	60,1
PL414	Koninski	0,0	0,7	90,2	122,5	28,6	3841,6	8816,0	19,3	60,9
PL415	Miasto Poznan	100,0	100,0	100,0	101,3	31,5	12698	22183,0	11,8	53,3
PL421	Szczecinski	35,0	53,9	79,4	67,3	33,9	11747,1	10661,1	21,7	48,6

PL422	Koszalinski	0,0	65,7	68,7	48,4	14,4	5459,5	9198,7	24,5	47,7
PL431	Gorzowski	4,3	34,6	92,0	87,4	47,8	3707	9726,4	18,5	56,1
PL432	Zielonogórski	0,0	90,7	94,4	89,4	44,2	6144,9	9788,2	19,5	48,0
PL511	Jeleniogórsko-walbrzyski	0,0	52,5	94,0	110,4	37,5	11665,2	8808,7	26,5	44,9
PL512	Legnicki	0,0	13,7	98,7	95,9	30,9	6899,2	13838,3	24,0	50,3
PL513	Wroclawski	16,4	38,9	70,7	116,2	30,8	3743,5	8589,7	20,5	54,3
PL514	Miasto Wroclaw	92,0	99,9	100,0	125,4	34,0	9868,5	15495,3	16,5	54,0
PL520	Opolski	0,0	63,9	91,7	139,1	35,2	9879,9	9377,8	16,9	52,5
PL611	Bydgoski	61,9	73,7	94,1	95,3	22,0	10532,7	10390,7	20,4	49,5
PL612	Torunsko-wloclawski	2,0	78,9	97,0	98,2	22,8	9643,8	9146,1	19,4	53,4
PL621	Elblaski	4,6	16,1	95,3	61,4	13,7	4240,4	7959,2	20,3	48,6
PL622	Olsztynski	0,5	70,6	73,5	44,4	10,1	5859,3	9577,9	18,1	54,3
PL623	Elcki	0,0	3,6	32,5	33,7	6,9	1999,6	7036,3	27,3	36,4
PL631	Slupski	0,0	61,6	89,7	49,1	11,5	3898,4	8160,5	27,2	51,0
PL632	Gdanski	21,6	34,0	85,0	68,4	15,2	7629,3	7951,9	20,0	49,8
PL633	Gdansk-Gdynia-Sopot	61,8	100,0	100,0	79,6	19,0	11828,8	15684,1	11,5	52,6
PT11	Norte	39,5	91,8	89,4	66,6	34,1	47045,3	12648,1	8,8	65,9
PT15	Algarve	57,7	66,9	66,9	23,7	15,2	6773,9	16585,5	6,2	68,0
PT16	Centro (PT)	2,4	90,5	84,3	66,9	36,3	32786	13824,1	5,2	71,4
PT17	Lisboa	95,3	99,4	96,6	96,8	75,8	62559,1	22744,9	8,6	66,8
PT18	Alentejo	5,8	68,7	46,5	42,8	28,3	11602,1	15114,5	9,1	67,0
PT20	Região Autónoma dos Açores (PT)	0,0	0,0	0,0	2,5	1,3	3410,7	14175,1	4,1	63,0
PT30	Região Autónoma da Madeira (PT)	0,0	0,0	0,0	7,9	5,6	4759	19532,4	4,5	67,6
RO011	Bacau	50,7	61,5	84,9	67,7	6,6	4399	6076,0	4,4	67,6
RO012	Botosani	13,3	13,7	73,0	43,3	3,5	1668,3	3626,7	5,0	71,6
RO013	Iasi	45,4	56,8	80,4	60,3	5,3	4754,5	5812,3	3,8	61,1
RO014	Neamt	3,8	11,6	93,9	65,5	6,0	2807,3	4916,5	11,5	45,2
RO015	Suceava	36,6	54,8	81,5	45,0	4,0	3561,1	5051,2	5,1	63,6
RO016	Vaslui	0,0	0,4	83,6	53,2	4,7	1757,1	3811,5	7,5	59,3
RO021	Braila	0,0	52,6	75,7	67,1	7,5	2191,6	5891,4	9,4	66,3
RO022	Buzau	0,0	0,8	83,8	83,9	10,1	2717,5	5478,8	4,2	60,1
RO023	Constanta	69,6	78,9	87,3	48,2	5,9	6438,4	9017,4	10,7	50,5
RO024	Galati	0,0	48,7	77,3	57,3	5,8	3926,1	6312,1	7,1	52,9
RO025	Tulcea	0,0	20,8	73,6	34,0	3,7	1546	6086,6	16,3	41,5
RO026	Vrancea	0,0	0,0	75,5	66,6	7,0	2030,6	5153,8	2,3	56,2
RO031	Arges	0,0	77,7	95,3	89,0	11,1	4965,7	7663,1	5,8	75,2

RO032	Calarasi	2,1	9,2	70,6	87,0	12,3	1633	5119,1	12,6	58,4
RO033	Dâmbovita	0,4	67,8	81,5	115,5	15,9	2920,1	5427,7	10,6	47,5
RO034	Giurgiu	3,8	53,9	62,9	110,3	17,2	1271,8	4416,0	3,6	75,9
RO035	Ialomita	0,2	0,5	59,8	79,6	10,4	1931,4	6591,8	8,3	63,3
RO036	Prahova	17,3	81,7	87,5	109,4	14,4	5566,4	6706,5	14,6	45,6
RO037	Teleorman	0,0	0,8	67,9	86,1	11,3	2137	4993,0	7,6	52,7
RO041	Dolj	0,0	58,1	67,7	60,3	6,6	4239,8	5872,3	5,7	71,9
RO042	Gorj	0,0	62,9	66,0	56,4	6,7	3179,3	8236,5	15,1	41,6
RO043	Mehedinti	0,0	0,4	58,6	43,0	4,8	1739,3	5684,0	9,3	49,4
RO044	Olt	0,0	12,6	83,1	78,4	9,0	2420,7	4960,5	3,9	81,1
RO045	Vâlcea	0,2	6,6	78,6	71,6	8,4	2753,4	6602,9	4,0	40,5
RO051	Arad	0,0	65,8	66,4	55,5	9,6	3962,9	8596,3	6,6	43,5
RO052	Caras-Severin	0,0	50,3	81,5	36,6	4,8	2215,1	6652,0	8,7	64,0
RO053	Hunedoara	0,0	38,7	92,6	53,9	6,9	3415,4	7042,1	7,9	50,0
RO054	Timis	58,8	73,3	91,8	48,5	8,3	6676,3	10131,0	5,0	66,3
RO061	Bihor	38,9	58,8	82,8	61,4	10,5	4733	7914,7	4,7	50,9
RO062	Bistrita-Nasaud	0,0	0,0	63,8	46,9	5,3	1787,6	5621,4	5,3	72,5
RO063	Cluj	64,7	76,9	90,5	61,4	8,1	6269,6	9060,1	5,2	56,7
RO064	Maramures	25,1	39,4	81,1	42,0	5,0	2891	5591,9	9,6	48,0
RO065	Satu Mare	51,5	5,4	82,6	56,3	8,5	2355,1	6348,0	5,2	50,5
RO066	Salaj	0,1	1,3	80,1	59,3	8,1	1409,3	5682,7	5,7	69,9
RO071	Alba	0,8	53,0	80,3	61,0	7,8	2780,6	7279,1	6,6	65,0
RO072	Brasov	0,0	81,8	91,0	73,5	9,0	5200,1	8725,0	11,8	49,5
RO073	Covasna	0,0	47,8	70,2	71,3	8,3	1571	7013,4	8,1	58,4
RO074	Harghita	0,0	0,0	72,4	57,9	6,2	2010,9	6130,8	5,5	56,6
RO075	Mures	0,0	73,4	90,8	58,6	6,9	4417,8	7564,7	9,8	46,4
RO076	Sibiu	42,8	52,0	87,2	64,0	7,9	3375,1	7979,0	6,6	57,2
RO081	Bucuresti (capital)	100,0	100,0	100,0	152,3	27,5	27809,8	25144,5	6,8	61,0
RO082	Ilfov	92,2	95,7	95,8	143,2	23,4	2793,9	2533,0	7,9	47,0
SE010	Stockholms län	85,2	88,5	90,8	51,8	87,5	66503,5	35620,8	6,7	74,9
SE021	Uppsala län	49,1	77,6	83,1	34,5	51,8	6589,4	21852,1	6,7	72,0
SE022	Södermanlands län	43,9	51,1	52,8	36,9	54,0	5343,6	20494,2	8,7	68,8
SE023	Östergötlands län	71,6	62,6	70,5	23,1	29,1	9073,3	21838,9	8,6	69,8
SE024	Örebro län	70,1	73,4	66,5	21,1	26,8	6394,3	23342,0	9,2	69,1
SE025	Västmanlands län	70,8	80,5	82,0	29,8	40,9	5661,2	21725,0	7,4	73,6
SE041	Blekinge län	63,7	91,6	63,4	18,6	23,0	3517,4	23430,8	9,2	69,3
SE044	Skåne län	83,1	90,3	83,2	52,5	76,4	27458,2	23734,9	8,4	69,7
SE061	Värmlands län	44,8	48,1	45,5	15,2	21,4	6100,3	22298,9	7,2	70,9

SE062	Dalarnas län	37,9	48,0	30,4	9,2	11,9	6300,9	22804,8	8,0	71,5
SE063	Gävleborgs län	0,0	42,4	58,4	9,5	12,0	6156,3	22245,2	10,9	67,9
SE071	Västernorrlands län	54,0	48,7	34,6	4,4	5,3	5953,2	24382,0	8,4	71,9
SE072	Jämtlands län	21,8	41,7	39,4	2,6	3,1	2814,1	22064,0	7,8	71,3
SE081	Västerbottens län	46,8	36,9	34,7	2,1	2,5	5792,3	22588,2	7,9	70,9
SE082	Norrbottens län	25,6	38,6	31,6	1,6	1,9	6311,7	24972,9	9,5	68,7
SE091	Jönköpings län	35,3	51,7	44,1	22,0	27,6	7868,5	23916,9	5,2	78,1
SE092	Kronobergs län	59,5	62,8	68,0	22,1	28,7	4314,7	24256,6	5,3	77,6
SE093	Kalmar län	46,3	28,8	47,4	13,5	16,1	5061,2	21564,2	7,1	69,9
SE094	Gotlands län	33,8	37,2	0,0	6,9	7,5	1226,8	21298,8	7,9	70,9
SE0A1	Hallands län	79,3	89,9	98,1	38,8	52,0	6042	21382,4	6,4	74,8
SE0A2	Västra Götalands län	70,2	85,6	86,1	28,5	37,1	38149,4	25122,7	6,9	73,1
SI001	Pomurska	22,5	29,5	99,8	62,7	44,0	1519,7	12348,0	11,0	62,2
SI002	Podravska	96,7	96,7	99,4	63,2	46,1	4833,3	15131,2	8,7	62,4
SI003	Koroska	69,3	89,0	99,2	73,0	59,8	1025	13877,6	6,8	64,1
SI004	Savinjska	69,1	99,7	99,7	64,2	48,8	4109,9	16003,7	8,1	65,9
SI005	Zasavska	29,6	100,0	100,0	65,0	49,8	587,5	12838,2	8,8	63,3
SI006	Spodnjeposavska	69,8	91,9	98,1	47,7	33,8	1000	14274,5	7,4	64,8
SI009	Gorenjska	95,0	99,0	99,6	74,7	67,8	3060	15467,5	4,7	66,6
SI00A	Notranjsko-kraska	74,3	90,6	87,2	58,7	52,5	702,6	13800,0	5,1	69,4
SI00B	Goriska	61,6	75,0	98,5	75,1	73,0	2053	17145,2	4,2	66,5
SI00C	Obalno-kraska	7,6	99,9	100,0	66,1	65,0	1942,6	18499,4	4,8	66,4
SI00D	Jugovzhodna Slovenija	18,6	64,6	77,4	44,4	34,3	2262,9	16297,7	5,6	68,2
SI00E	Osrednjeslovenska	93,9	99,9	99,6	69,0	57,3	12694,3	25639,8	4,9	68,7
SK010	Bratislavský kraj	88,8	93,2	97,5	130,8	89,1	16693,5	27832,4	5,3	69,6
SK021	Trnavský kraj	26,2	88,2	99,4	125,0	66,3	6915,5	12527,8	10,5	64,2
SK022	Trencianský kraj	0,0	88,4	97,7	128,8	45,1	6713,4	11148,8	8,1	62,5
SK023	Nitrianský kraj	0,0	76,5	98,7	118,6	50,7	7500,2	10567,4	17,8	56,1
SK031	Zilinský kraj	0,0	67,3	92,9	121,4	32,9	6887	9930,8	15,3	57,1
SK032	Banskobystrický kraj	30,6	66,4	96,4	98,6	30,5	6684,4	10144,0	23,9	53,2
SK041	Presovský kraj	10,7	49,9	95,7	92,4	18,6	5888,8	7409,0	21,5	53,4
SK042	Kosický kraj	47,0	56,7	89,8	84,5	18,3	8361,4	10872,1	24,7	49,5
UKC1	Tees Valley and Durham	58,1	98,7	n.a.	132,1	137,1	22136,3	19285,7	6,0	66,6
UKC2	Northumberland, Tyne and Wear	87,6	93,1	n.a.	86,7	91,7	31064,8	22278,1	6,1	67,1
UKD1	Cumbria	0,0	51,1	n.a.	100,5	107,0	10134	20584,8	3,8	76,6
UKD2	Cheshire	93,2	99,9	n.a.	288,4	318,3	27702,4	27940,4	3,3	73,5
UKD3	Greater Manchester	91,9	100,0	n.a.	329,5	364,3	63343,8	24987,7	4,8	69,8

UKD4	Lancashire	48,3	99,3	n.a.	226,5	245,6	31415,7	21937,7	4,3	70,4
UKD5	Merseyside	76,8	100,0	n.a.	247,6	266,7	25632,2	18777,9	5,6	65,9
UKE1	East Riding and North Lincolnshire	51,7	91,0	n.a.	171,4	187,8	19784,4	22365,7	5,4	68,0
UKE2	North Yorkshire	38,4	76,4	n.a.	179,4	193,5	18490,9	24265,5	2,9	76,3
UKE3	South Yorkshire	0,0	98,5	n.a.	297,9	328,3	26078,8	20445,6	5,3	68,5
UKE4	West Yorkshire	82,7	99,5	n.a.	293,2	323,2	51975,8	24727,5	4,6	72,0
UKF1	Derbyshire and Nottinghamshire	77,6	99,0	n.a.	312,8	354,0	48314,9	24040,4	4,3	72,5
UKF2	Leicestershire, Rutland and Northants	69,0	99,2	n.a.	289,0	368,3	43090,9	27154,7	4,6	74,8
UKF3	Lincolnshire	4,5	63,3	n.a.	183,3	215,2	13522,2	20200,4	3,3	73,1
UKG1	Herefordshire, Worcestershire and Warks	58,6	92,9	n.a.	233,7	289,9	30014,3	24003,9	2,6	76,5
UKG2	Shropshire and Staffordshire	30,0	95,8	n.a.	247,3	282,3	31583,5	21086,8	3,6	73,5
UKG3	West Midlands	74,9	100,0	n.a.	313,5	375,3	64749,9	25108,8	6,3	67,1
UKH1	East Anglia	46,8	85,6	n.a.	166,3	222,3	54719,7	24556,0	4,1	74,9
UKH2	Bedfordshire, Hertfordshire	82,6	97,4	n.a.	330,9	513,6	47936,1	29661,3	3,8	76,1
UKH3	Essex	45,1	97,3	n.a.	284,4	422,3	36706,7	22483,2	3,8	74,8
UKI1	Inner London	100,0	100,0	n.a.	484,5	815,0	191304,7	65564,4	7,8	62,7
UKI2	Outer London	96,9	100,0	n.a.	462,5	749,2	110241,3	24548,6	6,5	70,3
UKJ1	Berkshire, Bucks and Oxfordshire	57,8	96,3	n.a.	304,2	456,1	79337,2	37481,6	3,5	78,0
UKJ2	Surrey, East and West Sussex	48,6	92,3	n.a.	337,3	500,5	72332,4	28099,0	3,7	75,5
UKJ3	Hampshire and Isle of Wight	89,6	96,0	n.a.	258,6	366,5	45850,6	25483,1	3,9	75,0
UKJ4	Kent	12,4	96,0	n.a.	297,4	420,7	34345,6	21397,6	4,2	74,4
UKK1	Gloucestershire, Wiltshire and North Somerset	66,5	96,1	n.a.	215,4	289,3	68019,2	30935,9	3,5	77,9
UKK2	Dorset and Somerset	47,6	73,8	n.a.	146,6	184,7	25944,5	21443,7	3,5	74,6
UKK3	Cornwall and Isles of Scilly	55,7	26,8	n.a.	48,5	47,1	8797,2	17065,6	3,4	72,3
UKK4	Devon	82,6	85,3	n.a.	79,9	87,6	22938,8	20955,5	3,8	73,2
UKL1	West Wales and The Valleys	4,6	81,5	n.a.	94,8	103,5	32332,6	17274,0	5,1	66,4
UKL2	East Wales	50,1	88,3	n.a.	144,4	166,7	28438,4	26491,8	3,5	71,4
UKM1	North Eastern Scotland	62,6	74,4	n.a.	23,1	29,7	16609,5	33125,6	3,9	76,8
UKM2	Eastern Scotland	69,3	90,0	n.a.	70,7	81,2	49782,2	26005,0	5,0	73,4
UKM3	South Western Scotland	90,6	96,8	n.a.	76,1	84,4	54625,1	23942,7	6,3	69,4
UKM4	Highlands and Islands	51,9	42,2	n.a.	13,5	14,8	7202,9	19432,6	3,7	73,4
UKN0	Northern Ireland	65,8	87,3	n.a.	44,1	49,4	36436,1	21351,7	4,7	66,0