



Territorial Observation No. 3
September 2010

Territorial Dynamics in Europe
Trends in Economic Performance of
European Regions 2000-2006

The ESPON 2013 Programme

Coordination Unit
70, rue de Luxembourg
Esch-sur-Alzette
LUXEMBOURG
Phone: +352 545580700
Fax: +352 545580701
Email: info@espon.eu

This publication is part-financed by the European Regional Development Fund, the EU Member States and the Partner States, Iceland, Liechtenstein, Norway and Switzerland. The Managing Authority responsible for the ESPON 2013 Programme is the Ministry for Sustainable Development and Infrastructures of Luxembourg.

ISBN: 978-2-9599669-4-1

© ESPON 2013 Programme

Reproduction is authorised provided the source is acknowledged and a copy is sent to the ESPON Coordination Unit.

First edition, printed in September 2010

In the same series of ESPON publications:

Territorial Observation No.1:
“Territorial Dynamics in Europe – Trends in Population development”, November 2008

Territorial Observation No.2:
“Territorial Dynamics in Europe – Trends in Accessibility”, November 2009

Printed on paper produced environmentally friendly

Disclaimer:
The content of this publication is based on applied research results provided by the ESPON 2013 Programme. As such, the maps and their corresponding texts do not necessarily reflect the opinion of the ESPON Monitoring Committee.

The European Union has since 2000 implemented the Lisbon Strategy aiming at boosting European competitiveness and making Europe the world's leading knowledge-economy by 2010, based on the principle of sustainable development. Due to this fact R&D, education and climate change have been high on the political agenda in every European Member State.

In the meanwhile, the global economic downturn has emphasized a focus on growth and employment in the Lisbon Strategy context, and made responses to Europe's major challenges – accelerating globalisation, climate change and ageing population – even more urgent.

The EU has consequently adopted a new global strategy for the period beyond 2010, the so called Europe 2020 Strategy, a successor to the Lisbon Strategy focused on “smart, sustainable and inclusive growth”. This new common agenda shall help the EU to recover from the crisis and to achieve high levels of employment and productivity as well as social and territorial cohesion, where knowledge and innovation are the key factors.

This ESPON Territorial Observation No.3 intends to give policy makers and practitioners short and concise information on territorial dimensions of these strategies by comparing the position of regions around Europe. Benchmarking European regions support the understanding of their territorial potentials and dynamics. It gives as well insight of the regional diversity in economic performance related to the Lisbon/Europe 2020 Strategy.

The content and maps included in this publication includes results from an ESPON project¹ providing most recent data for 2001-2006 on seven regionalised Lisbon short list of indicators. The indicators and derived trends cover all 27 EU Member States plus Iceland, Liechtenstein, Norway and Switzerland. In providing comparable regional information across Europe, NUTS 2 regions have been chosen.

Please note that the latest data available for most of the indicators analysed display the situation in 2006. Consequently, the majority of maps presented can not reflect effects of the recent global economic downturn.

The ESPON 2013 Programme will continue observing territorial trends and dynamics in Europe. Looking into economic, social and environmental developments will contribute to better understand Europe's territorial diversity at different geographical levels and lead towards an integrated long-term better use of territorial potentials.

The underlying report and data are available at www.espon.eu

¹ ESPON (2009), “Update on maps and related data on economic Lisbon indicators”, elaborated by Tomas Hanell, Eurofutures, Finland.

Territorial Dynamics in Europe

Trends in Economic Performance of European Regions 2000-2006

Foreword		page 3
1	Territorial Dynamics related to the Lisbon/Europe 2020 Strategy	page 5
	– What should policy makers be aware of and consider?	
	– How may the global economic downturn affect European regions?	
1.1	Summary Points for Policy Consideration	page 5
1.2	Territorial Impacts of the Global Economic Downturn	page 6
2.	Regional/local contributions to the Lisbon/2020 Strategy	page 7
	– Which regions are improving or weakening their economic performance?	
	– What territorial patterns can be identified?	
	– Which trends are the most important between 2001 and 2006?	
2.1	Regional Unemployment in Europe	page 7
2.2	R&D Investments in European Regions	page 8
2.3	Trends in Economic Performance 2001-2006	page 9
3.	Territorial Reflections related to the Europe 2020 Strategy	page 14
	– What indicators could measure progress on the Europe 2020 ambitions?	
3.1	Geography of Higher Education: Tertiary Educated People in Labour Force	page 14
3.2	Elements in a Greener Economy: Renewable Energy Consumption and Potentials	page 16
Maps and Figures		
	Map 1: Regional Unemployment, 2008	page 7
	Map 2: R&D Expenditure as percentage of GDP, 2006	page 9
	Map 3: Composite Economic Lisbon Performance, 2006	page 10
	Map 4: Change in Composite Economic Lisbon Performance 2000-2006	page 11
	Map 5: Tertiary Educated People in Labour Force, 2007	page 15
	Map 6: Wind Power potential, 2005	page 17
	Figure 1: Regional changes within countries in Economic Lisbon Performance 2000-2006	page 12
	Figure 2: Share of renewable in gross final consumption of energy, 2005	page 16

1 – Territorial Dynamics related to the Lisbon/Europe 2020 Strategy

What should policy makers be aware of and consider?

The European Union has set a strategic goal for this decade “of becoming the most competitive and dynamic knowledge-based economy in the world capable of sustainable economic growth with more and better jobs and greater social cohesion”.

In order to measure the progress of this strategy a set of indicators has been agreed. The indicators cover the five domains of employment, innovation and research, economic reform, social cohesion, the environment as well as general economic background.

The Lisbon Strategy objectives remain important for Europe regardless the fact that the original goals set for 2010 will not be fully met, also due to the global economic downturn starting in 2007.

Regions and cities play a major role in contributing to the fulfilment of the strategy. The strategy therefore has a clear territorial dimension where the diversity of dynamics and potentials of each region and city will define their contribution. Subsequently, monitoring of the territorial aspects related to the strategic goals as well as the policy responses from regions and cities is as essential as ever.

In 2004, the Commission suggested a “short list” of 14 structural indicators, allowing for a “concise presentation and a better assessment of achievements over time vis-à-vis the Lisbon agenda” which the European Council agreed. Of these 14 indicators only the indicator, “dispersion of regional employment rates” by definition incorporates a territorial dimension. However, the other indicators also display a territorial diversity.

The rate of unemployment is a key indicator from the Lisbon strategy when measuring economic performance. It is highly correlated with other key economic indicators, such as GDP per capita.

Research and Development spending is another key indicator telling more about the current level of knowledge driven support and innovation as well as the investment in a future knowledge based economy.

ESPO has established a composite benchmark index including 7 of the 14 Lisbon indicators in a regionalised analysis of the economic Lisbon performance. The index combines these regional indicators into an index which basically show the capability of individual European regions in improving their economic competitiveness related to the objectives.

- The European Union clearly has regions that are better equipped than others in terms of economic Lisbon performance. And different potential exists.
- Stimulating improvements in the competitiveness of currently underperforming regions and places may support a better balanced territory at regional, national and/or European scale.

“Europe 2020” being the successor of the Lisbon Strategy builds on its achievements. It intends to identify sources of growth that could respond to Europe’s main challenges and “turn the EU into a smart, sustainable and inclusive economy”². In the pursuit of these objectives, the European Commission has put emphasis on five EU goals: Employment, R&D, climate/energy, high education and social inclusion which are being translated into national targets.

The more explicit focusing by the Europe 2020 Strategy on high education and a greener economy, challenges the definition of relevant indicators that can display the situation in regions and cities. Looking at potential additional indicators the share of highly educated people and the consumption of and potential for renewable energy shall be seen as first appetizers.

- The territorial patterns in high level education and renewable energy consumption both display significant differences between regions.
- A significant territorial diversity of development potentials for European regions and cities is the starting point also for the implementation of the Europe 2020 Strategy.

All territories possess development opportunities and sound policy decisions at all levels require evidence, knowledge and understanding of the position of regions and cities both within Europe in order to construct the necessary tailor made policy decisions.

1.1 Summary Points for Policy Consideration

The global economic challenges and the diverse conditions for European regions and cities in contributing efficiently to the European Strategies, make it evident to identify and mobilize the territorial capital of the individual region.

² COM (2010) 2020, Communication from the Commission, Europe 2020 – A strategy for smart, sustainable and inclusive growth”.

1 – Territorial Dynamics related to the Lisbon/Europe 2020 Strategy

In today's increasingly integrating world this will require benchmarking of regions in their European context, and progressively more in the international competitive environment.

Policy makers engaged with competitiveness and territorial cohesion at regional/local, national and/or European level should in particular take the following key points into consideration:

- From a European perspective, territorial patterns emerge with strengthened positions of regions in the West and North compared to the East and South of Europe, and with better potentials in core regions than in more peripheral ones.
- The best educated labour force can be found in Northern Europe and in large European cities.
- However, only 19 out of 287 NUTS 2 regions met the European target of 3% for R&D expenditure.
- In 2001-2006, 4 out of 10 regions decreased their economic Lisbon performance. They are mainly located in Eastern Europe and in peripheral areas in Southern Europe, in particular Portugal, Italy, Greece and Cyprus.
- Current trends show that disadvantaged regions seem to loose ground in terms of competitiveness.
- Within EU Member States, territorial dynamics 2001-2006 have increased the regional disparities within many countries. Capital city regions have in general gained a more favourable position compared to other regions within the same country.
- The global economic downturn have in 2010 resulted in particular high unemployment rates in southern Spain and southern Italy and in many

regions in countries with external borders towards the Eastern neighbours.

- In realising the Lisbon/Europe 2020 Strategy, all regions have their part to play, especially those where the potential for higher productivity and employment is greatest. Many regions show good potentials for contributing to the Lisbon/Europe 2020 Strategy, but not all.
- Overall, European trends of regional economic performance 2001-2006 have strengthened the position of the Western, Central and Northern parts of Europe, and enforced the role of the Capital City Regions and more urbanised regions.
- As contrast, Eastern and Southern parts of Europe have in the same period been losing ground, in particular regions placed in the periphery of the individual countries.

1.2 Territorial Impacts of the Global Economic Downturn

How may the global economic downturn affect European regions?

The global economic downturn has revealed structural weaknesses in many countries and regions of the EU, regardless of their level of economic and social development. The crisis has brought the growth and convergence experienced before 2007 to a halt. In addition, fears are that the global economic downturn also could enforce trends experienced from 2001-2006 benefitting in particular the central and northern parts of Europe and the largest European cities.

The crisis has a clear national component and in some, but not all, European countries the level of

unemployment has changed dramatically. Signs of a recovery is underway that little by little are expected to counter the higher level of unemployment and lead to lower unemployment rates, however this is not expected to happen overnight.

The vulnerability of European regions in current economic downturn is clearly unevenly distributed within Europe. Regions are hit asymmetrically depending on the structure of their economic base. Some sectors of the economy are more affected by a crisis than others. In particular regions with a high share of export-oriented sectors face the challenge of shrinking demands. However, also the automotive sector and tourism have posed particular challenges and job-losses for some regions.

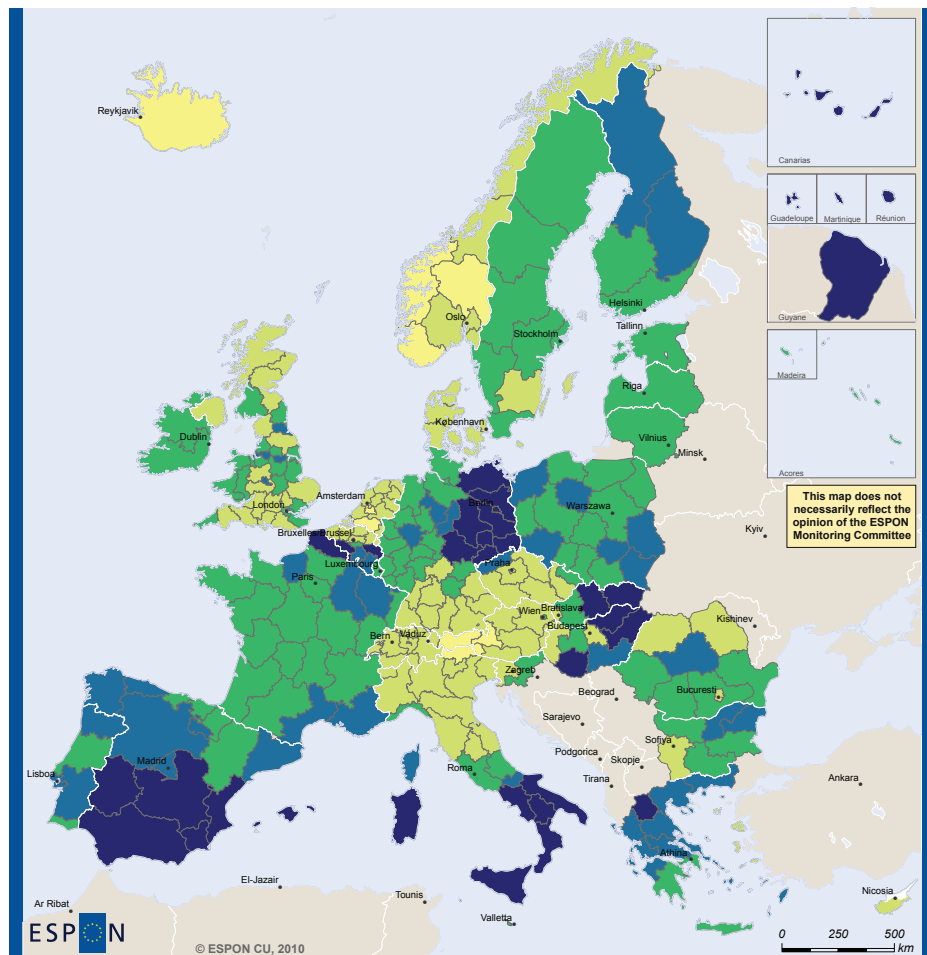
It is obvious that the EU, its regions and cities are increasingly influenced by developments at the global level. Regional competitiveness and a smart, sustainable and inclusive growth within the European territory need accordingly, in many cases, to take stock of competitive advantages in relation to other regions of the World.

In moving towards a balanced development and territorial cohesion, it becomes increasingly necessary to built on knowledge, fact and evidence when shaping policy responses for Europe's success.

ESPON is looking forward to available data that can provide comparable facts and evidence on the territorial impact of the recent economic downturn on European regions. ESPON will as well work on understanding better the position and territorial potentials of Europe in a shifting and ever more integrated World economy.

2 – Regional/local contributions to the Lisbon/2020 Strategy

Map 1 Regional Unemployment, 2008



Unemployment rate in 2008 (%)



Regional level: NUTS 2
 Source: ESPON Database
 Origin of data: EUROSTAT
 © EuroGeographics Association for administrative boundaries

Which regions are improving or weakening their economic performance?

What territorial patterns can be identified?

Which trends are the most important between 2001 and 2006?

2.1 Regional Unemployment in Europe

Unemployment is highly correlated with GDP per capita making the unemployment rate an important indicator for the economic well-being of a region.

The most recent regionalised data available for unemployment does not show the impact of the global economic recession in European regions and its cities. In 2008, regions with the highest unemployment rates (above 10%) are mainly located in Southern Spain, Southern Italy and Eastern part of Germany. In addition, particular regions in Poland, Hungary, Slovakia and Greece show also unemployment rates above 10%.

In practice, this means that these regions were in a less favourable position in terms of labour market conditions. The unemployment rate reflects the region's situation in jobs and might also indicate a mismatch between the characteristics of the labour force (skills, education) and those needed by the market.

The lowest levels of unemployment in 2008 are observed in Norway, some regions in the United Kingdom, Belgium, the Netherlands and capital city regions in Eastern Europe.

From a European perspective, a diversity of regional situations and disparities in relation to unemployment rate exists. The largest disparities within countries can be found in Italy, Germany and Hungary.

When considering the evolution of the unemployment rate since the beginning of the economic recession in Europe, the picture is changing and reveals contrasted evolutions across European countries³. Some countries, in particular Germany and Belgium, show capacity to resist to the crisis in terms of unemployment. On the other hand, Iceland, Lithuania and Spain registered the highest increase on unemployment.

Estimates made for 2010 based on national and available data from Eurostat indicate that the recovery from the global economic crisis is underway and that many regions have started experiencing a decrease in unemployment. However, unemployment is still particular high in southern Spain and southern Italy and in many regions in countries with external borders towards the Eastern neighbours.

2.2 R&D Investment in European Regions

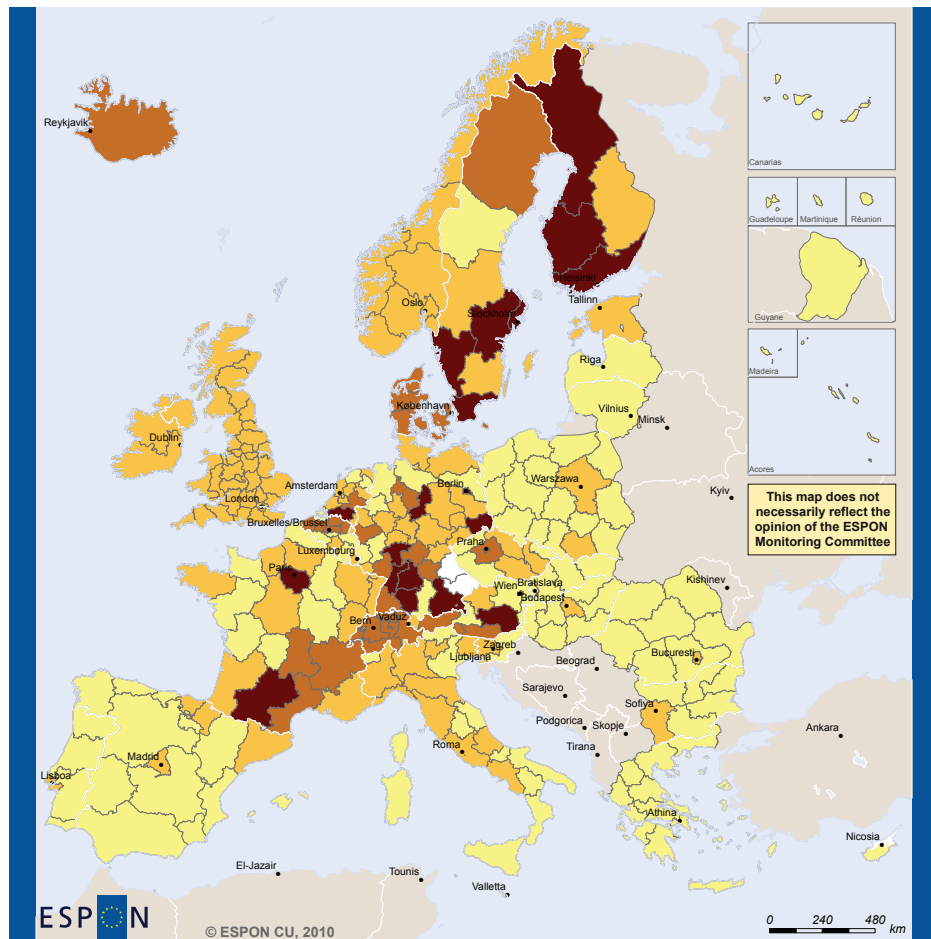
Expenditure on R&D as a percentage of GDP is a key indicator to measure the innovative strength of an economy. The Europe 2020 Strategy highlights the important role of research and development (R & D) and innovation in the EU to overcome the global economic recession and to gain competitiveness in relation to the rest of the world. R&D expenditure of 3% of the GDP is one of five headline targets in the Europe 2020 Strategy. In fact, this was already a priority in the partnership for growth and jobs, which put science, technology and innovation at the heart of EU national and regional policies.

In 2007, only 19 out of 287 NUTS 2 regions met the European target of 3% for R&D expenditure. These include nearly all of Finland and southern Sweden as well as seven regions in Germany, two in France and two in Austria and one in the Netherlands. Some of these regions are positively influenced by capital cities, such as Paris, Vienna, Berlin, Stockholm and Helsinki.

In general, territorial patterns in R&D expenditure corresponds to the European urban structure and to regions with high economic performance. Expenditure is highest in the most urban parts of Europe. Regions with a lower R & D intensity are primarily located in Eastern Europe, in Greece as well as in the Iberian Peninsula.

³ The lack of availability of data at NUTS 2 level on this topic does not allow for an analysis of the situation at regional level.

Map 2 R&D Expenditure as percentage of GDP, 2006



EUROPEAN UNION
Part-financed by the European Regional Development Fund
INVESTING IN YOUR FUTURE

Regional level: NUTS 2
Source: ESPON Database
Origin of data: EUROSTAT
© EuroGeographics Association for administrative boundaries

R&D expenditure as % of GDP



2.3 Trends in Economic Performance 2001-2006

The composite index on the economic Lisbon performance highlights a considerable regional diversity, which once again emphasises that tailor-made development strategies and policy mixes have to be considered based on the inherent profiles and potentials of the various European regions.

This composite indicator represents an effort to quantify the economic achievements of the regions in Europe in terms of the Lisbon goals. It analyses 7 of the 14 indicators of the Lisbon Strategy short list of structural indicators that can be regionalised (NUTS 2 level). These are: Gross Domestic Product per capita; Gross Domestic Product per employed person; Employment rate; Employment rate of older workers; Gross domestic expenditure on research and development (GERD), Dispersion of regional (un)employment rates and Long-term unemployment rate.

These seven indicators are put into a composite Lisbon benchmark index, for which changes over time (2000-2006) were observed. The methodology developed to build up this index is presented below.

At European level in 2006, a profound difference is apparent between West and East Europe, where the composite Lisbon economic performance is substantially better in regions in Western Europe. Exceptions to this overall pattern consist of some regions in Portugal, Spain and Southern Italy, all with a lower performance. In Eastern Europe, positive exceptions are the capital cities, in particular Prague (ahead of Brussels and Vienna), Ljubljana, Bratislava and Budapest.

2 – Regional/local contributions to the Lisbon/2020 Strategy

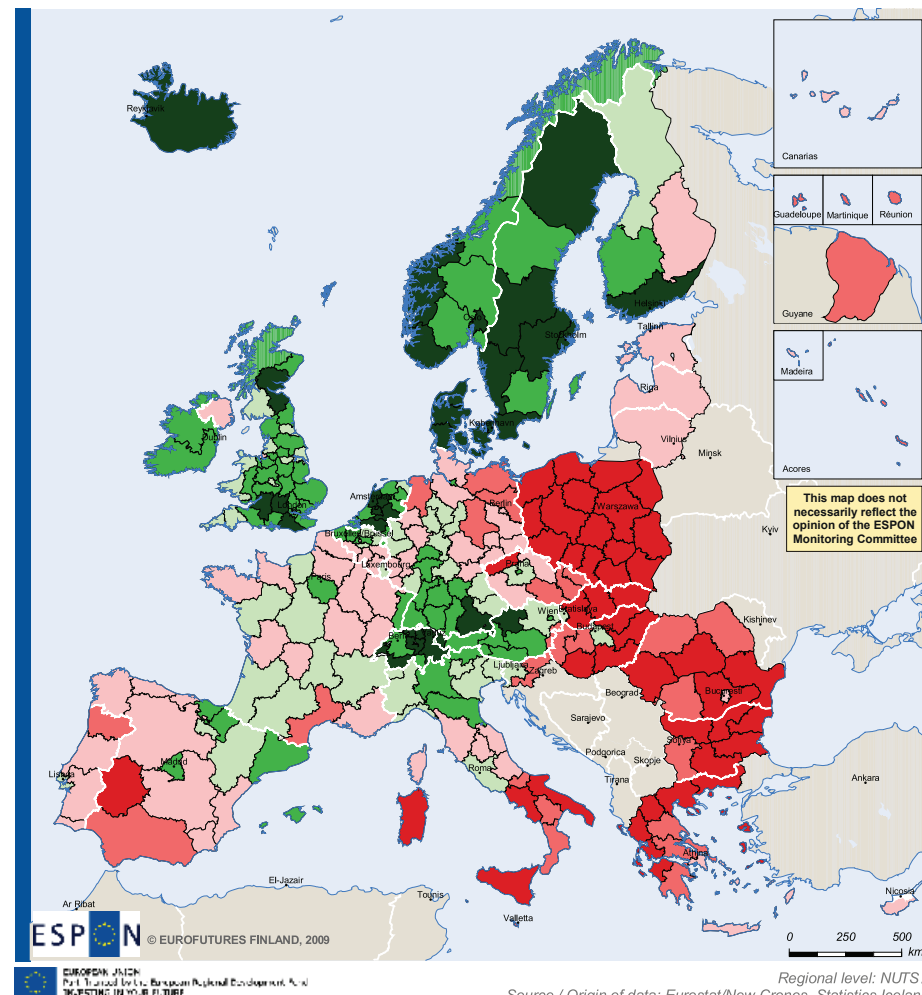
The second important territorial observation is that Northern European regions in general perform much better than regions in the South. Again, positive exceptions can be found in regions in Southern Germany and the Alpine parts of Western Europe.

At European scale, central regions in Europe are in a more favourable position than peripheral regions. The Nordic countries as well reveal a high performance in the composite indicator analysed. This overall territorial pattern observed for the economic Lisbon performance is largely the same as for other key drivers of regional development, such as accessibility and presence of the creative economy.

At national level, the capital city regions in Europe in general are favoured in terms of competitiveness capabilities and reveal higher performance compared to other regions within the same country.

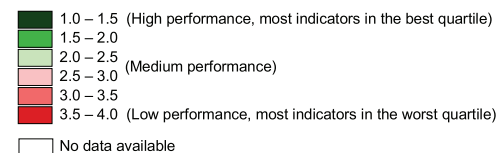
Within most countries in Eastern Europe little or no regional disparities are visible while in other countries such as Italy, Germany, France and Spain, rather large differences amongst regions exist with well-performing and less-performing side by side.

Map 3 Composite Economic Lisbon Performance, 2006



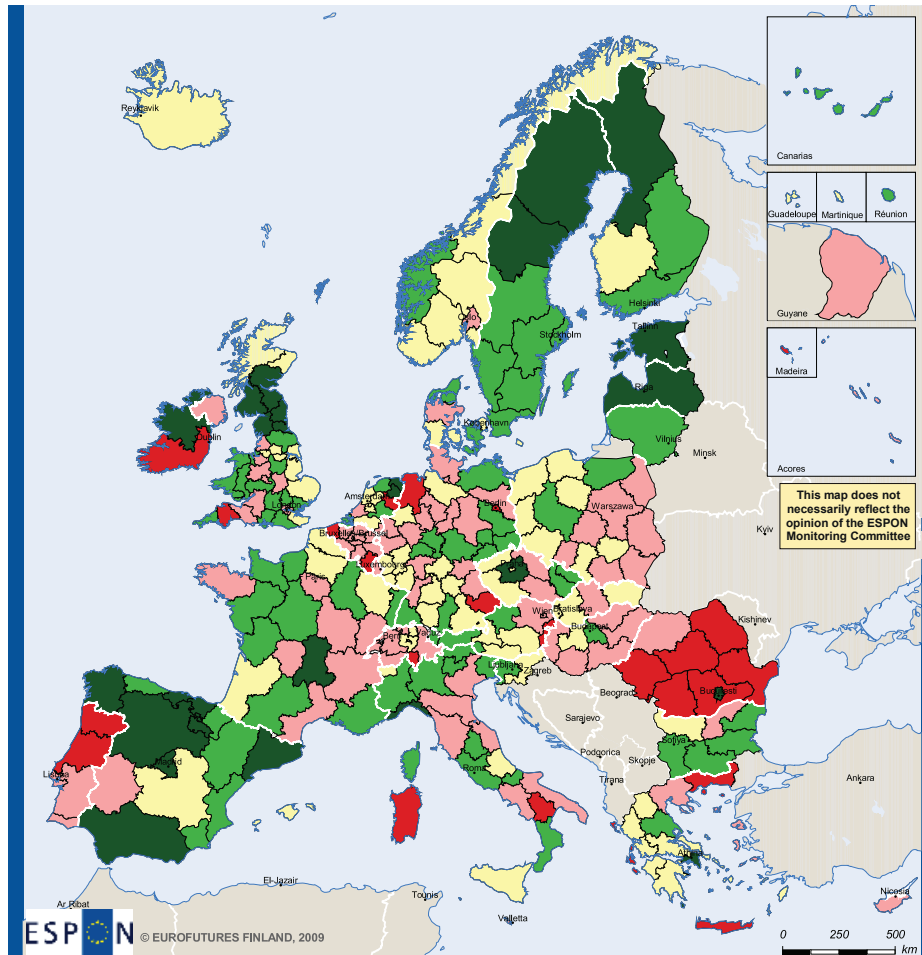
Composite Lisbon performance ca. 2006

Average quartile for all seven mapped indicators:



Regional level: NUTS2
 Source / Origin of data: Eurostat/New Cronos, Statistics Iceland, Landesverwaltung Fürstentum Liechtenstein, Statistics Norway, Statistik Schweiz
 ©EuroGeographics Association for administrative boundaries

Map 4 Change in Composite Economic Lisbon Performance 2000-2006



ESPON N © EUROFUTURES FINLAND, 2009
 ESPON N PART FINANCED BY THE EUROPEAN REGIONAL DEVELOPMENT FUND

Regional level: NUTS 2
 Source / Origin of data: Eurostat/New Cronos, Statistics Iceland, Landesverwaltung Fürstentum Liechtenstein, Statistics Norway, Statistik Schweiz
 ©EuroGeographics Association for administrative boundaries

Change in composite Lisbon performance ca. 2000-06

- < -0.4 (Strongly improving relative performance)
- -0.4 – -0.1 (Improving relative performance)
- -0.1 – 0.1 (Relative performance largely unchanged)
- 0.1 – 0.4 (Weakening relative performance)
- > 0.4 (Strongly weakening relative performance)

No data available

The dynamics of the regions vary widely across Europe. The regional performance of the seven structural Lisbon indicators that are included in this analysis has showed different levels of change during 2001-2006. Indicators such as long-term unemployment or employment rates of elderly people have changed significantly during this period related to economic cycles. Others such as GERD or the GDP are more stable, at least in the short term period analysed.

Taken as a whole, trends in the territorial pattern of economic Lisbon performance are mixed. There is no general pattern of certain types of countries witnessing improved or deteriorating Lisbon performance. However, in 15 countries there has been an internal shifts where some regions are now performing better and while other are performing worse.

Understanding Map 3 and 4

For each of the seven variables, all regions are ranked from 1 through 287 and then divided into quartiles (1 through 4). Composite performance is calculated as the average of these seven quartile rankings.

For 2000-2006 the changes are calculated as nr of points change in composite average performance between last and first year. Negative value=relative improving performance; positive value=relative worsening performance.

Composite performance based on the following seven regionalized Lisbon short list indicators:

1. Gross Domestic Product in PPS per capita
2. Gross Domestic Product in PPS per person employed (2000 and 2000-2005)
3. Employment rate, total
4. Employment rate, 55-64 years
5. Total intramural R&D expenditure (GERD) as a percentage of GDP
6. Dispersion of regional unemployment rates1
7. Long-term unemployment rate2

1 Coefficient of variance [$S^2 = \sum (X-M)^2 / (N-1)$] of NUTS 3 unemployment rates within each NUTS 2 region.
 2 Persons unemployed for 12 months or over as a share of the economically active population.

2 – Regional/local contributions to the Lisbon/2020 Strategy

At country level, particularly regions of Belgium and Portugal have lost in relative performance, while all Swedish regions have improved their position. In all other countries the situation is a mix of winners and losers as can be seen from the table.

From a European perspective, the number of regions improving and worsening their situation is almost the same. However, the small proportion of regions in Eastern Europe that have improved their relative performance combined with a large share of regions in this area that have weakened their relative position, have affected a European territorial balance negatively.

Figure 1 Regional changes within countries in Economic Lisbon Performance 2000-2006

	Nr of regions per country where the relative performance of the Lisbon composite average between 2000 and 2006 vis-a-vis the ESPON space:		
	has improved	is unchanged	is worse
Austria	3	3	3
Belgium			11
Bulgaria	4	1	1
Switzerland		2	5
Cyprus			1
Czech republic	3	3	2
Germany	10	11	18
Denmark	2	2	1
Estonia	1		
Spain	14	3	2
Finland	4	1	
France	12	6	8
Greece	2	6	5
Hungary	1	1	5
Ireland	1		1
Iceland		1	
Italy	10	3	8
Lichtenstein			1
Lithuania	1		
Luxembourg			1
Latvia	1		
Malta			1
The Netherlands	5	4	3
Norway	1	5	1
Poland	2	7	7
Portugal			7
Romania	1		7
Sweden	8		
Slovenia	1	1	
Slovakia		3	1
The UK	17	9	11

Measuring regional competitiveness

Economic Lisbon performance is measured through the analysis of one combined indicator, the so called Lisbon composite index, which is based on 7 out of the 14 indicators of the Lisbon Strategy, coming from the defined short list of structural indicators. These indicators are: Gross Domestic Product per capita; Gross Domestic Product per employed person; Employment rate; Employment rate of older workers; Gross domestic expenditure on research and development (GERD), Dispersion of regional (un)employment rates and Long-term unemployment rate.

The methodology for creating the composite indicator is the following: For each of the seven indicators, all regions are ranked and divided into quartiles. This implies classifying regions as belonging to the best 25% of regions, the second best 25%, the third best 25% and the fourth best 25%. For each region, these quartile positions are added up and divided by seven (total number of indicators considered), for each region thus resulting in an average quartile position for the region related to these seven indicators. This quartile position varies from 1 (representing the highest performance with all indicators in the best quartile) to a 4 (lowest performance in which all indicators are in the worst quartile).

This method gives equal weight to all seven indicators, allowing for an easy comparison of changes over time, and also downplays the role of regions performing extremely well or bad for one or a few of the indicators analysed. The case of Inner London exemplifies this fact as despite of having a GDP per capita 236% higher than the EU27 average, with the quartile based method is ranked 124th in the list as for the other indicators (apart from GDP/employed), it ends closer to or even below the EU average.

Additional considerations

When constructing composite indicators, collinearity of the input data has a considerable effect on the outcome despite the aggregation method used. This means that by combining variables with a high degree of correlation one inevitably introduces an element of double counting into the composite indicator created. For the interpretation of the analytic results it is nonetheless important to be aware of such collinearity. As expectedly, GDP per inhabitant and GDP per employed person correlate strongly, as do the dual employment rates (the total and for the 15-64 years old). Long-term unemployment rate also correlates fairly strongly negatively with the latter two.

In practical terms this means that some of the indicators thus have more effect on the composite indicator than the others. In order to identify which of these do so, simple linear regressions were performed on all input indicators as independent variables and the Lisbon composite as the dependent variables. The results indicate that the overall employment rate (15-64 years) explains 73% of the variation in the Lisbon composite. Therefore, when discussing the composite Lisbon performance presented in this publication, one should thus be aware that the main discussion of territorial patterns relates to the indicator on employment rates, however with important relative considerations related to the other indicators.

For more information about the measuring composite Lisbon performance within the ESPON Programme, please consult <https://www.espon.eu/>

3 – Territorial Reflections related to the Europe 2020 Strategy

What indicators could measure progress on the Europe 2020 ambitions?

The Europe 2020 Strategy mentions territorial cohesion as part of its objectives. However, the territorial dimension of the strategy is not articulated in detail. The implementation will to a large extent depend on contributions from the regional and local scale which makes it important to deepen the evidence and understanding of existing European structures and potentials that can support regional and local contributions related to smart, sustainable and inclusive growth.

Indicators to be used measuring progress are not yet communicated. Basically, the indicators from the Lisbon Strategy will still be relevant. However, stronger emphasis is put in the Europe 2020 Strategy on factors such as education levels and a greener economy.

As mere appetizers the European geography of academic skills and the consumption/potentials of green energy are displayed below. The first indicator informs about the medium term potential for offering highly educated human resources, while the indicators related to renewable energy on the one hand gives a feeling of a readiness among consumers for the technology absorption in the green economic sector and on the other the potential for producing wind energy in different parts of the EU.

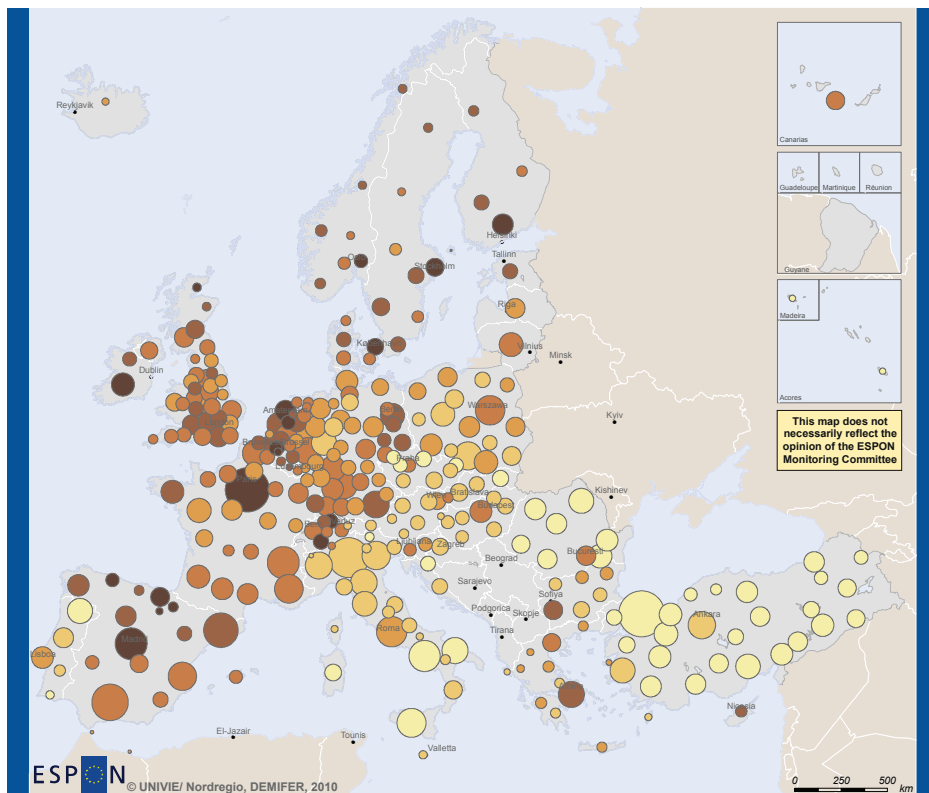
It has to be stressed, that much more work lies ahead in particular widening the understanding of the geography of potentials for a greener economic development. However, in making a start the elements presented has been included, but this is only a beginning.

3.1 Geography of Higher Education: Tertiary Educated people in Labour Force

The indicator on tertiary education levels in the regional work force measures the percentage of the population aged 25-64 having completed a university degree or similar. It gives information on the level of academic skills in a region as a human resource for future development.

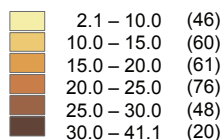
In general, tertiary educational levels are highest in the North Europe and in urban areas across Europe. In 23 European regions more than 35% of inhabitants have a higher education. These include large cities as Brussels, London, Paris, Stockholm and Madrid. Regions with the lowest levels are largely situated in Portugal, Eastern Europe (in particular Romania) as well as on islands, such as Sardinia, Sicily, Acores and Madeira.

Map 5 Tertiary Educated People in Labour Force, 2007



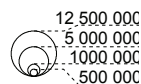
EUROPEAN UNION
Part-financed by the European Regional Development Fund
INVESTING IN YOUR FUTURE

Tertiary Educated Persons (ISCED 5-6)
as a share of population aged 15-64 years, in % in 2007



Regional level: NUTS 2
Source: ESPON 2013 Database 2011
Origin of data: EU-Labour Force Survey 2007; Eurostat, NSIs 2006-10
© EuroGeographics Association for administrative boundaries
(X) = number of regions per category
Data not available for LI & FR Overseas

Total Population in the region
as in January 1. 2007



At European scale, one can find pronounced differences in tertiary educational attainment levels, not only between more urbanised and rural territories, but in particular between the North and South. Northern regions and large European cities have the highest volumes of highly educated citizens.

The territorial patterns observed in relation to the composite Lisbon economic performance are to a certain extent reinforced by the geography of the tertiary education levels. Regions having a high percentage of people with tertiary education in the labour force are in general economically more successful regions, enjoying a more competitive position in the global market. This underlines the importance of investing in human capital in enhancing competitiveness and in counteracting a global economic downturn.

3.2 Elements in a Greener Economy: Renewable Energy Consumption and Potentials

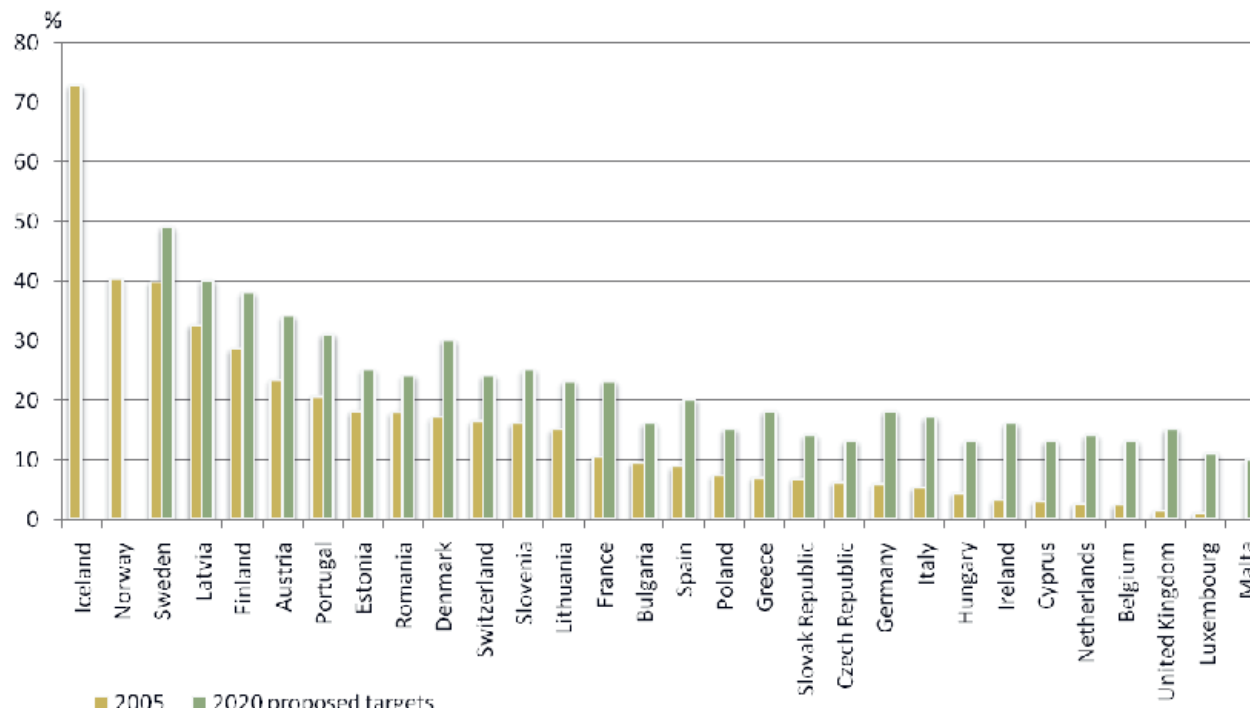
One element in understanding the potential of a region in increasing a greener economic base is the region's renewable energy consumption. It is here considered a first indication on the readiness among citizens and enterprises towards green solutions and innovation supporting a greener economic base.

The share of renewable energy sources in consumer's energy consumption has been increasing since 1990 and reached 8.6 % in 2005. However, the share of renewables in the final energy consumption shows deep differences between European countries.

Iceland and Sweden tops (due to geothermal and hydro energy production), while the United Kingdom, Luxembourg and Malta hardly consume renewable energy.

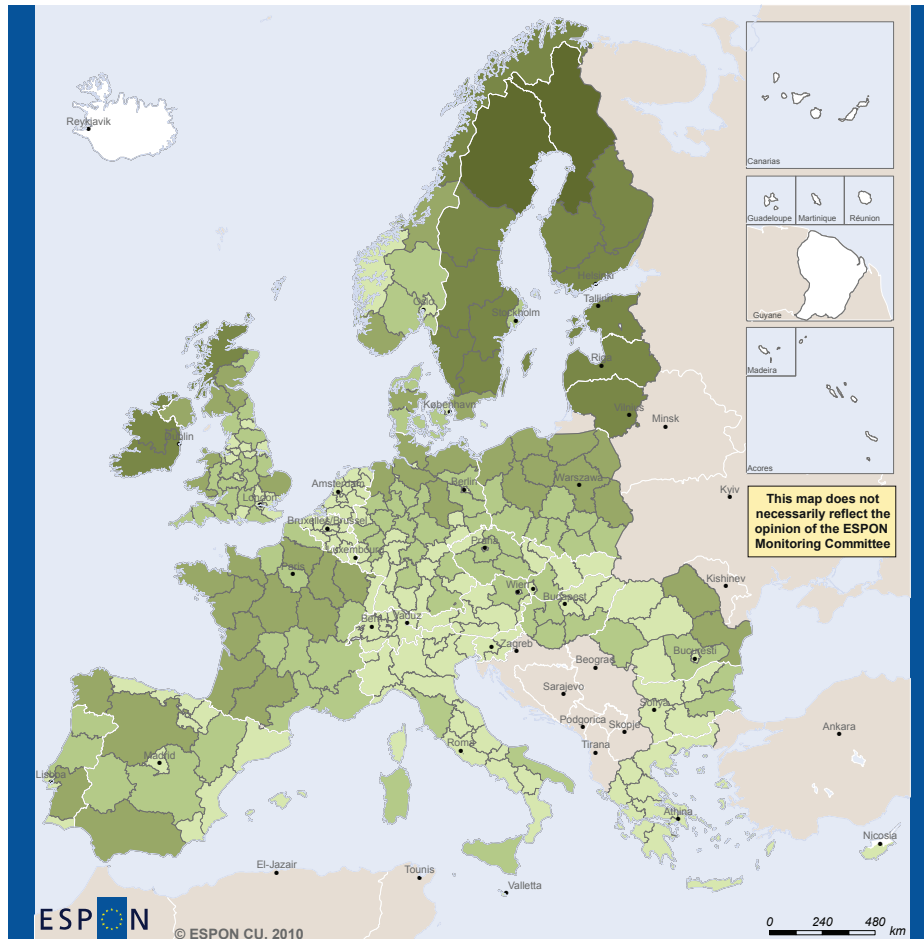
The share of renewable energy consumption has in particular increased in Latvia, Lithuania, Romania and Estonia, albeit starting from a relatively low base.

Figure 2 Share of renewables in gross final consumption of energy, 2005



Source: Directive 2009/28/EC of 23 April 2009.
 Switzerland: National Statistics Office and National Strategy.
 Norway and Iceland: EUROSTAT, May 2009. It refers to Gross Inland Consumption.
 Liechtenstein: No data

Map 6 Wind Power potential, 2005



ESPON
 Part-financed by the European Regional Development Fund
 INVESTING IN YOUR FUTURE

Regional level: NUTS 2
 Source: ESPON Database, 2010
 Origin of data: EEA, 2009
 © EuroGeographics Association for administrative boundaries

Wind Power Potential (m/s)



Many more elements need to be included in addressing addressing the potential for a greener economy within a certain territory. For sure the indicator on renewable energy consumption is insufficient to understand territorial potentials for a greener economy. Consumption is related to the demand side and needs supplement with information on the supply side, such as the region’s potential production and for technology transfer towards greener products.

As one element related to energy and to the supply side of a greener energy production is the wind power potential within different regions. Here many territories in Europe have a high score, and it is obvious that not only regions along (westbound) coast should consider wind power as an option for a greener energy production.

The European policy process ahead around the Europe 2020 Strategy in the months is likely to closer define indicators to be used for the measurement of progress towards the objectives of the strategy, including a greener economy. The ESPON 2013 Programme will follow this process attentively and support the strategy implementation as far as possible with facts and evidence on its territorial dimension and the potentials at regional/local level for the necessary contribution to its success.



www.espon.eu

Interested in ESPON?

The ESPON 2013 Programme is part-financed by the European Regional Development Fund, the EU Member States and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ESPON shall support Cohesion Policy development with European-wide comparable information, evidence, analyses and scenarios on framework conditions for the development of regions, cities and larger territories. In doing so, it shall facilitate the mobilisation of territorial capital and development opportunities, contributing to improving

European competitiveness, to the widening and deepening of European territorial cooperation and to a sustainable and balanced development. The Managing Authority responsible for the ESPON 2013 Programme is the Ministry of Sustainable Development and Infrastructures of Luxembourg.

ISBN 978-2-9599669-4-1