





Executive summary

1 Recomposition and interdependence in the national space

Increase in population concentration in south and west, the coasts and around large urban areas

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Between 1999 and 2009, the French population increased by 4.2 million, growing from 60.1 to 64.3 million inhabitants. It grew in all regions except Champagne-Ardenne. Due to migration, differences in dynamism have been widening between regions in the south and west, which all had population increases greater than the national average (up 0.7%), and those elsewhere, particularly in the north-east. Between 1999 and 2009, nearly 60% of population growth nationwide took place in seven regions (Rhône-Alpes, PACA, Languedoc-Roussillon, Midi-Pyrénées, Aquitaine, Pays de la Loire and Brittany), and the Paris region accounted for nearly 20%. In 2009 they respectively represented 40% and 20% of the French population.

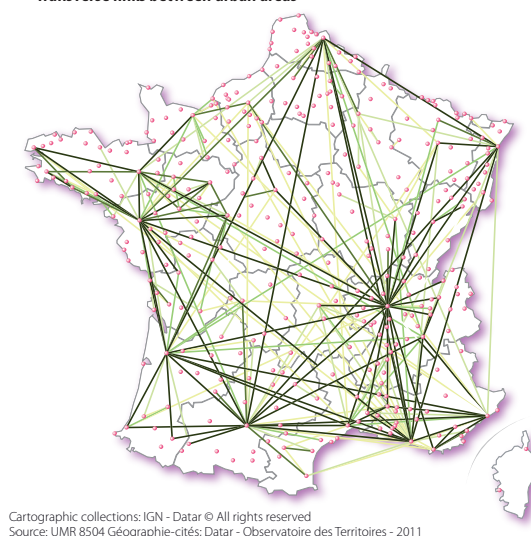
Beyond the larger regional trends, the population is increasingly concentrated in two types of spaces: **the coasts**, especially along the Atlantic and Mediterranean, and large urban areas. Using the Insee's new 2011 definition of zoning, the 241 large urban areas represent 80% of the French population and have added three million inhabitants since 1999. Their position has become significantly stronger: they now occupy a third of France's surface area, compared with 20% ten years ago.

Urban systems express exchanges at different levels

Large urban areas play a particularly important structural role in the functioning of the national territory. The large Paris urban area counts nearly 12 million inhabitants and Ile-de-France represents more than a quarter of gross domestic product (GDP). Except for Paris, no French urban area has the size, diversity of functions and degree of integration in long-distance networks to be considered metropolitan at the European or international level. As in other countries with a large metropolitan area, such as the United Kingdom, large urban areas in France have relatively few connections with Europe and the rest of the world, with the exception of Paris and, to a lesser extent, Lyon.

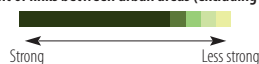
Maps 1 and 2 ► Flows that structure territories at various levels

Transverse links between urban areas



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Source: UMR 8504 Géographie-cités; Datar - Observatoire des Territoires - 2011

Extent of links between urban areas (excluding Paris)



Explanation: extent of links between urban areas in France (excluding Paris) is measured when there are at least seven flow indicators.

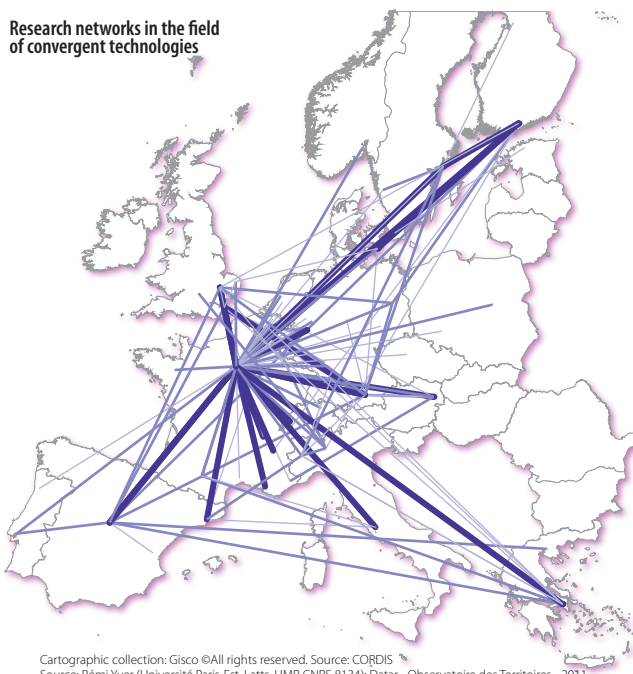
Links between two urban areas are shown only if there are at least three indicators.

A mark is assigned to each link. The mark increases with the number of flows observed.

Extent is the total of marks received.

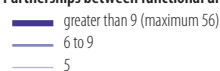
Source: UMR Géographie-Cités, 2011, *Systèmes urbains et métropolitains, Rapport pour la Datar*, volume 1, Avril 2011.

Research networks in the field of convergent technologies



Cartographic collection: Gisco © All rights reserved. Source: CORDIS
Source: Rémi Yver (Université Paris-Est, Latts, UMR CNRS 8134); Datar - Observatoire des Territoires - 2011

Partnerships between functional urban areas studied



Only links of more than five projects are shown.

Source: LATTs, Géographie-Cités, IGEAT, IGUL, LVMT, 2011, *Analyse comparée des métropoles européennes, Rapport pour la Datar*, June 2011.

France continues to be highly centred around its capital. Urban areas of all sizes have developed links with Paris, which plays a pivotal role in international exchanges, especially as part of European research and technological cooperation programmes. In parallel, several of France's largest urban areas, Lyon, Marseille, Lille, Toulouse and Bordeaux, are also developing long-distance relationships with one another. Lyon stands out for a variety and significantly higher level of activity (worker migration, availability of high speed transport, links between branches and headquarters and scientific partnerships) and connections with other European regions.

Finally, in addition to these long-distance exchanges, analysis of multiple connections that link all the urban areas has identified 26 local urban systems, often within regions, but occasionally extending beyond them. These regional (or interregional) urban systems are part of national networks, often through the main urban area, which plays a pivotal role in exchanges.

Demographic revival of rural spaces and interdependence with urban spaces

If the major part of demographic growth in the last decade has been in large urban areas, the period is also marked by a reorientation of population trends in spaces considered as rural. There is marked improvement throughout nearly

Table 1 ► Population by type of space (1999-2008)

Type of space (according to 2010 urban areas)	2008 Population	Per cent share of total population	Per cent share of total surface area	Per cent average annual population change 1999-2008	Per cent due to natural repla- cement	Per cent due to migration
Large urban areas (more than 10,000 jobs)	37,836,276	59.2	7.3	0.50	0.58	-0.09
Rim of large urban areas	11,679,705	18.3	25.5	1.34	0.46	0.88
Multipolar communities in large urban areas	3,295,652	5.2	8.2	1.15	0.26	0.88
Medium-sized urban areas (5,000-10,000 jobs)	1,924,141	3.0	2.6	0.45	0.15	0.30
Rim of medium-sized urban areas	349,572	0.5	1.8	1.00	0.23	0.76
Small urban areas (less than 5,000 jobs)	2,363,821	3.7	5.8	0.24	-0.16	0.40
Rim of small urban areas	167,145	0.3	1.2	0.62	0.06	0.57
Other multipolar communities	3,337,968	5.2	16.3	0.91	0.05	0.86
Isolated communities not affected by urban centres	3,007,579	4.7	31.2	0.37	-0.37	0.74
Total général	63,961,859	100.0	100.0	0.68	0.43	0.26

Area covered: France

Source: Insee, 1999 and 2008 Population Census

the entire country, however the shift is not sufficient to overcome population decreases in areas that are farthest from cities, particularly in Champagne-Ardenne, Limousin and Burgundy.

It is precisely in spaces that can be termed intermediate, between city and country, where population growth outside urban areas is concentrated. These "multipolar" communities, i.e., outside suburban rings, but where more than 40% of workers commute to work in one of the nearby urban areas, represented 10% of the population in 2008. They contributed 15% of national growth since 1999 and grown by 600,000 inhabitants. In addition to lower land and housing costs, mixed urban and rural spaces provide residences, service clusters, and production, agricultural and industrial functions.

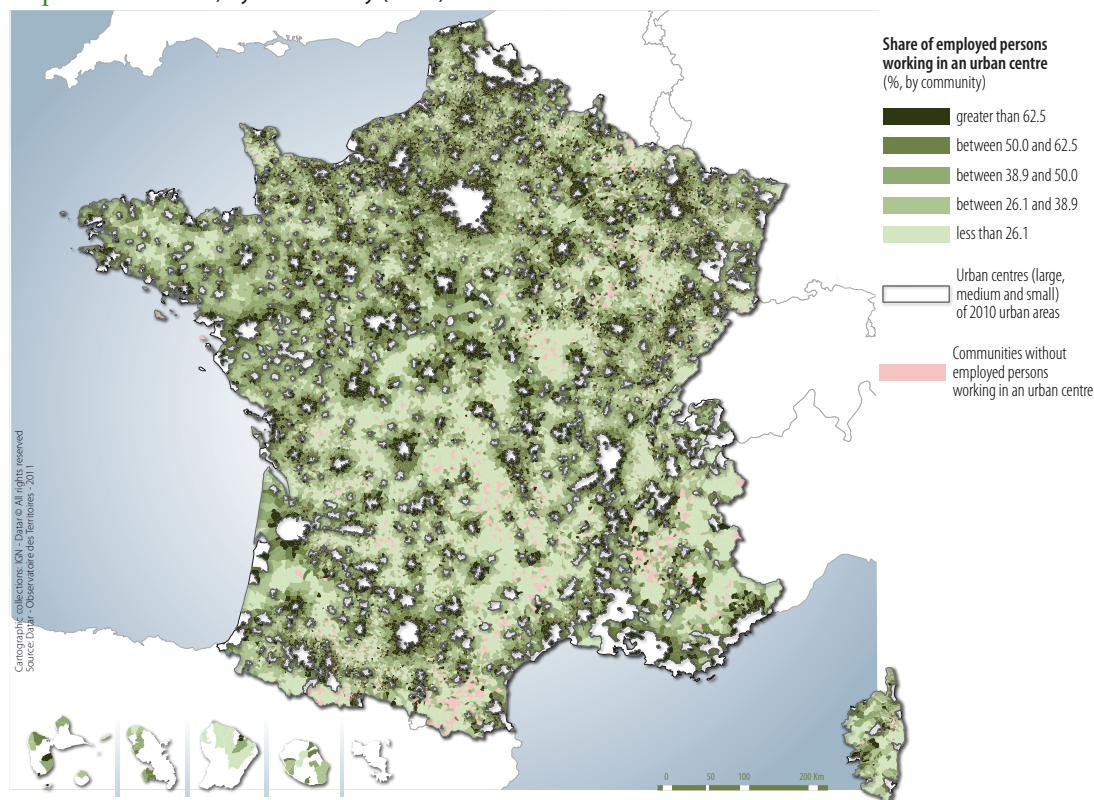
Mobility and new technologies bring different ways of life together

The trend is for the ways of life of populations in different types of spaces to converge due to increases in residential and daily mobility and growing reliance on information and communication technologies.

Studies on residential migrations, commuting and the location of second homes further support the interdependence of urban and rural territories. The phenomenon continues to grow, to judge from the change in commuting patterns: increases in trips for higher education, shopping, and especially for work. These trips are growing longer (from 12 to 14.7 km between 1994 and 2008), especially for residents of more densely populated areas. Analysis of net migrations between the various spaces confirms the trend for working people, especially from lower and middle levels, to reside further and further away from cities.

In intermediate and less densely populated areas, the share of households with high speed internet access is lower than in densely populated areas (57% and 50% respectively, compared with 60%), but the gap is smaller in France than in the European Union (56%, 46% and 61%). Internet use is slightly lower in rural communities (with less than

Map 3 ► Commuters, by community (2008)



Source: Insee, 2008 Population Census

2,000 inhabitants) than in urban areas, except for e-commerce which appears to be as developed as in large cities (with more than 100,00 inhabitants): **nearly 50% buy online compared with under 40% in other urban areas**. Communication and information technologies have also improved educational conditions in rural areas.

These observations close the urban-rural gap which served as a framework for analysing population change over the past 20 years.

Accelerated artificialisation and increased dependence on the automobile: consequences of moving to sparsely populated areas

The attraction of areas far from large urban centres has advantages for households, while adding social and environmental risks. Sparsely populated areas frequently offer little or no mass transport to business districts. In addition, these areas do not provide a great variety of services, which often leads to trips to better equipped centres. Access to employment and services essentially means daily commutes by car. While use of mass transit has been increasing in city centres since 2000, use of automobiles as part of the trip grew steadily between 1999 and 2006 in less populated areas, such as suburban rings, where automobile traffic has grown by 30% in 14 years. Now, 75% of trips are by car. The lack of transit options, and the related costs, especially at a time when energy is becoming more expensive, make low-income households vulnerable.

Migration to areas far from cities also increases artificialisation. Construction of individual homes is the main factor (400,000 hectares between 1982 and 2004), along with the development of highway infrastructure and business and industrial zones. Thus, a discontinuous urban fabric continues to spread in all regions, resulting in the fragmentation and isolation of natural environments and threatening biodiversity.

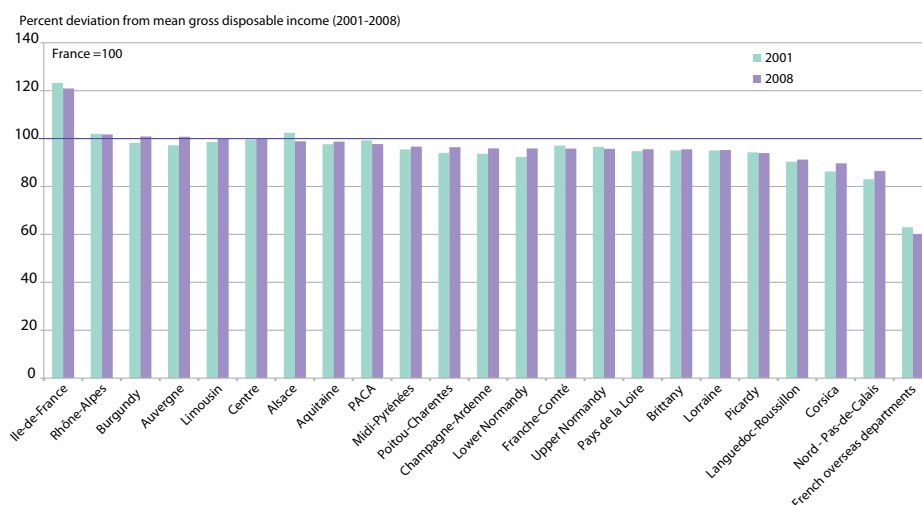
2 Convergences and divergences of regional growth trajectories

Gaps in wealth are diminishing between regions in metropolitan France and increasing with France's overseas departments

In 2007, annual per capita gross disposable income (GDI), after transfers and deductions, was approximately €20,000. It doubles from €12,000 on average in overseas departments to €24,000 in Ile-de-France. If the gap in per capita GNP between metropolitan France and the overseas departments, except for French Guiana, is becoming smaller, the gap in per capita GDI between overseas departments and the rest of the country has widened slightly. Overseas departments outpaced other regions in France in the growth of per capita GNP between 2000 and 2008, but high unemployment rates (more than 20%) weighed down per capita GDI, despite a significant contribution from redistribution mechanisms.

In contrast, gaps in per capita GDI between regions in metropolitan France have diminished for reasons that vary by region: gains in productivity resulting in increased business revenue; increased contributions from redistribution revenue

Chart 1 ► Per capital gross disposable income for French regions (2001-2008)



Source: INSEE, provisional regional accounts of households - base 2000.

(retirement benefits in particular); and increasing dissociation between areas where wealth is created (measured by per capita GNP) and where people reside and consume.

Ile-de-France remains a unique case, but several regions converge on a high value-added development model

Measured by per capita GDP, convergence is less clear than that for income due to the unique case of Ile-de-France. In terms of per capita GDI, the gap between the capital and other regions in metropolitan France has grown smaller, although, thanks to high productivity gains between 2000 and 2008, Ile-de-France has solidified its advantaged position in terms of per capita GDP and confirmed its role with regard high value-added business activities, such as business-to-business services including finance and real estate, while the share of lower value-added activities such as administration and non-merchant services has diminished. The share of business income reached 93% and decreased slightly between 2001 and 2008. The region contributes 6% of its primary income (before redistribution) towards the GDI of other French regions through income transfers. Those derived from businesses in Ile-de-France also benefit areas immediately surrounding the region due to daily shifts in assets, which is growing.

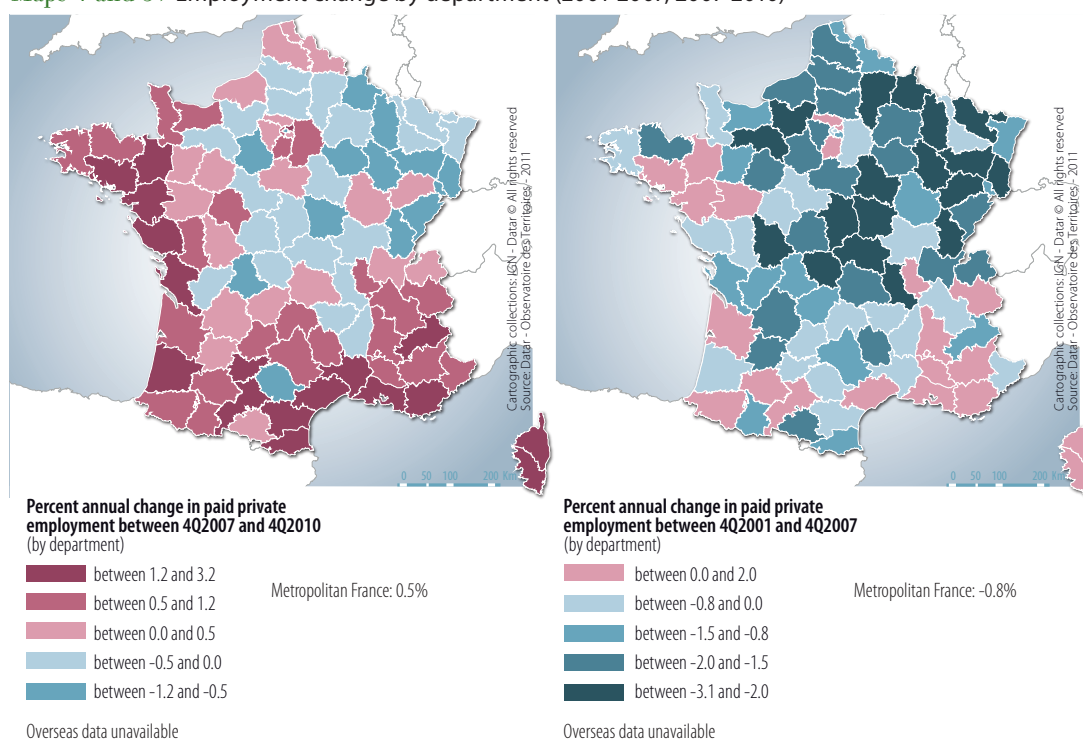
High business concentration also characterizes the regions of Provence-Alpes-Côte d'Azur (PACA) and Rhône-Alpes, as well as per capita GNP and productivity that is distinctly higher than the average for regions outside Ile-de-France. In terms of dynamics, however, they are outpaced by certain regions where productivity gains are higher than average: Midi-Pyrénées, Brittany, Aquitaine, Pays de la Loire and Nord-Pas de Calais. These changes contribute to reducing gaps in per capita GNP and GDI between regions. In terms of income, the first four have the advantage of their attractiveness, especially for retired persons.

Regional disparities are growing smaller, but traditionally industrial regions are not keeping up with national dynamics

The retirement system constitutes a powerful redistribution mechanism that benefitted the economy of numerous regions between 2001 and 2008, and favoured the development of a residential economy. In the rural regions that are the most attractive for persons over 60, retirement income, higher than that of previous generations of retirees living in the region, has generated demand for services and helped maintain or create economic activity and contributed to an increase in per capita GDI. This is the case in Auvergne, Limousin, Lower Normandy and Poitou-Charentes, where the share of business income fell (by some 3%) in favour of transfers. The first two regions now number among those with per capita GDI, while per capita GDP remains well below that of other provincial regions.

Overall, disparities in per capita GDP and GDI between provincial regions have lessened due to these favourable changes. The fact remains that several regions are not part of these dynamics. Of these, Languedoc-Roussillon is atypical, due to a business structure highly concentrated in construction and low productivity gains. Per capita GDP and GDI remain very low. Other regions, Picardy, Lorraine, Champagne-Ardenne, Franche-Comté and Alsace, are traditionally industrial, and have declined compared with the average in terms of both per capita GDP and GDI. After more than 30 years, they continue to suffer the consequences of restructurations of business activity made at the cost of industrial activity. GDP per employee has declined compared with the national average, and the unemployment rate is rising. Their low residential attractiveness aggravates the situation and impedes the growth of service business which are concentrated in large urban areas in the south and west. Recourse to cross-border work, particularly in Lorraine, contributes to limiting the effects of reduced business activity on income. Beyond beneficial local short-term effects, reliance on cross-border employment nevertheless makes the region more vulnerable.

Maps 4 and 5 ► Employment change by department (2001-2007, 2007-2010)



Source: Insee, local employment estimates (2001-2007-2010)

The recession of 2008 initially affected the industrial sector, which led to a sharper drop in the number of jobs than in previous years (more than 300,000 jobs were lost between late 2007 and early 2011). The recession thus had a greater impact on industrial regions. The financial dimension of the recession, which resulted in cutbacks in construction and real estate business, also revealed the vulnerability of local economies based principally on business activity tied to the local population, especially housing construction, as in Languedoc-Roussillon and Poitou-Charentes, for example.

3 Diversity of development models, opportunities and challenges

Diversity of development models and factors

Between 2000 and 2008, the three largest urban regions (Ile-de-France, PACA and Rhône-Alpes) made up more than half (53%) of national growth, while they represent only a third of the population of metropolitan France. The contribution of the next six regions is in line with their demographic share: 30% of growth between 2000 and 2008 for 30% of the population. The thirteen other regions contributed 17%. Overall, the contribution of the smallest regions has fallen compared with 1993-2000. Several rural departments, including Aveyron, Lozère, Lot and Corrèze,

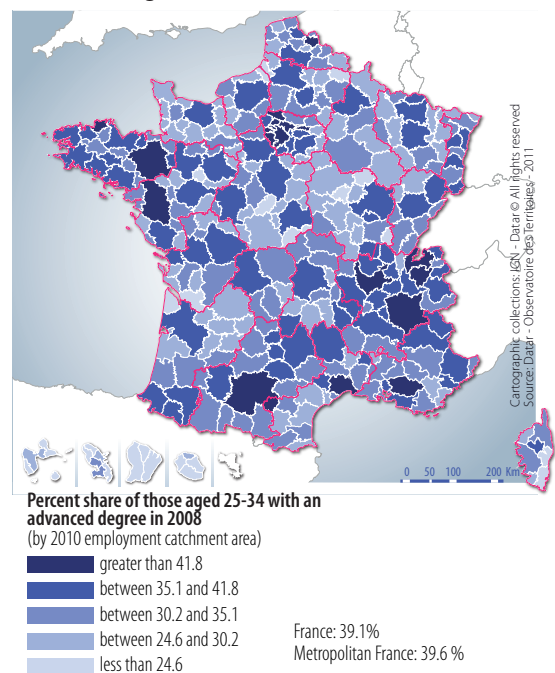
have nevertheless experienced per capita GNP growth that is higher than the national average, demonstrating that the “metropolitan” model is not the only one that produces growth and development.

Long-term changes, such as the recession, have shown the importance of diverse development models for different geographic regions. At the level of employment catchment areas, specific aspects of employment growth trajectories are very marked. They are in part determined by structural characteristics, inherited from local history and major economic disruptions that have taken place over several decades. Even if, over the course of the past 25 years, models based on development of “metropolitan”-type activities and those based on residential or touristic attractiveness have often been shown to perform better from a job-creation perspective, dynamic sites exist in all types of employment catchment areas.

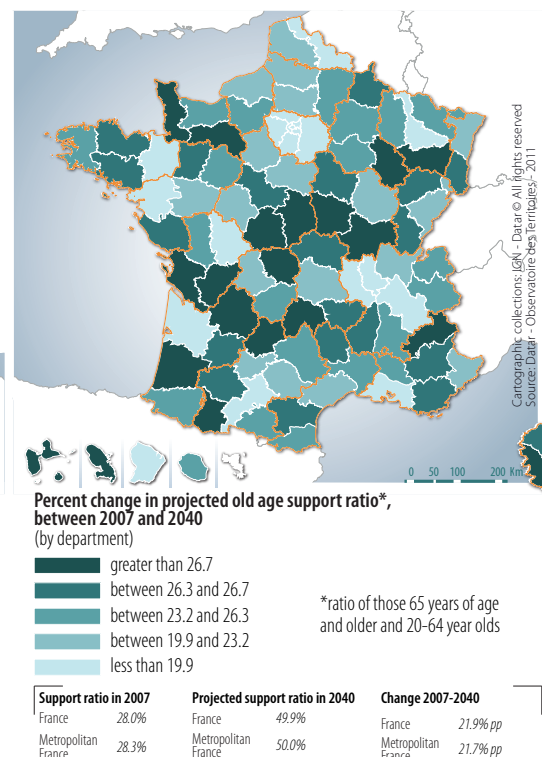
Education, the major contributor to dynamic employment

Certain factors favour development, with level of education pre-eminent. Sharp disparities exist in education level between and within regions. Most regions in the north-east are limited by a lower-than-average education level, with a low percentage of persons with advanced degrees and a high number leaving school without a diploma. In addition to large gaps between regions, there are gaps between large urban centres and less densely populated areas. Employment catchment areas in large urban areas are characterised by high percentages of people with advanced degrees and low numbers of school-leavers, a factor which contributes to dynamism.

Map 6 ► Population of 25-34 year olds with advanced degrees (2008)



Map 7 ► Economic dependence of older people (2007-2040)



Other categories of employment catchment areas have on average a modest level of education, with a small number of university graduates, and marked disparities. Whether employment catchment areas are specialised in a specific sector, e.g. industrial, agricultural or tourist, or not, employment dynamics are tied to level of education.

Other factors are associated with growth trajectories, such as accessibility of transportation infrastructure, amenities, availability of services and real estate. Development of tourism is one development path, but in general the challenge is to use resources for a green economy. New sources of growth should be studied, particularly based on challenges related to climate change, preservation of biodiversity and development of renewable energy. This path involves efforts in terms of innovation, and surveys of businesses have demonstrated that sustainable development encourages innovation.

The north-east and rural areas susceptible to ageing of the population

Like all European countries, France is facing the challenges of an ageing population. Nevertheless, its high birth rate (it contributed 90% of the EU's natural replacement rate between 1999 and 2008) gives it an advantage over most of Europe in terms of potential workforce. The French population will increase from 65 to more than 70 million inhabitants by 2040. As a result, France's rank in the EU will strengthen and its position will remain steady among Euro-Mediterranean countries at around 6.2%.

Nationally, gaps between the very attractive regions in the south and west and those in the north and east will continue to widen. In a context where the natural replacement rate will decline since the number of deaths will increase as baby-boom generations grow older, migration will play a greater role in population change. North-east regions which currently have the advantage of a younger population will lose it as the number of women of child-bearing age decreases due to migration. These regions will thus be deprived of part of their potential workforce and experience more rapid ageing of the population.

Ageing also constitutes a threat to rural regions, especially those whose development relies exclusively on welcoming retirees: ageing of the population and migration of retirees has already changed the age-based structures of numerous living zones and this general trend will accelerate in the years leading up to 2040. The arrival of young retirees is an asset over the medium term, but they will require adjustments in current services due to the increased economic dependency of those 65 and older. The ratio between retired and employed persons will continue to increase: for half of the departments, this ratio will increase by more than 25% between 2006 and 2040. This increase will be felt particularly in departments that are predominantly rural, including Nièvre (up 37%), Cantal, Dordogne and Lot (each up 35%).

The challenge is to anticipate the unavoidable reorganisation of the business service network and respond to the needs of an ageing population while ensuring services are provided that attract or simply retain younger generations. More than quantity, the issue is the diversity of services and their availability in rural areas. The challenge is to find the path for continuing development that can support the potential of human capital in the regions.

► TERRITORIAL COHESION: WHAT LIES BEHIND THE TERM?

Looking to history for a definition

The objective of economic and social cohesion is closely associated with the construction of Europe. Though the Treaty of Rome had already advocated "harmonious development", the first official mention of economic and social cohesion appears in 1986 in the Single Act. It embodies the idea of solidarity, achieved through regional policy and, in a broader perspective, all European and national policies, which are supposed to contribute to it. It is claimed that, if all citizens and their territories contribute to developing the domestic market, this will automatically narrow the gaps between different Member States and between different European regions.

The objective of territorial cohesion appears in 1997 with the Treaty of Amsterdam, in an article on "services of general interest": access to general-interest services in the territories is intended to guarantee the quality of life of European citizens.

Further progress was made with Article 174 on the Functioning of the European Union, as amended by the Treaty of Lisbon (2007): "In order to promote its overall harmonious development, the Union shall develop and pursue its actions leading to the strengthening of its economic, social and territorial cohesion. In particular, the Union shall aim at reducing disparities between the levels of development of the various regions and the backwardness of the least favoured regions. Among the regions concerned, particular attention shall be paid to rural areas, areas affected by industrial transition, and regions which suffer from severe and permanent natural or demographic handicaps such as the northernmost regions with very low population density and island, cross-border and mountain regions."

The concept of territorial cohesion was developed first in an intergovernmental context, with the European Spatial Development Perspective (ESDP) in 1999 and the territorial agenda (2007, 2011), then in a community context with the reports on cohesion, the Green Paper (2008) [1], and finally the Europe 2020 strategy for smart, sustainable and inclusive growth [1] [2].

The Stiglitz-Sen- Fitoussi report (2009) adds well-being and progress to the other objectives [3]. Today, economic, social and territorial cohesion can be seen as a territorial variant of sustainable development.

Territorial cohesion was initially approached from the angle of the handicaps suffered by certain territories, which called for specific policies or even compensation and equalization measures. Today, the emphasis has shifted to considering the diversity of the territories and their assets (the "territorial capital") - and helping to make the most of these assets by "enabling" the territories - and to the territorial integration resulting from mobility (for metropolitan territories, for example) [4] [5].

Putting territorial cohesion into practice calls for horizontal policy coordination at every level, vertical policy coordination through multi-level governance, and cooperation across administrative borders within functional spaces (urban-rural, cross-border regions, or macro-regions such as the Baltic or Danube) [1] [2].

A multi-dimensional approach and new issues [6]

1) Reducing the wealth differences between territories is more specifically concerned with the uneven spatial distribution of poverty and unemployment risks. This implies focusing attention on a number of more fragile territories that are home to a high proportion of underprivileged, and often less mobile, population groups.

2) Balanced territorial development means that the more peripheral regions have the same development chances as central regions. This in turn implies that each territory is given the transport and telecommunications infrastructures it needs, and the means to develop its human capital and capacity for innovation, so that it can leverage its specific resources and comparative advantages.

3) The principle of citizen equality, i.e. that citizens have the same fundamental rights and the same right to a quality living environment, means that population groups must be guaranteed fair access to services of general interest (in particular education and health care) by offsetting the shortcomings of the private markets, so that everyone can enjoy the same opportunities regardless of where they live.

4) The scope of action should be able to disregard administrative boundaries when necessary and take account of functional boundaries instead. In this case, regional and local development stakeholders will have to cooperate to ensure that public action is more consistent. One of the features of cross-border areas in particular is the difference in development on either side of the border and the difficulty of overcoming administrative and political obstacles to build integrated living areas.

5) The environmental aspect of sustainable development, now generally recognised, differs from one territory to another. In particular, environmental protection, the threat of climate change and the drive to dramatically increase renewable energy production are increasing the need to coordinate action at different levels in order to both tackle the threats and seize the opportunities for development.

[1] European Union, 2008. "Turning territorial diversity into strength", Green Paper on Territorial Cohesion, October.

[2] Jean Peyrony, 2010. "L'avenir de la politique de cohésion", in *Territoire 2040* No. 2.

[3] ESPON, 2011. "INTERCO project, Indicators of territorial cohesion".

[4] OECD, 2001. "Territorial Outlook"

[5] European Union, 2011. "Territorial Agenda of the European Union 2020", agreed on 19 May 2011 in Gödöllő, Hungary.

[6] European Union, 2010. "Investing in Europe's future", Fifth Report on Economic, Social and Territorial Cohesion, pages 24-25, November.

4 French regional growth within the European context

The challenge of producing wealth in a favourable demographic contexte

Between 2000 and 2010, France's share of the EU population went from 12.6% to 12.9%, whereas its contribution to GDP was at the same level in 2010 as in 2000, i.e. 16%. It had sagged slightly between 2000 and 2008, as the period preceding the financial crisis had been more propitious for regions covered by the **"convergence objective"**, including regions in the new Member States, and the large Irish, Spanish and Greek regions. The crisis, and its particularly long-lasting effects in these regions, has reshuffled the cards somewhat in the European Union and France's contribution is on the rise.

In the period leading up to the crisis, from 2000 to 2008, though France's growth had fallen slightly behind the European average (3.2% as against 3.9%, on a purchasing-power parity basis), the nine French regions in the European Union's top 50 largest regions maintained or even improved their position. In 2008, their output represented 11% of the wealth produced in the EU, slightly up from 2000. Ile-de-France is still by far the most productive of the 271 European regions in terms of contribution to GDP. In 2008, it represented 4.5% of European production.

However against a backdrop of steep population growth and moderate GDP growth, between 2000 and 2008 almost all French regions saw their per capita GDP fall behind the EU average. In 2008, only three French regions (Ile-de-France, Rhône-Alpes and Provence-Alpes-Côte d'Azur) had a per capita GDP that topped the European average: an indication of the stakes involved in harnessing the regions' economic growth factors.

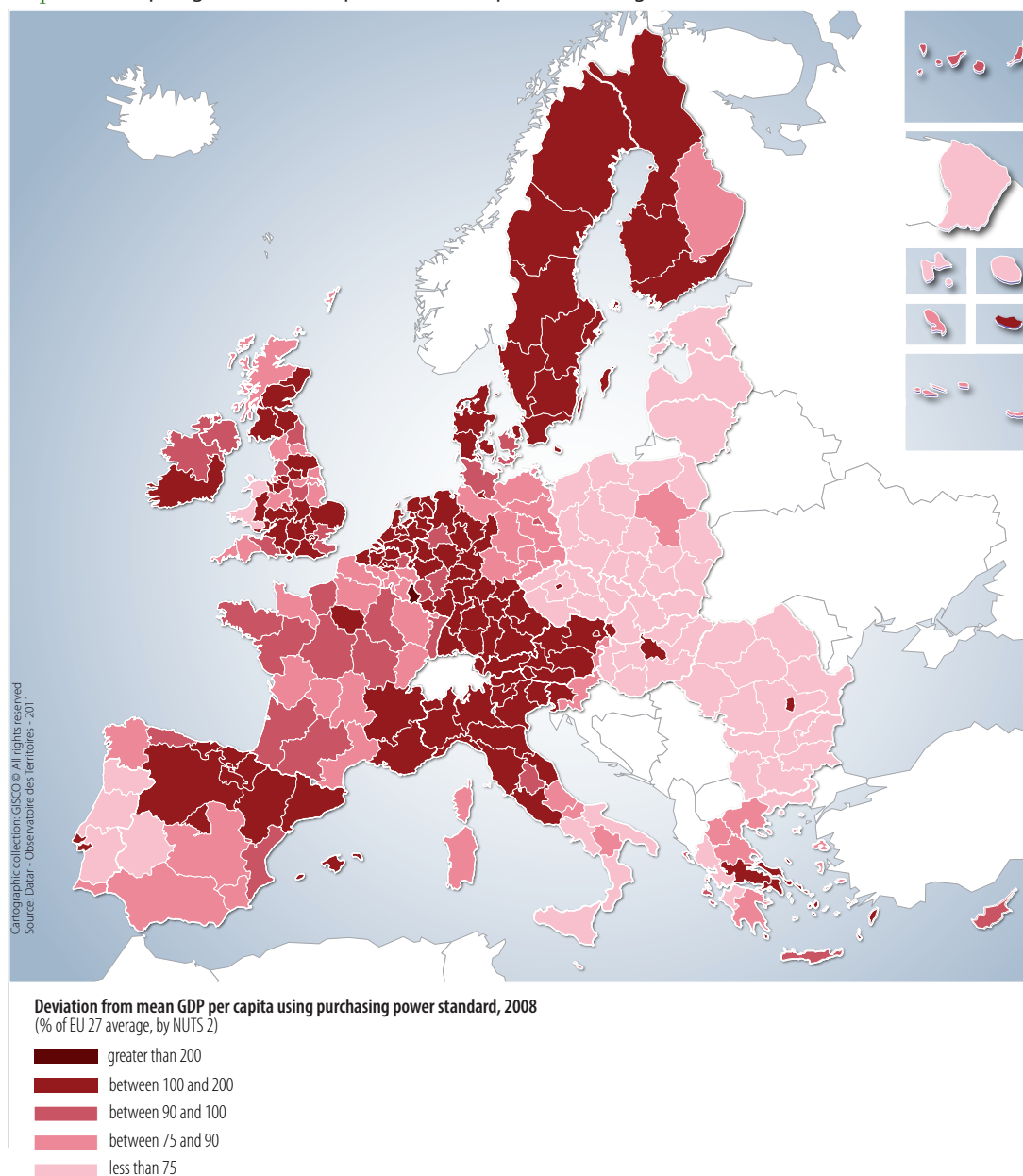
Harnessing innovation and labour to drive growth

Two ways to increase per capita GDP are to raise productivity and to make more efficient use of the labour pool. In every region, there is room for improvement that would enable France to achieve the objectives set under the new Europe 2020 strategy, which is aiming for "smart, sustainable and inclusive growth".

Innovation is a way to increase productivity and help the economy adjust to the new challenges of sustainability. France makes a substantial contribution to research spending within Europe. This is mainly due to Ile-de-France, which, because of its size and its 6.8% share in total EU spending in 2007, is Europe's top-ranking region in terms of R&D expenditure. A number of other regions are well-placed in the research drive. However only one region, Midi-Pyrénées, spends more than 3% of GDP on R&D and the national average was 2.21% in 2009, so France falls short of the European target of 3%.

Although R&D is highly concentrated in France, the trend is nevertheless towards decentralisation. Ile-de-France's share slipped from 49% of R&D expenditure in 1990 to 40% in 2007. All of the regions, including those with the smallest economic means, contribute to the national research drive according to their specific features. A handful of regions – Franche-Comté, Upper Normandie and Picardy – stand out for a high 80% private-sector contribution when the average in France is two-thirds. If we consider a set of characteristics of research stakeholders and activities, together with the patterns of cooperation between stakeholders, we can see that regional profiles vary widely. The factors that determine how willing businesses are to innovate also vary with the region, though underlying factors such as size and industry would nevertheless appear to be a constant.

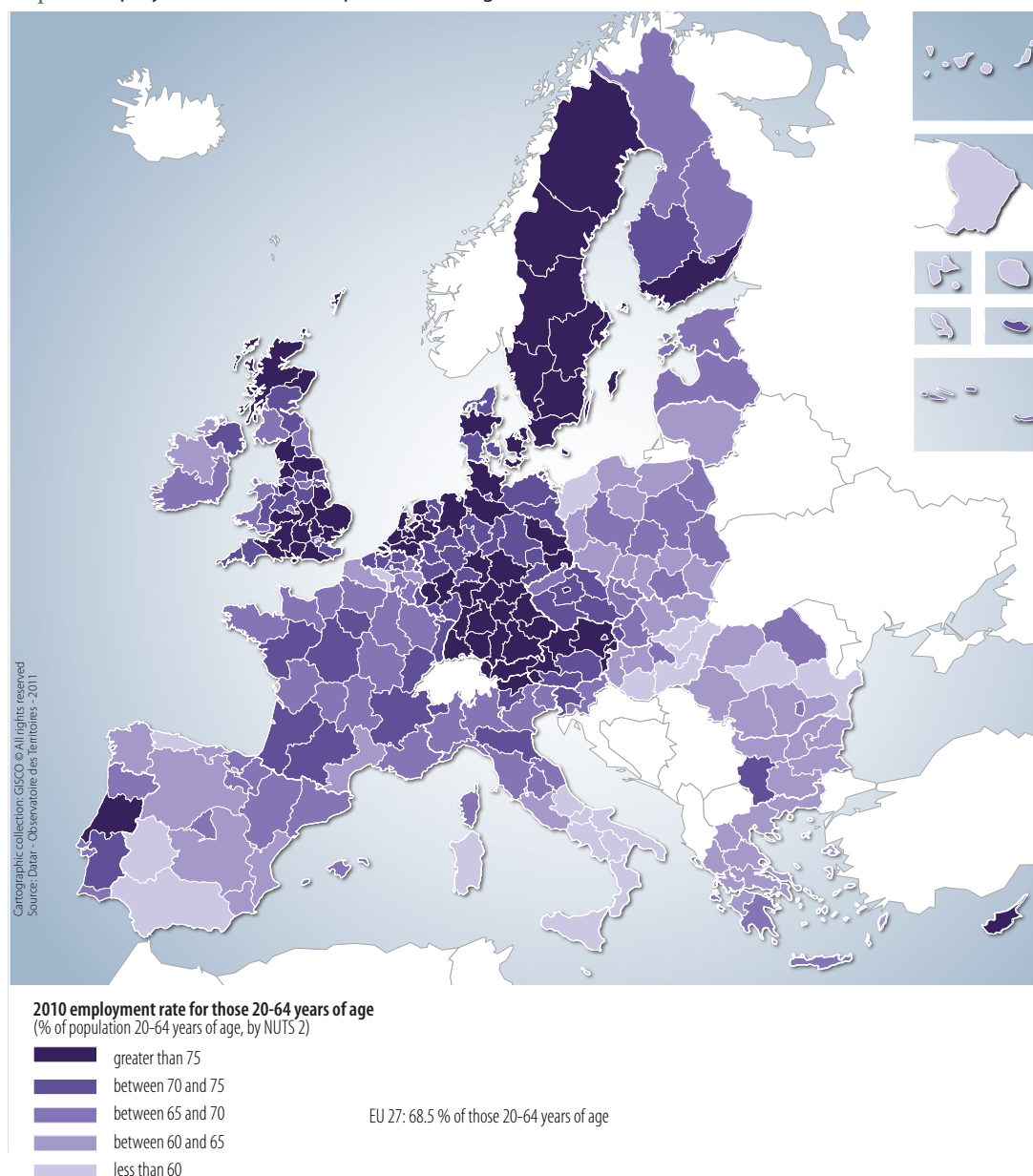
Map 8 ► Per capita gross domestic product of European Union regions (2008)



Source: Eurostat, 2008

Harnessing human resources for smart, inclusive growth

When it comes to strengthening regions' capacity for innovation, the level of education is a decisive factor. The excellence of a handful of regions means France ranks highly among EU countries as a whole in terms of knowledge development, as can be seen by the large proportion of higher-education graduates among its young people (43.5% of 30- to 34-year-olds), even overshooting the European target of 40%. There are marked differences among the territories. Ile-de-France, like most of the EU's capital regions, stands out from the rest with a higher-education graduate rate of over 50%. Other regions are well placed, enjoying both a high ratio and a significant

Map 9 ► Employment rates of European Union regions (2010)

Source: Eurostat, 2010

upward trend: examples include Midi-Pyrénées, Brittany, Rhône-Alpes and Pays de la Loire. Other regions are lagging behind: the regions bordering Ile-de-France, except for Centre; Lorraine, to the east; and Limousin and Poitou-Charentes in the centre-west. These regions have a modest 30 to 35% of higher-education graduates and there is only slight improvement.

The proportion of young people without any formal qualification is an indicator of potential difficulties entering the knowledge economy. The proportion of 18 to 24-year-olds that dropped out of school or training stood at 12.8% in France in 2010, a long way from the European target of 10%.

Raising the level of education makes it easier to harness the labour force, which is a source of not only productivity gains but also growth. Even though France's employment rate is above the EU average (69.2% as against 68.5%, in 2010), it remains below the European target of 75%. **A number of regions are particularly concerned by low employment levels, especially Languedoc-Roussillon and Nord-Pas-de-Calais.**

A higher employment rate also fosters social cohesion. Finding jobs for everyone of employable age is a factor that reduces poverty, another objective of the Europe 2020 strategy. On the whole, France can boast a controlled poverty rate, thanks to redistribution mechanisms (12.9% in 2009, as against the EU average of 16.3%), though there are marked disparities among the territories.

Fighting climate change and controlling energy use to achieve sustainable growth

Achieving sustainable growth necessarily entails combating climate change. According to the latest data, France is reducing its greenhouse gas emissions at a slower rate than the EU average. The forecasts of the Intergovernmental Panel on Climate Change (IPCC) are admittedly more optimistic for France as a whole, which is expected to record a rise in temperatures of around 2.5°C by 2100, compared with a rise of 3 to 5°C at European level, but the effects of global warming will not be the same everywhere, and will vary by geographic location and level of economic development. The areas bordering the Mediterranean (several regions in Portugal, Spain, France, Italy and Greece) will experience a steep increase in temperatures and in the number of very hot days per year, together with a sharp drop in precipitation and days of frost. The north-west of Europe (United Kingdom, Ireland, and the north-west of France, Germany, Belgium and the Netherlands) is expected to see more strong rain and higher average annual temperatures.

Another issue to address for more sustainable production is increasing energy efficiency and developing renewable energies. France's performance outpaces the European average, but lags behind the majority of northern European countries. Where energy intensity (the ratio of energy consumption to GDP) is concerned, there is considerable room for improvement in the majority of regions, whose structure and level of consumption depend heavily on the characteristics of the production plant. Even so, a few regions reduced their energy intensity by around a quarter between 1990 and 2009: Midi-Pyrénées, Nord-Pas-de-Calais, Upper Normandie and Provence-Alpes-Côte d'Azur.

France is also expected to achieve the targeted 23% of renewable energy in its final consumption by 2020, whereas in 2008 the figure stood at only 11%.

