

CAHIERS

DE L'INSTITUT D'AMÉNAGEMENT
ET D'URBANISME
DE LA RÉGION D'ÎLE-DE-FRANCE

N°
135

PUBLICATION
TRIMESTRIELLE
CRÉÉE EN 1964
DECEMBER 2002

Directeur de la publication

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Impression : Augustin

Commission paritaire N° 811 AD

ISSN 0153-6184

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Dépôt légal : 4^e trimestre 2002**Diffusion vente et abonnement :**

Olivier LANGE (01.53.85.79.38)

olivier.lange@iaurif.org

	France	Étranger
Le numéro :	36 €	38 €
Abonnement pour 4 numéros :	87 €	98 €
Étudiants *	Remise 30 %	

Sur place :

LIBRAIRIE ÎLE-DE-FRANCE, accueil IAURIF
15, rue Falguière, Paris 15^e (01.53.85.77.40)

Olivier LANGE (01.53.85.79.38)

olivier.lange@iaurif.org**Par correspondance :**

INSTITUT D'AMÉNAGEMENT ET D'URBANISME
DE LA RÉGION D'ÎLE-DE-FRANCE
15, rue Falguière, 75740 Paris Cedex 15

abonnement et vente au numéro :

<http://www.iaurif.org>

* Photocopie carte de l'année en cours. Tarif 2002

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What competitiveness for European metropolitan areas?



Daniel Brunel
Vice-president
in charge
of employment,
industrial policy,
vocational training
and youth.

As Europe expands and globalisation proceeds apace, the major urban regions have been comparing and appraising their relative strengths and weaknesses, in order to hold their own in an increasingly competitive international economic environment.

These regions and their cities are aware of the key part they can play in terms of both the dynamics of the European economy and the repercussions of such dynamics on each of the areas concerned. They therefore continually have to improve their performance levels, which means they are committed to an ongoing process of innovation.

What are these major metropolitan areas like in North Western Europe? How can we measure and compare their relative performance levels? On what territories are they located? What links are there between the results recorded by their businesses

and the qualitative strengths of their territories?

These are some of the key questions for the European Union's economic development addressed by a group of European partners as part of the GEMACA II project⁽¹⁾. Its ambition was to achieve several objectives:

- *to better understand the framework and the various dynamics of economic development in the regions of North Western Europe;*
- *to collect comparable information and data on socio-economic trends in metropolitan areas;*
- *to identify and analyse the high-growth sectors in four functional urban regions (Dublin, London, Paris, the RheinRuhr);*
- *to delineate the outline of the economic regions in all metropolitan areas.*

This 135th issue of our Cahier reports on the work done and preliminary conclusions drawn by the GEMACA II group of partners, of which IAURIF has been an active leader since 1992.

(1) Group for European Metropolitan Areas Comparative Analysis, second project.



COMPANY COMPETITIVENESS AND THE REGIONAL ECONOMIC ENVIRONMENT

Dominique Lecomte
IAURIF

Metropolitan areas play a critical role in the economy of Europe. They are the engines of growth and the nodes of innovation. The economic activity they foster and the benefits of that activity diffuse through the hierarchy of lesser urban centres located within each country. At a broader level, the economic development of the European Union as a whole depends directly on the competitiveness of its main urban regions. Indeed, in an increasingly competitive world, enhancing the competitiveness of these metropolitan areas is a sine qua non for the overall prosperity of the European economy, the quality of life enjoyed by its inhabitants and the strengthening of social cohesion.

The economic competitiveness of a region depends on two highly correlated factors:

- the performance levels of existing companies;
- and the features of the regions in which these companies are located.

Economic globalisation is forcing companies continually to improve their performance levels, failing which they run the risk of failure. They have therefore committed themselves to an ongoing process of technological and managerial innovation, of penetrating new markets, of cost cutting and of optimal location of their facilities, irrespective of political borders.

In other words, companies continually have to reinvent their strategy and organisation. Such reinvention is influenced by three major factors, in particular.

- First, accessibility: this is the quality of regional and international transport infrastructure and the quality of telecommunications or accessibility to information, which in turn depends on factors such as local linguistic skills, culture and history.
- Second, the availability and total cost of skilled personnel: among the skills of the available economically active population, the key skill is entrepreneurial spirit.
- Third, the availability, quality and cost of commercial real estate: office space in central urban neighbourhoods, business parks, manufacturing plants and research and development facilities are valuable assets.

These factors make up the "the regional economic environment". The key features of a regional economic environment determine the competitiveness of the companies located in the region and the regional economy's capacity for creating viable new activities, developing existing activities and inducing companies to locate in the region.

It goes without saying that public policies – at local, regional, national and supranational levels – help to shape the regional economic environment and, consequently, over the long term, to determine considerably the competitiveness of regional economies. The contributions of public policies to regional competitiveness are complex, because they are both direct and indirect, positive and sometimes negative. Potentially, public policies can make major contributions to regional economic competitiveness through the formulation of a coherent regional economic development strategy and the co-ordination of its implementation via, for example, the construction of major infrastructure facilities, the allocating of land to economic activities or housing (land-use planning), the provision of educational and vocational training facilities and the improvement in the natural environment.

However, the validity of a regional development strategy depends on the availability of a wealth of relevant information on the economic region concerned. In this connection, it is crucially important to bear in mind

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that companies organise their activities on the basis of regions defined as functional areas. The regional labour pool and access to infrastructure facilities and services of all kinds set the contours of these areas. In other words, they are not based on administrative or political boundaries.

THE GEMACA II STUDY

The exact title of the study, whose main results are presented in this issue of the Cahier, is The Competitiveness of Leading European Metropolitan Areas at the Start of the 21st Century. GEMACA II is the acronym for the working group of partners involved in the study, that is: the Group for European Metropolitan Areas Comparative Analysis, second project.

Organisation

The study was conducted in 2000 and 2001 by four partners:

- LSE - London School of Economics and Political Science;
- ILS - Institut für Landes und Stadtentwicklungsforschung des Landes Nordrhein-Westfalen;
- DIT - Dublin Institute of Technology;
- and IAURIF (Institut d'Aménagement et d'Urbanisme de la Région Ile-de-France), which steered and co-ordinated the project.

In addition to each partner's own resources, the scope and diversity of the study's themes required the input of several organisations on a sub-contracting basis:

- Jones Lang LaSalle, London;
- IESEG, Lille;
- IGEAT / ULB, Brussels;
- OTB / DU, Delft;
- LATTS / ENPC, Marne-la-Vallée;

- IRPUD, and S & W, Dortmund;
- INSEE, Paris;
- INS, Brussels.

The study also benefited from a major contribution by EUROSTAT, free of charge.

The project received the financial support of:

- ERDF, under the INTERREG II C European programme;
- the United Kingdom's Department of the Environment, Transport and the Regions (DETR);
- and l'Observatoire Régional Habitat et Aménagement (ORHA) in Lille.

Objectives

The overall aim of the project was twofold: on the one hand, to better understand the structure and dynamics of the economic development of a small number of major city regions; and, on the other hand, to act as the precursor of a future "economic observatory", whose role would be to produce comparable information on all major metropolitan areas in Europe. Indeed, the players charged with formulating territorial economic policies in Europe (government authorities at European, national, regional and local levels; economic agents in the private and public sectors; and inter-regional urban and rural planning specialists) sorely lack such information.

Within the above overall remit, the study set itself three specific goals:

- to define the boundaries of the economic areas of all the city regions of North Western Europe with a population of over one million inhabitants, using comparable functional criteria;
- to produce comparable information and data on socio-economic trends in these metropolitan areas over the 1990s, in order to measure the relative competitiveness of these areas in relation to each other;
- to identify the high growth economic sectors in four urban regions (Dublin, London, Paris and the RhineRuhr) and the conditions that favour their development.

Scope of the project

- The geographical boundaries of all the functional urban regions (FURs) with a population of over one million inhabitants in North Western Europe were defined on the basis of common criteria:
Antwerp, Birmingham, Brussels, Dublin, Edinburgh, Frankfurt (RhineMain), Glasgow, Lille, Liverpool, London, Manchester, Paris, Amsterdam/Rotterdam (Randstad) and Düsseldorf/Cologne (RhineRuhr).
- The data produced on these regions for the years 1992 – 1999 relate to the following:
Population and labour force
Standard of education of the labour force
Economic activities by sector
Full time and part time employment
Temporary employment
Employment by social status and occupation
Unemployment in terms of duration,

standard of training or age group
Production (output)
Patents and scientific publications
Office real estate market
Transport infrastructure facilities and regional / international accessibility

- The relative macroeconomic positioning of the 14 regions in relation to each other in 1999 was assessed in static and dynamic terms.
- A comparative analysis was conducted of high growth sectors and enterprise clusters in the FURs of Dublin, London, Paris and RhineRuhr. This survey focused on: information and communication technologies (ICT), biotechnologies, the creative industries and the financial services industry.
- An in-depth analysis was conducted of the following specific sectors and enterprise clusters:
tourism in Dublin
research and development in Paris
logistics, services for the elderly and environmental industries in the RhineRuhr
- Economic governance in the Dublin, London, Paris and RhineRuhr FURs.

Contents of the Cahier

This Cahier presents the results of the GEMACA study in 13 articles, which are summed up below.

Cities and regions : comparable measures require comparable territories

Competition between cities has been increasing across the world because of globalisation and, in the case of Europe, because of increasing economic integration. But what is a "city"?

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What geographical definition is there of such territories competing with each other? Does the definition of a territory influence the comparative study of cities?

In the first article, Paul Cheshire and Galina Gornostaeva (LSE) explain why the prerequisite to a reliable comparative analysis of metropolitan areas is to define the concept of "regional territory". The authors base their explanation on examples taken from various countries in terms of population trends and output per inhabitant.

They go on to present the method used in the study to define the limits of metropolitan territories in a consistent way, with a view to improving the comparability of regional socio-economic data, facilitating research into a whole range of issues and implementing urban development policies on the appropriate scale.

The competitiveness of cities: why it matters in the 21st Century and how we can measure it ?

"International successful firms derive

key elements of competitive advantage – i.e. their ability to sell their products in contested markets – from particular characteristics of the regional environments in which they are based" (Michael Porter).

Ian Gordon's article is of particular interest to all those who have been seeking to formulate competitive economic development strategies on a regional scale. Before proposing indicators of regional competitiveness, the author reviews the changes in the relative importance attached by companies to the various distinctive features of their regional locations since the end of the Ford era. He underscores the growing importance to business competitiveness over the last 20 years of qualitative urban assets in an increasingly uncertain economic environment and in the context of stiffer competition based on distinctive products.

The author goes on to review the various markets in which cities are competing with each other, namely:

- products and services markets (the most important market, according to Gordon);
- inward investment by business;
- highly qualified and/or high net worth residents;
- major world events;
- and national or European public aid flows.

To outperform competitors, that is, to obtain advantages that exceed the costs involved, the golden rule is to strengthen a region's distinctive assets in order to obtain exclusive advantages (an element of monopoly). Finally, after showing that no single indicator of a city's relative competitiveness exists, the author proposes three types of indicator relating to the product and services market (export performance, output and employment growth, productivity), which he examines critically.

The socio-economic profiles of Functional Urban Regions

Five articles briefly present the socio-economic trends in the Paris, Dublin, Randstad, London and RhineRuhr FURs. Reflecting the diversity of the distinctive features of these FURs, the themes reviewed are also very varied: the history of urban development, regional urban organisation, migrations and internal population imbalances, problems of an ageing population, current structural changes, specialisation of activities, employment location trends, economic strengths and weaknesses, the main challenges of regional planning and institutional reforms. This qualitative analysis enhances the inter-regional macroeconomic comparisons presented in the following article.

The economic positioning of metropolitan areas in North Western Europe

The data collected on the 14 functional urban regions in North Western Europe with populations of over one million inhabitants made it possible to compare the macroeconomic features of these FURs in 1999 and to assess their relative dynamism in the 1990s. The results of the comparisons presented in this article are groundbreaking. For the first time, the data on European metropolitan areas were comparable in both statistical and spatial terms. In addition, for the first time, the Paris area was compared with other major metropolitan areas, and not only with other French regions. This should satisfy those who rightly think that greater Paris, because of its sheer size and special functions, cannot be compared with other French metropolitan areas. With appropriate changes, this reasoning also applies to other metropolitan areas that account for over 30 or 40% of national wealth, such as Greater London, Brussels and Dublin.



This article reviews numerous macroeconomic features. Needless to say, these include scaling data on population, employment, output and unemployment. But they also include structural data on the age and educational attainment of the population, the share of the population of working age that is in employment, part-time or service jobs as percentages of total employment, output per job or inhabitant, and the rate of youth unemployment. For each of these structural data, regional differences were very significant.

Thanks to the data on population, employment and output growth and on the decline in unemployment, the overall relative economic dynamism of the FURs concerned in the 1990s was assessed. The best-performing, that is, the most competitive FURs over the period were Dublin, the Randstad and London.

Transport, accessibility and economic competitiveness

One of the most important of the many factors of competitiveness of metropolitan areas is the mobility of people and goods within them or between them.

This theme was approached in two complementary ways: first, through a qualitative analysis of each metropolitan area, based on expert reports; second, through a scaled indicator of the relative internal and pan-European accessibility of the 14 FURs, based on a European accessibility model.

The comparative accessibility of each FUR on a European scale by road, rail and air is very clearly summarised in a table.

Office real estate market and the competitiveness of metropolitan areas

Over the last 15 years, vast office development programmes have been

completed in the major metropolitan areas of Europe. New business districts have emerged, physically reflecting the transformation of Europe's urban economies into service-focused economies. Because of the growing contributions to wealth creation of service sector areas, it was decided to include in the GEMACA project a special survey of the office real estate market in metropolitan areas and to focus strongly on office real estate challenges as a factor of business competitiveness, and therefore as a factor of the effectiveness of regional productive systems.

The article reviews the main office market trends in Europe, namely: the opening up of national markets to foreign investors; the diversity of the legal and tax systems; the gradual yielding of control over business locations; the development of partnerships between the public and private sectors in urban regeneration projects; the reduction in the traditional gap between economic and real estate cycles; and the recent stabilisation of surface areas used for employment.

This overview is complemented by a special study by Jones Lang LaSalle of the office real estate markets in 2001 in Brussels, Düsseldorf, Frankfurt, Dublin, Paris, Amsterdam and London.

The scientific and technological capabilities of European regions

In an economy based increasingly on knowledge, the competitiveness of businesses and regions depends more and more on their scientific and technological capabilities. Part of the GEMACA study was therefore dedicated to an analysis of the collective and individual capabilities of North Western Europe's metropolitan areas in the fields of science and technology.

This article presents the main conclusions of the GEMACA study's analysis, showing how these areas have specialised. The two indicators of regional specialisation used were the number of scientific publications and the number of patent registrations within the geographical boundaries of the functional urban regions concerned.

The study produced scaled indicators of the concentration of scientific and technological activities in the main regions and a few specialised metropolitan areas.

The performance levels of the regions covered by the study were remarkable, as they accounted for 26% of Europe's scientific output and 23% of Europe's technological output. However, between 1990 and 1998, their scientific output diminished quite significantly as did their technological output, albeit less so. This decline was mainly due to the multiplication of the number of centres of scientific and technological excellence across the whole of Europe, particularly in the Nordic countries and southern Germany.

Governance in functional urban regions

The competitiveness of a region can be boosted by effective decision-making and management structures. The attractiveness of a region can be enhanced by the following: a development strategy and action programme drawn up at regional level; good co-ordination of the players responsible for implementing this strategy and action programme; the ability of public and private operators to co-operate at the infra-regional (local) level; and, last but not least, the joint representation of each region in its dealings with the outside world.

The current restructuring of European urban systems has shown



how important it is to have an institutional and decision-making framework that delivers a regional government capable of effectively fostering regional unity, by reflecting the interests of all the various metropolitan area players involved. Because of the enlargement of the scope of physical and economic planning, the functional urban region (FUR) has now become the most suitable basic level for implementing metropolitan area policy.

However, a FUR is characterised by its dynamic system of socio-economic inter-relationships, along with a specific set of economic, social and cultural practices and an environment featuring a certain degree of physical (spatial) and institutional proximity. The boundaries of such functional regions rarely coincide with the existing territorial structures of regional/local government. As a result, any attempts to make policy decisions and to implement them at the level of a functional urban region come up against major obstacles and meet with considerable resistance. This then means that the main problem is to design political and administrative structures as if they were to be territorial authorities and to set up effective strategic management and marketing units at the level of an actual functional urban region. This article analyses the current attempts to reorganise regional government and governance in the RhineRuhr region, as well as in London, Dublin and Paris.

Enterprise clustering: a factor of the locating of high value-added activities in European regions

In numerous economic sectors, companies tend to group together in order to achieve economies of scale and to benefit from complementary synergies and existing infrastructure facilities. Moreover, this clustering process tends to be self-sustaining: when other companies see the economic benefits enjoyed by the firms already part of a cluster, they join them by relocating close to them. Enterprise clustering is also a strategy for minimising risk: the companies concerned seem to learn from each others; they use the same service providers and suppliers; and they develop and innovate by using the latest knowledge available from their immediate professional environment.

Such clustering seems even more important to fast-growing new fields of activity than in the past. However, our knowledge of the benefits of clustering and our understanding of its importance to company competitiveness are still inadequate. Thus, one of the main goals of the GEMACA study was to consider enterprise clustering in major metropolitan areas. This article summarises research conducted under the GEMACA project into the determinants of the clustering and development of high value-added activities in the Dublin, London, Paris and RhineRuhr regions. Twenty-one studies were conducted, notably on information and communication technologies (ICT), the creative industries, biotechnologies, the financial services sector and envi-

ronmental industries. The comparative analyses presented focus on ICT and financial services.

Enterprise clustering does not always occur spontaneously. Local public-sector, private-sector and voluntary players sometimes play a strategic role in their birth and development. The article makes many general methodological recommendations for formulating and implementing policies that support enterprise clustering, as well as specific recommendations for each of the regions studied.

Following this article, four enterprise clustering case studies are presented.

Information and communication technologies (ICT) in Ile-de-France As France's leading economic area, in which a very large number of companies and high technology laboratories are headquartered, Ile-de-France is home to the largest number of information technology and multimedia companies in France. It is also one of Europe's leading regions, ranked second only after London.

What makes this high-growth enterprise cluster stand out? What has been the logic behind the locating of ICT companies in Ile-de-France? What explains the development of this cluster in Ile-de-France? What part did the public authorities play in this? The article suggests answers to these questions, shedding light on the conditions that have favoured the development of the ICT sector, which has dominated the headlines of economic news in recent years.



The environment protection industry in the RhineRuhr region

The environment protection industry (EPI) provides one of the most promising examples of an emerging economic sector with a high potential for job creation. In the RhineRuhr region, mining and steel production companies have managed to conduct their business in compliance with the new regulations protecting the environment. In fact, this was the starting-point of the development of EPI in the region, because the new regulations turned the search for solutions to environmental problems into as many new markets. The EPI enterprise cluster took off in the 1980s. It grew very fast in the early 1990s. Today, it has reached maturity and stabilised at a high level of activity. The introduction of even tougher regulations has led to the expectation that it is about to experience another period of high growth. As a result, the development of EPI has been a major component of the region's strategy of business diversification.

The media cluster in London

The media provide an example of an enterprise cluster that has developed mainly in one of the largest metropolitan areas and tends to be highly concentrated geographically in the central districts of the area. The presence of the media is seen as indicative of the ability to stand out as different, in terms of urban advantages and benefits, not only from other urban regions, but also from other districts within the same urban region.

In the 20th century, the media industry was transformed first by vertical integration in the 1920s, and then by the flexible specialisation of the 1980s and technical innovations, which both revolutionised existing activities and generated new ones. These last two drivers of change were the main causes of the restructuring of the media industry and the emergence of the media enterprise cluster that exists in London today.

The concentration of the media industry in the largest city in the United Kingdom has been due to conurbation-related economies of scale and ease of access to institutions, suppliers and customers. London's Soho district is a good example of the sustainable comparative advantage provided by a capital city whose cultural influence is world-wide.

The financial services industry cluster in Dublin

The establishment of the International Financial Services Centre (IFSC) in Dublin has been particularly interesting. It is a good example of a cluster development project implemented with the active support of central and local government authorities. This cluster has now reached maturity; that is, it has achieved the critical mass required to ensure its future development. In 2001, over 8,500 people were employed by nearly 500 international financial institutions located in the cluster, while finance-related service companies also employed over 8,500 people.

The IFSC began in 1986 when the decision was made to turn the

former Dublin docklands into a business district. The IFSC is now considered as the flagship project for the urban regeneration of the Dublin area. It is of crucial importance to the city in terms of the number of jobs created and the amount of tax revenue generated. The planned expansion of the IFSC is a key component of the Dublin docks redevelopment plan, which is currently being implemented.

The main instrument that has favoured the development of the IFSC was a reduced rate of corporation tax payable by financial institutions that conduct their business in foreign currencies.





P. Guignard/laurif



Cities and Regions:

comparable measures
require comparable
territories

Pr. Paul Cheshire

Dr. Galina Gornostaeva

London School of Economics
and Political Science

Competition between cities is intensifying. Measures –penetration of contested markets by a city's exports, growth in productivity and economic growth itself- are useful for gauging the success of a city's economy in this competitive process. An important issue remains, however, and that is what is a 'city' ? What territorial units are they that compete with each other ? Does it make a difference how cities are measured ? Can we define cities in ways which are useful for studying them in this internationally comparable sense ? It was the argument which underpinned the whole research embodied in the GEMACA II project.

If cities compete, what are cities?

We are satisfied it makes sense to think of cities as competing with each other and that this competition has intensified as a result of the integration of Europe. Indeed the integration of Europe is in some sense only a strongly policy-assisted boost to the wider process of internationalisation of economic and social systems: globalisation. Competition between cities is intensifying throughout the world but particularly within Europe. We have discussed what measures – penetration of contested markets by a city's exports, growth in productivity and economic growth itself – are useful for gauging the success of a city's economy in this competitive process.¹

An important issue remains, however, and that is what is a 'city'? What territorial units are they that compete with each other? Does it make a difference how cities are measured? Can we define cities in ways which are useful for studying them in this internationally comparable sense? The argument of this chapter, an argument which underpinned the whole research embodied in the GEMACA II project, is that resolving this definitional issue is an essential first step – indeed that one of the significant gaps in data for Europe is data for comparably and economically usefully defined cities. The definition we have adopted is the Functional Urban Region or FUR although there is no uniquely correct definition even of FURs. Very useful improvements in the comparability of data for studying a wide range of issues, as well as for policy implementation, could be achieved with any one of a range of definitions based on economic and demographic criteria of how 'urban' places were.

One of the peculiarities of Europe is that each country has its own idea of what a 'city' is and it is often difficult for even students of urban development to grasp that the definition they have grown used to in their lives and work is not that used in other countries. There is even less recognition of how vital a common definition is if valid comparisons of demographic, economic and social development patterns are to be made. At the risk of over simplification, let us try to characterise some national positions.

Most Belgians have great difficulty with the idea that Brussels extends beyond the confines of its administrative boundaries which define the limits of the national bilingual zone and contain less than one million inhabitants. If one examines the metropolitan area of Brussels, however, defined as the sphere of economic influence of the Brussels employment concentration, it covers nearly four million inhabitants and extends over a third of Belgium. The French have various administrative definitions of cities, with some extra ones available for Paris. In normal cases they identify cities in terms of their central commune although a handful of large cities have a *Communauté Urbaine*: this is a federation of Communes relating to the city. Historically in France new urbanisation has largely been in the form of continuous additions attached to existing urban areas. Reflecting this the French, for comparative purposes, typically rely on the concept of the *agglomération* – a morphological definition based primarily on the density of buildings. Given the historical pattern of French urbanisation such a definition produces broadly comparable definitions since it embraces whole cities although a few problems arise in the more densely urbanised

regions of northern and eastern France which require additional criteria. It has the additional advantage that it can be measured using remote sensing techniques. There are recent signs, however, of a more British-style leapfrogging pattern of urban development emerging 'naturally' in some of the rapidly growing cities of southern France such as Toulouse or Montpellier. This will erode the value of the *agglomération* definition for comparative purposes. And if the French *agglomération* criteria are applied to Belgium the whole country from Antwerp to Liège turns out to be one city: not a result with which either Belgians or students of urban development should be satisfied. Equally, the *agglomération* definition does not produce comparably complete definitions of cities when applied to Britain or to the Netherlands. In the Netherlands land use planning policies have deliberately prevented contiguous urbanisation. The Germans use a legal definition of cities – the *Kreisfreie Städte* – with which they are generally content, especially if they are politicians or students of political science. Other unofficial definitions exist but are not widely used.

(1) It can be argued that in a fully competitive economy in which all factors are completely mobile and knowledge or technology are common to all cities in the system then population growth is the best measures of a city's success since it will reflect both productivity growth and also changes in regional prices and quality of life (see Glaeser et al 1995). However these assumptions are far from fulfilled in a European context and growth in real GDP per capita seems the best single measure (see Cheshire and Magrini 2002).

The British seem to be prepared simply to accept current political/administrative definitions although these have been quite remarkably unstable in the past 30 years and especially so in the case of London. Scholars do produce definitions of British cities based on functional criteria (of which those originating with the Centre for Urban and Regional Development Studies at the University of Newcastle are probably the best known). The Census of Population produces data for 'built-up areas' – broadly equivalent to the French agglomeration – but neither of these are in wide use, even by specialists.

Accepting administrative definitions of cities in Britain requires an extraordinary, some might say, excessive degree of pragmatic flexibility. They have changed frequently over the past 30 years or so and their changes have been mainly driven by short term political considerations. In 1963 London was defined as the County of London. This corresponded with what is now known by those interested in the more arcane reaches of urban statistics as Inner London. When the Greater London Council (GLC) was created that became the administrative area of London and took over the popular concept of what London was. Already, of course, the functional reality of London was a good deal bigger. Even Heathrow airport is only partly within the boundary of the GLC and now both the other major London airports are entirely outwith those boundaries. Then, in the mid-1980s, the GLC, together with all the other Metropolitan Counties, was abolished leaving only a ghostly concept of London behind. Even Londoners could not reconcile themselves to what was now the only political unit called London – the medieval City. Although in 1971 this contained 230 000 jobs it had less than 6 000 residents.



What is a 'city'? The British seem to be prepared simply to accept current political/administrative definitions although these have changed over the past years.

V. Said/laurif

The most recent twist in the tale of London came in 2000 when the Greater London Authority (GLA) was created using – for political reasons – the old boundaries of the 1964 GLC. The GLA – even within its short existence – seems already to have become the familiar idea of London. But no other British cities have had their encompassing regional governments re-created.

Thus Europe suffers from a plethora of national definitions of 'cities' and even within single countries definitions can vary widely. From across the Atlantic, or if one is a student of European comparative urban development, this looks silly. In the US two parallel definitions of 'cities' are widely accepted and co-exist in harmony. There are the administrative/political units known as central cities and then for statistical purposes there is an official set of functionally defined metropolitan areas or urban regions. These latter, first defined for the 1940 census of population, have been variously called (Standard) Metropolitan Statistical Areas. They relate to areas identified in terms primarily by the structure of

employment and density of population as well as areas linked by commuting flows. Their advantages for comparative and analytical purposes are obvious: they are defined according to consistent criteria and they capture the whole of each individual economic and social system that constitutes a 'city'. This is not to claim that they are perfect nor are we interested here in the details of their definition. Whatever their shortcomings or inconsistencies the data sets based on them are orders of magnitude more useful than anything available for European cities.

The problems associated even with such a simple variable as urban size are obvious. To get valid values it is essential to measure population over areas that bear a consistent relation to the actual urban area. Comparisons based on, for example, the size of administrative units such as 'central cities' will be influenced as much by the accident of boundaries as by the actual size of urban areas. The extreme example is provided by London, where the City of London – a territorial definition of London the city had outgrown even in the early medieval era of its development.

If population or employment decline is to be separated from decentralisation, it is essential to include areas receiving decentralisation within the definition of 'metropolitan areas'. If comparisons are being made for indicators of prosperity or social conditions – such as unemployment or deprivation – it is again critical that inclusive and consistent definitions of cities are used. If they are not then systematic patterns of residential segregation (whether as in Paris or Glasgow, where the more poor and deprived tend to live in peripheral social housing or, as in London or Manchester, where they are concentrated in central areas) will distort measures. If the definition of 'city' varies in such exercises then the apparent incidence of, say, unemployment will depend as much on whether the specific areas where the unemployed are concentrated were included for particular cities as it will on the actual nature of local economic conditions. It is even more important to have comparable and inclusive definitions of cities if the comparison is international since patterns of residential segregation vary more systematically across countries than within them.

As was noted above probably the best single measure of a European cities competitive success is the rate of growth of real Gross Domestic Product per head but here it is more crucial than ever to have inclusive and comparable definitions of cities. GDP or output is calculated at workplaces and population is counted at place of residence so if there is net inward or outward commuting into the area used to delimit a city then the measure of GDP per capita will not give a valid indication of the living standards in that area. Table 1 shows this dramatically for various definitions of London used by Eurostat.

Who likes N.U.T.S.?

The second column of Table 2 shows the status of the 'region' within the nested system of N.U.T.S. (Nomenclature des Unités Territoriales Statistiques) regions used for official purposes by the European institutions, including Eurostat. These are a haphazard blend of national systems. National systems themselves vary immensely. For example in the Federal Republic of Germany the Level 1 N.U.T.S. regions correspond to the individual Länder such as Bremen or Bayern. Each has equal constitutional status yet Bremen is – as is shown by the data reported in Table 2 substantially smaller than a city-region: Bayern – with a population nearly 20 times as large – contains one of the largest city regions in the EU – München – as well as several other significant city-regions including Nürnberg and Augsburg. The richest city in Europe – Frankfurt – however has no statistical or official existence at all. This seems to reflect in part old Prussian hostility to the free city of Frankfurt.

Table 1

GDP per capita for different Londons 1995-98: relative to EU of 15

EU 15 = 100	N.U.T.S. status	1998	1997	1996	1995
Greater London	Level 1 & 2	157.4	151.6	126.4	124.4
Inner London	Level 3	250.6	242.1	202.1	200.1
Inner London - West	Level 4	461.9	448.6	377.3	373.1
Inner London – East	Level 4	129.1	124.4	103.4	103.5
Outer London	Level 3	99.4	95.5	79.6	77.6
Outer London – East & North East	Level 4	77.8	74.2	61.5	59.8
Outer London - South	Level 4	95.3	91.5	76.3	76.1
Outer London – West & North West	Level 4	120.9	117.1	98.0	94.9
South East	Level 1	116.0	110.0	91.5	86.8

Source: EUROSTAT/REGIO



One of the peculiarities of the European Union is that each country has its own idea of what a 'city' is.

DR



Bremen's officially constituted existence reflects even older events – its role, together with Hamburg, in the medieval trading system of the Hanseatic League. In France (ZEAT) and Britain (Standard Regions) the Level 1 regions have little but a statistical existence. In Britain the same is even truer of the next level down – Level 2. For EU purposes these are the most important from the point of view of both statistical data and policy implementation but in Britain they exist only as groupings of counties: the same is true in Germany where despite its decentralised federal structure the relevant units are either the uneven but mainly large Level 1 Länder or the small Kreise.

While some politicians represent N.U.T.S. regions, which are formalised in the EU's Committee of Regions, the economy of course is organised quite independently of them. International companies are interested in access to communication and transport infrastructure and labour markets and of course all these are interdependent. One of the elements in the GEMACA II project was a study by JonesLangLaSalle of the property requirements of new Technology, Media and Telecom companies or the Dot.Coms. This was a study of global reach including 4 major European cities (Hamburg, London, Munich and Paris). The consensus was almost complete – even for the

US cities. In deciding on their location what mattered was access to infrastructure: high capacity internet connections and public transport nodes. Access to public transport was critical because of their dependence on highly specialised and skilled labour. An earlier study (Cheshire & Gordon, 1995) showed that for multinational companies access to Heathrow airport was the most important common factor.

The same is true of property developers. They are interested not in the political jurisdiction but the effective economy. This is the case whether it is offices, industrial space or retail development. What is relevant is the demand for the category of property in the spatially bounded 'property market'. The geographical boundaries of this market will extend to the area influenced by the same economic conditions – that is it will be economically self-contained. There will be a national market but a series of regional or local markets determined by the actual behaviour in space of economic agents. Equally if one is a policy maker interested in economic development one will be interested in geographical areas within which the impact of interventions are (largely) self-contained. That is, one will need to minimise the spatial spillovers of interventions. And finally such policy makers at the national or supra-national level who are interested in spatial redistribution (or reducing 'spatial disparities') will need valid comparative measures of well being. Just as here we need valid comparative measures of 'competitiveness'. As we can see from Tables 1 and 2 if this measure of well being is GDP p.c. then the areas need to be self-contained in the sense that the people who work in the areas also live in the areas. Otherwise the measures of GDP per capita will be distorted.

Some N.U.T.S. are Cities.....

Table 2 illustrates this point. Some N.U.T.S. regions seem to correspond to cities. Data for population and GDP p.c. are shown for a selection of these. As well as for the N.U.T.S. regions the data are also shown for functionally defined urban regions: or FURs. FURs are designed to capture urban economies which are both self contained and homogeneous. The basic principle is to identify significant employment concentrations – which will be core cities – and the areas from which these economic centres draw their workforce and extend their economic influence. These 'hinterlands' are intentionally identified in a way which ensures they are inclusive. Working with the smallest practical spatial units for which data is available (Kreise in Germany for example or communes in France or Census Wards in the UK) each of these small units (for convenience 'municipalities') was added to a FUR's hinterland if 10% or more of its economically active population worked in the core city (or in the case of 'multi-polar' FURs – core cities) concerned and it was contiguous to a municipality already forming a part of the same FUR's hinterland.

This means that FURs do not exhaust the territory of a country. In the case of the GEMACA II study this is self-evidently true since we were only interested in the largest metropolitan regions and so only identified FURs with 1 million or more inhabitants.

The criteria for identifying a core city was that there were was a municipality or contiguous neighbouring municipalities containing 20,000 or more jobs, with a job density of at least 7 per ha. Since we were interested only in FURs with a million or more inhabitants in fact all cores that were identified had a total of considerably more than 20,000 jobs. There were then additional rules for handling problems such as voids or enclaves in determining both the area of the cores and hinterlands.²

The resulting FURs are clearly less than perfect but it is doubtful whether perfect definitions exist. What is clear is that they will be largely self-contained in an economic sense and their boundaries follow a logic determined by actual behaviour of economic/social actors. They will correspond both to labour catchment areas and to spatially defined property markets. Furthermore they will contain the full set of groups and places – the rich and the poor, the areas from which population or employment may be decentralising or recentralising – which in combi-

nation represent a city and its sphere of influence. The whole set of FURs studied within the project are shown in Map p.21 and the more detailed boundaries for the London and Paris FURs are shown in Maps on pages 22 and 23. These also show the boundaries of the relevant N.U.T.S. regions.

We can see from Table 2 that data taken directly from Eurostat, even for N.U.T.S. regions which correspond to cities can be very misleading in terms of the functional reality of those cities. It is not just that the administrative boundaries of some – Bremen and Brussels most obviously – cover a far smaller area than the economic region but also the relationship varies over time. This means that not just the per capita GDP of the N.U.T.S. version of Bremen is substantially overstated (the output relates to the jobs of large numbers of uncounted non-resident commuting workers as well as to residents) but measured rates of economic growth are misrepresented as well. Since – again to take the case of Bremen – there was decentralisation of population from the core city to the hinterland over the decade of the 1980s – the overstatement of GDP p.c. at the end of the decade was greater than at the start. The growth rate was thus overstated as well as GDP p.c. Nor was this measurement problem trivial. The overstatement was by nearly 40%.

Table 2

The Difference Boundaries Make; N.U.T.S. Regions which are Cities

Region (L)/Functional Urban Region (F)	Population '000s					GDP pc @ PPS		
	1991		% Change 1981-1991			% Change 1981-1991		
	F	L	F	L	F-L	F	L	F-L
Bremen	1272	682	2.3	-1.8	4.1	58.2	80.7	-22.5
Hamburg	2806	1645	3.4	0.4	3.0	64.2	84.7	-20.5
Ile-de-France/Paris	10624	10740	5.5	6.9	-1.4	102.1	87.1	15.0
Brussels	3399	960	0.6	-4.0	4.6	73.4	92.9	-19.5
Great London	8757	6871	-3.2	0.3	-3.5	114.0	95.2	18.8

Source: Eurostat and Urban Estimates on 1971 commuting boundaries
L = NUT Region - F = FUR

(2) By voids we mean single spatial units in which there were say less than 7 jobs per ha but which were separated by more or less empty space with additional units meeting the criterion beyond (as happens for example in the UK with the Green Belt). These voids represented 'gaps' between parts of an otherwise continuous core or hinterland. Enclaves are municipalities not meeting the criterion but entirely surrounded by others, which do. For precise details of the methodology employed refer to the GEMACA II Final Report (2001)

International differences and the role of institutional factors

A further type of problem illuminated by the comparison of data for FURs with those for administrative areas is the important contribution made to their patterns of physical urban development by institutional differences between countries. This is well illustrated by comparing the growth of London and Paris in terms of their population. Table 3 shows their population development from 1951-97 defined on the basis of employment location and commuting patterns recorded in 1971 (FUR71) as defined in Hall and Hay, 1980. Using these constant 1971 boundaries provides a longer time series but also allows the contrast with the results for the 1991 boundaries (FUR91) identified for the GEMACA II project and the built-up areas (agglomération) to be revealed.

This comparison shows how commuting patterns in the two cities have diverged over time leading to very different conclusions about the size of the cities, their growth over time and their patterns of decentralisation or recentralisation. The results from the GEMACA II project using the more recent data on commuting and employment results are shown for both cities in Table 4.

Data for 1997 are not available for the component core and hinterland of the FUR71 but the long term trend of population loss from the core of London's FUR is obvious. Hinterland growth was sufficient to offset core loss of population in London only until 1961. From then, on the constant 1971 boundaries, there was net loss of population until the late 1980s. The loss of the 1980s however was almost exactly offset by the gain of the first half of the 1990s with most of that gain being in the core – even the inner part of the core.

Table 3

London and Paris – Population 1951-97, FUR71: '000s

Functional Urban Region		Constant 1971 boundaries					
		1951*	1961*	1971*	1981*	1991*	1997*
London	Core	6417.0	6134.7	5593.9	4902.6	4639.2	
	% growth		-4.4	-8.8	-12.4	-5.4	...
	Hinterland	3384.1	3840.1	4186.1	4146.9	4117.3	
	% growth		13.5	9.0	-0.9	-0.7	...
	FUR	9801.1	9974.8	9780.0	9049.5	8756.5	9038.3
	% growth		1.8	-2.0	-7.5	-3.2	3.2
Paris	Core	6076.7	7358.2	8380.5	8332.3	8574.5	
	% growth		21.1	13.9	-0.6	2.9	...
	Hinterland	728.7	843.8	1122.9	1740.7	2049.3	
	% growth		15.8	33.1	55.0	17.7	...
	FUR	6805.5	8202.0	9503.3	10073.1	10623.8	10907.8
	% growth		20.5	15.9	6.0	5.5	2.7

Source: FUR database

*London and Paris adjusted to common dates.

Paris presents an apparently very different picture. Over the whole period, the Paris FUR71 experienced population growth in all its components except for a slight loss from its core during the 1970s. Between 1951 and 1997, the constant boundaries Paris FUR71 increased in size by some 60% while the London FUR71 lost about 8% of its population. Paris appeared to outstrip London as Western Europe's biggest city on this measure during the 1970s. Only during the 1990s has London's growth exceeded that of Paris. Another feature of the difference between the two cities is the size of their hinterlands relative to their cores. In London, about half the residents are in the hinterland defined by commuting flows: in Paris it is between 20 and 30%.



Table 4

London and Paris – Population of FUR71, FUR91 and Built-up Areas

Functional Urban Region		Population in 1991		
		FUR71	FUR91	Built-up Area
London				7843.2
	Core	4639.2	6125.5	
	Hinterland	4117.3	6393.8	
	FUR FUR growth 1981-91 %	8756.5 -3.2	12519.3 1.9	
Paris				9516.3
	Core	8574.5	7898.0	
	Hinterland	2049.3	3520.0	
	FUR FUR growth 1982-90 %	10623.8 5.5	11418.0 6.3	

The data presented in Table 4, however, present a very different picture. This allows for changes in commuting and employment patterns between 1971 and 1991. The 'size' of London is extremely sensitive to changing commuting patterns whereas that of Paris is not. The FUR91 of London – defined on the 1991 patterns of employment and commuting flows – is 56.6% larger than its built-up area and 43.0% larger than it is when defined on constant 1971 commuting boundaries. Paris FUR91 is only 20% larger than its built-up area at the same date and only 7.5% larger than its FUR71. We also find, if apply commuting patterns of 1991, that not only was London very substantially larger than it was when defined on its 1971 boundaries but it was apparently larger than Paris: 9.6% larger rather than 21.3% smaller.

This is perhaps only a confirmation of the common view that London is particularly subject to long distance commuting. This is a long term historical difference between the two cities. It probably reflects the historic retention of city walls in Paris and the associated growth and retention of a concentration of upper socio-economic groups within the centre compared to the suburbanisation and subsequent ex-urbanisation of such groups from London. Such a historic difference has almost certainly been re-inforced by the very different policies of land use planning followed in Britain compared to France, however. As was noted above, in France, urban growth is in general allowed to take place by continuous additions at the existing urban boundary. In Britain, the land use planning system in place since 1947 requires the maintenance of constant urban boundaries and the protection of

unbuilt land, or 'Green Belts', around them. Growth of London has thus been significantly squeezed to leapfrog across green space to satellite communities. The result is more and longer distance commuting and quite possibly greater total energy consumption. These differences in land use planning policies themselves are likely to reflect the historic differences in the spatial distribution of upper, and politically more influential, social groups in the two countries.

Different inheritances and institutional regimes are also influential on physical patterns of urban development in other EU countries. The polycentric nature of the Dutch FUR (the Randstad) similarly reflects both historical inheritance and recent planning policy which has maintained an unbuilt green space between the four component core cities. The extensive hinterland of Brussels reflects planning policies that make little attempt to restrict or contain urban development, a tax regime that allowed commuting costs to be offset against tax until quite recently and significant investment in the motorway infrastructure.



Functional urban regions of NorthWest of Europe

Conclusion

Economies and societies alike are built out of FURs or something very like them. Major cities and their spheres of economic influence are the most relevant units for location and comparative measurement alike. There are few N.U.T.S. regions which correspond at all closely to the effective economic region of cities. Paris and the Ile de France represent one of the very few exceptions although Berlin and Brandenburg together probably approximate the functional reality of modern Berlin. N.U.T.S. are hugely varied. Some, like Inner London, Bremen or even Hamburg and Brussels are just parts of urban areas – at most the central city. On the other hand some N.U.T.S. regions are larger than a number of EU countries and major cities such as RheinMain/Frankfurt have no corresponding N.U.T.S. region at all. Even to compare city size or prosperity we need functionally defined urban regions. It is certain that we need FURs if we are to compare competitiveness because such a concept relates to coherent economic regions. A major focus of the GEMACA II project therefore was to identify all our metropolitan regions using a common set of functional criteria and then to analyse a wide range of data for the resulting FURs. On the other hand it must be accepted that politicians represent administrative regions and so like them.



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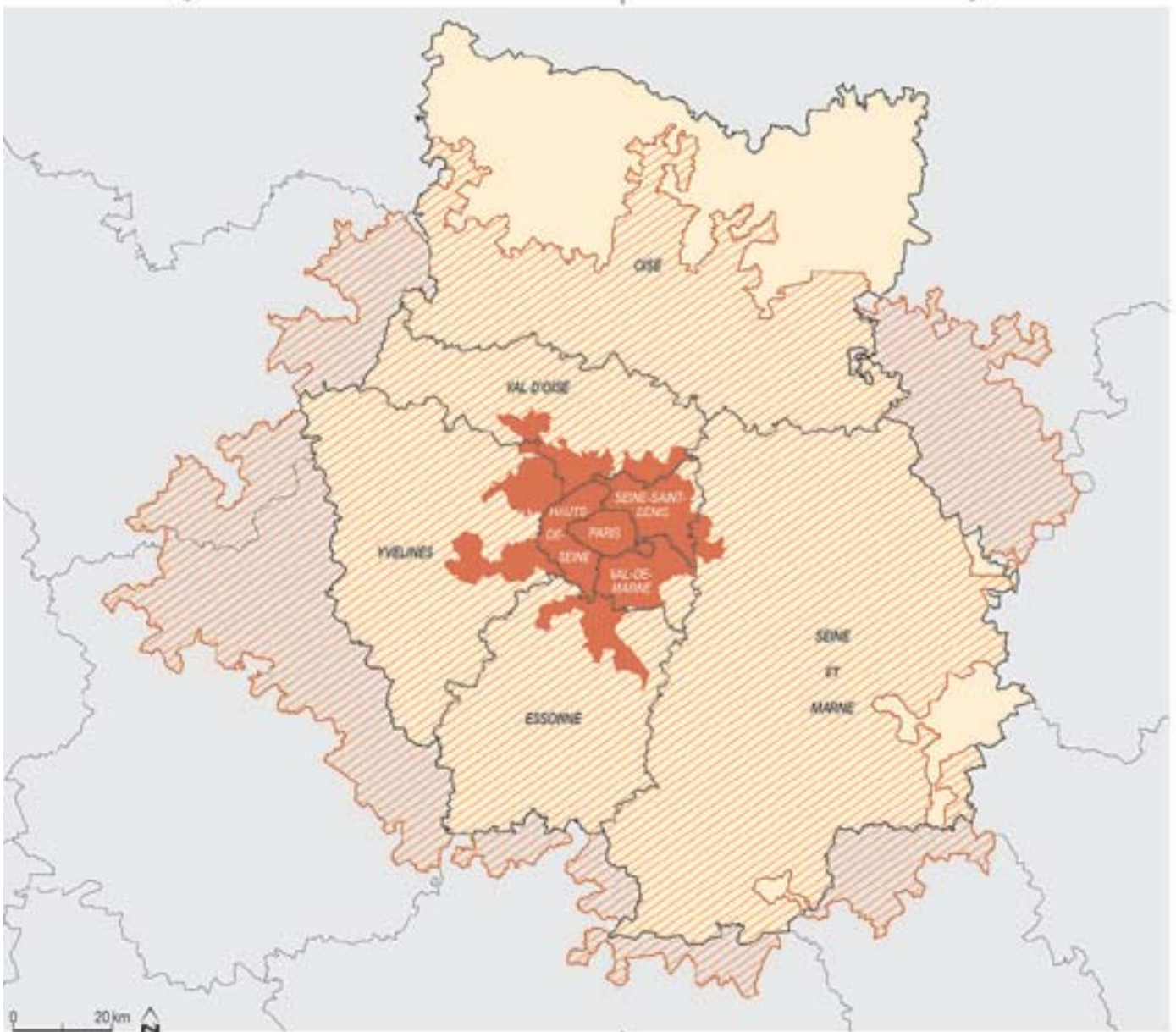
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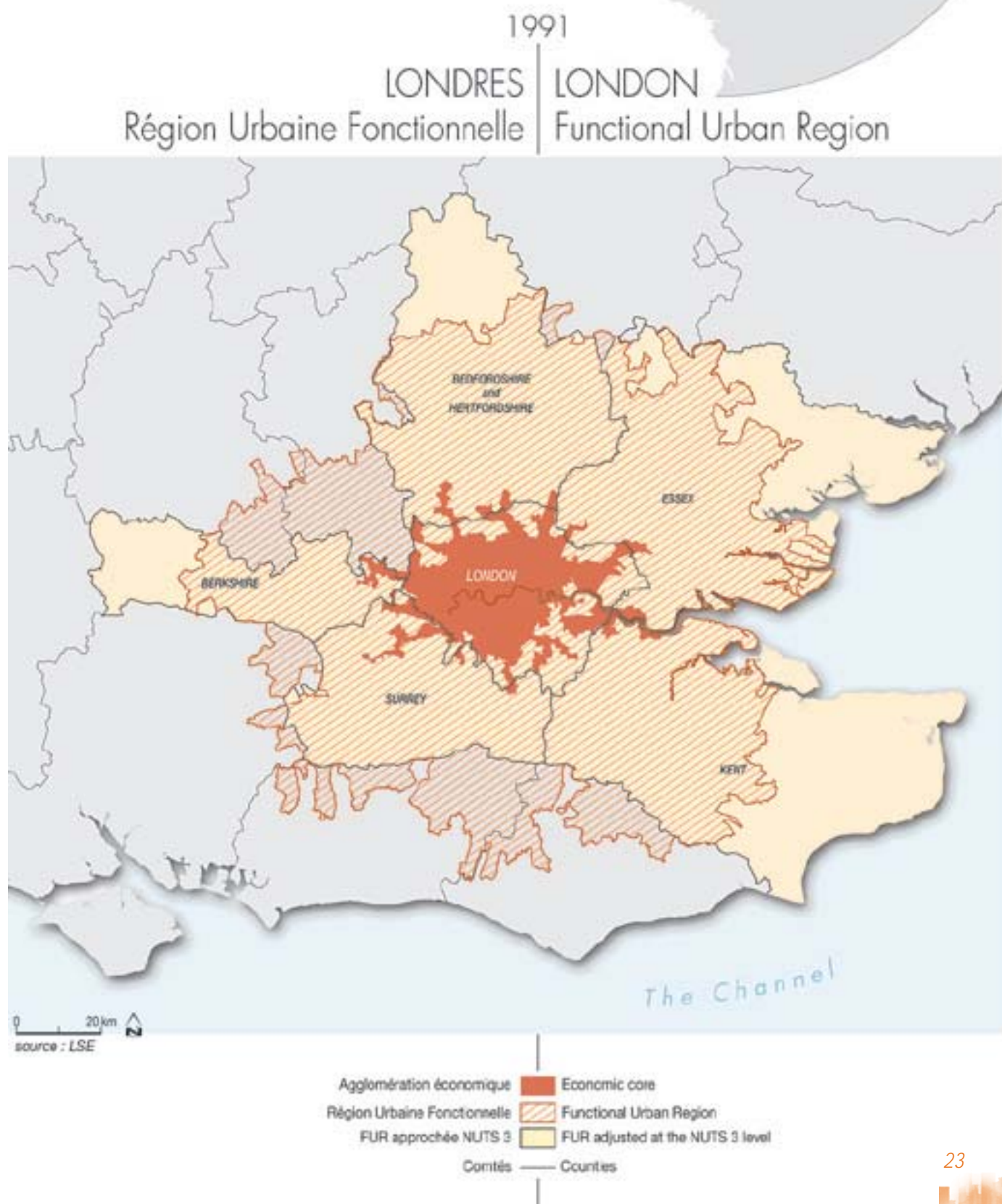
1990

PARIS | PARIS

Région Urbaine Fonctionnelle | Functional Urban Region



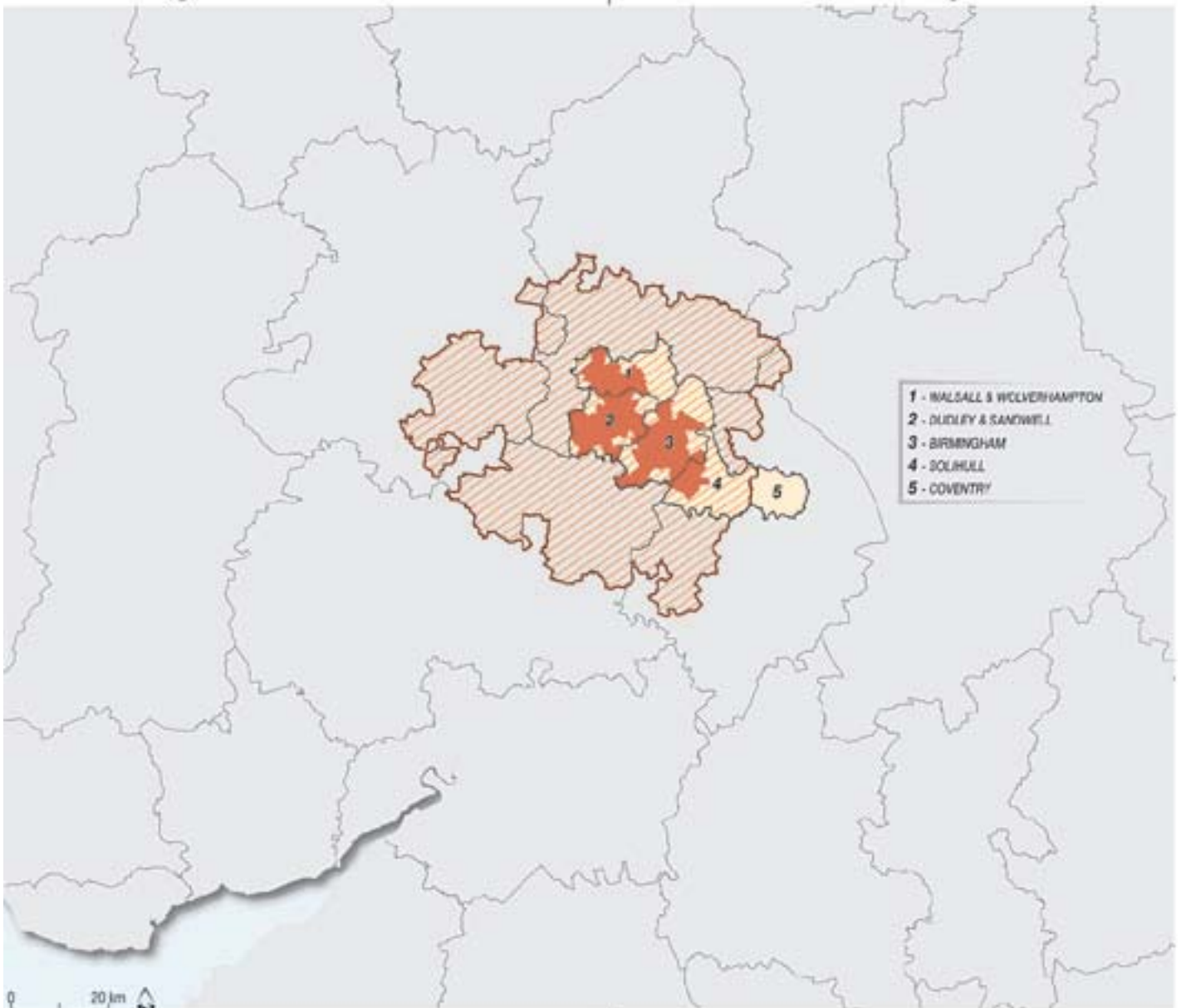
- Agglomération économique Economic core
- Région Urbaine Fonctionnelle Functional Urban Region
- FUR approchée NUTS 3 FUR adjusted at the NUTS 3 level
- Département Department





1991

BIRMINGHAM | BIRMINGHAM
Région Urbaine Fonctionnelle | Functional Urban Region



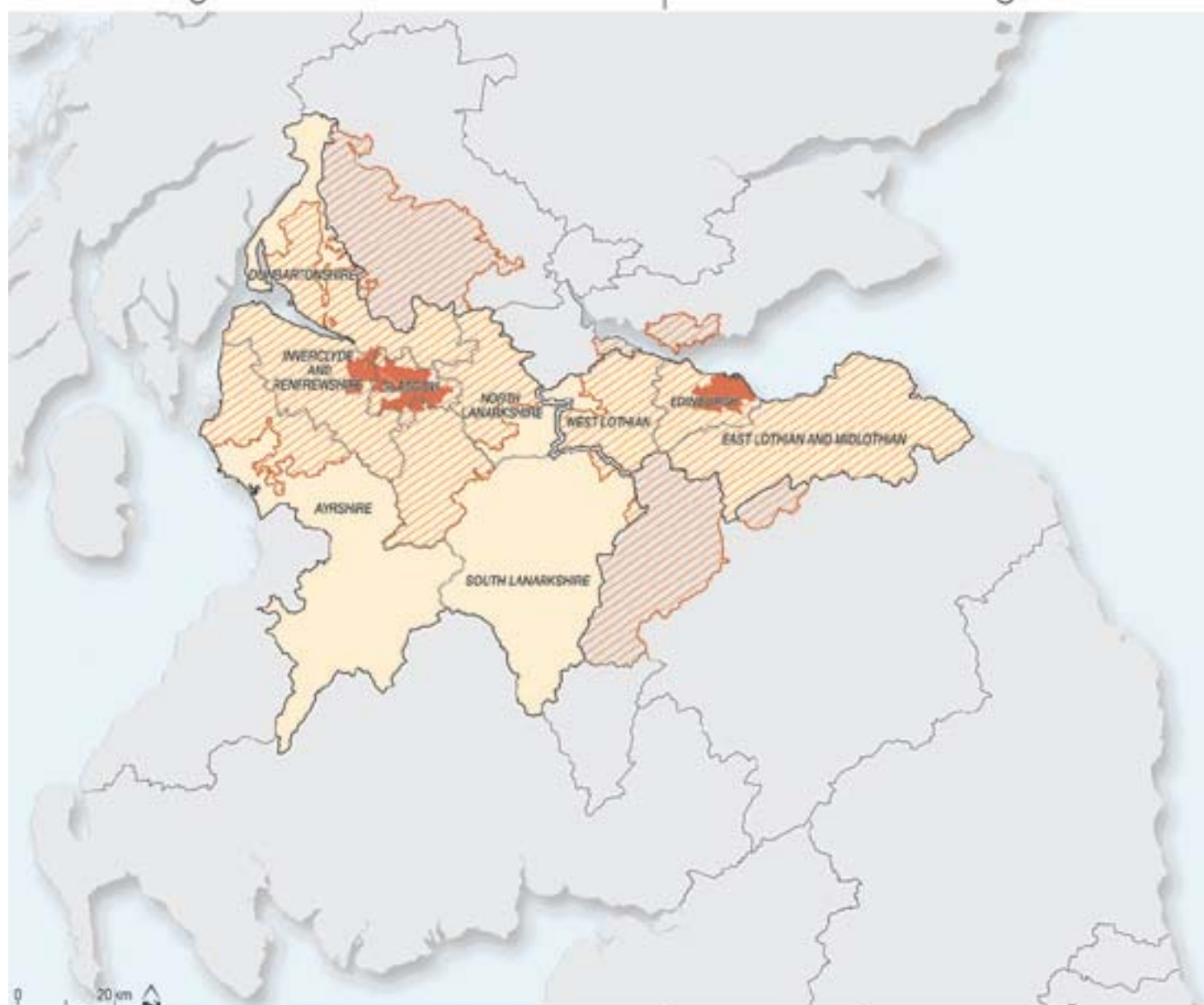
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| Agglomération économique | | Economic core |
| Région Urbaine Fonctionnelle | | Functional Urban Region |
| FUR approchée NUTS 3 | | FUR adjusted at the NUTS 3 level |
| Comtés | | Counties |



1991

GLASGOW / EDIMBOURG | GLASGOW / EDINBURGH
Régions Urbaines Fonctionnelles | Functional Urban Regions

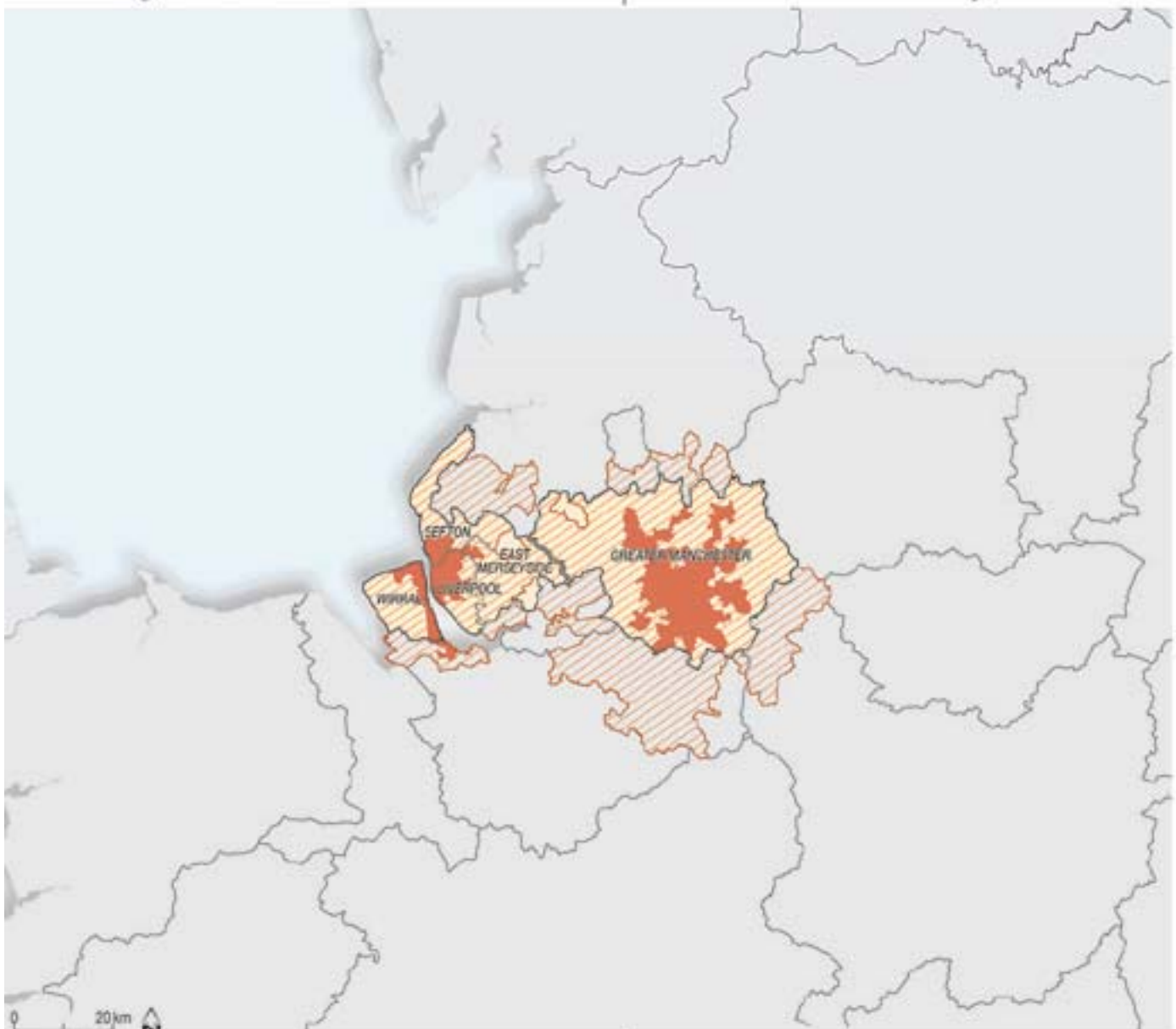


Agglomération économique | Economic core
Région Urbaine Fonctionnelle | Functional Urban Region
FUR approchée NUTS 3 | FUR adjusted at the NUTS 3 level
Comtés | Counties

1991

LIVERPOOL / MANCHESTER
Régions Urbaines Fonctionnelles

LIVERPOOL / MANCHESTER
Functional Urban Regions



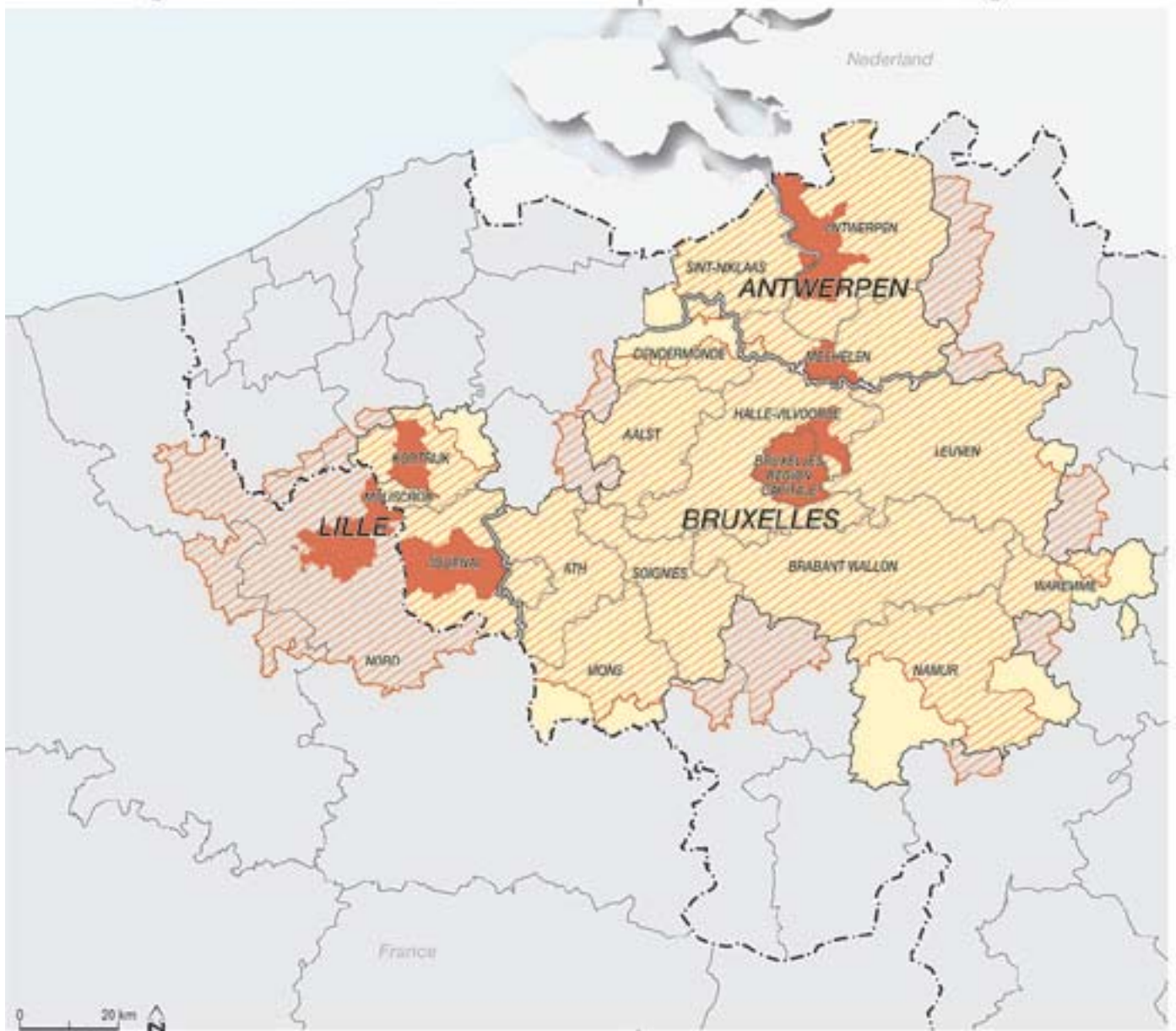
Agglomération économique	Economic core
Région Urbaine Fonctionnelle	Functional Urban Region
FUR approchée NUTS 3	FUR adjusted at the NUTS 3 level
Comtés	Counties



1999

LILLE/ANVERS/BRUXELLES
Régions Urbaines Fonctionnelles

LILLE/ANTWERP/BRUSSELS
Functional Urban Regions

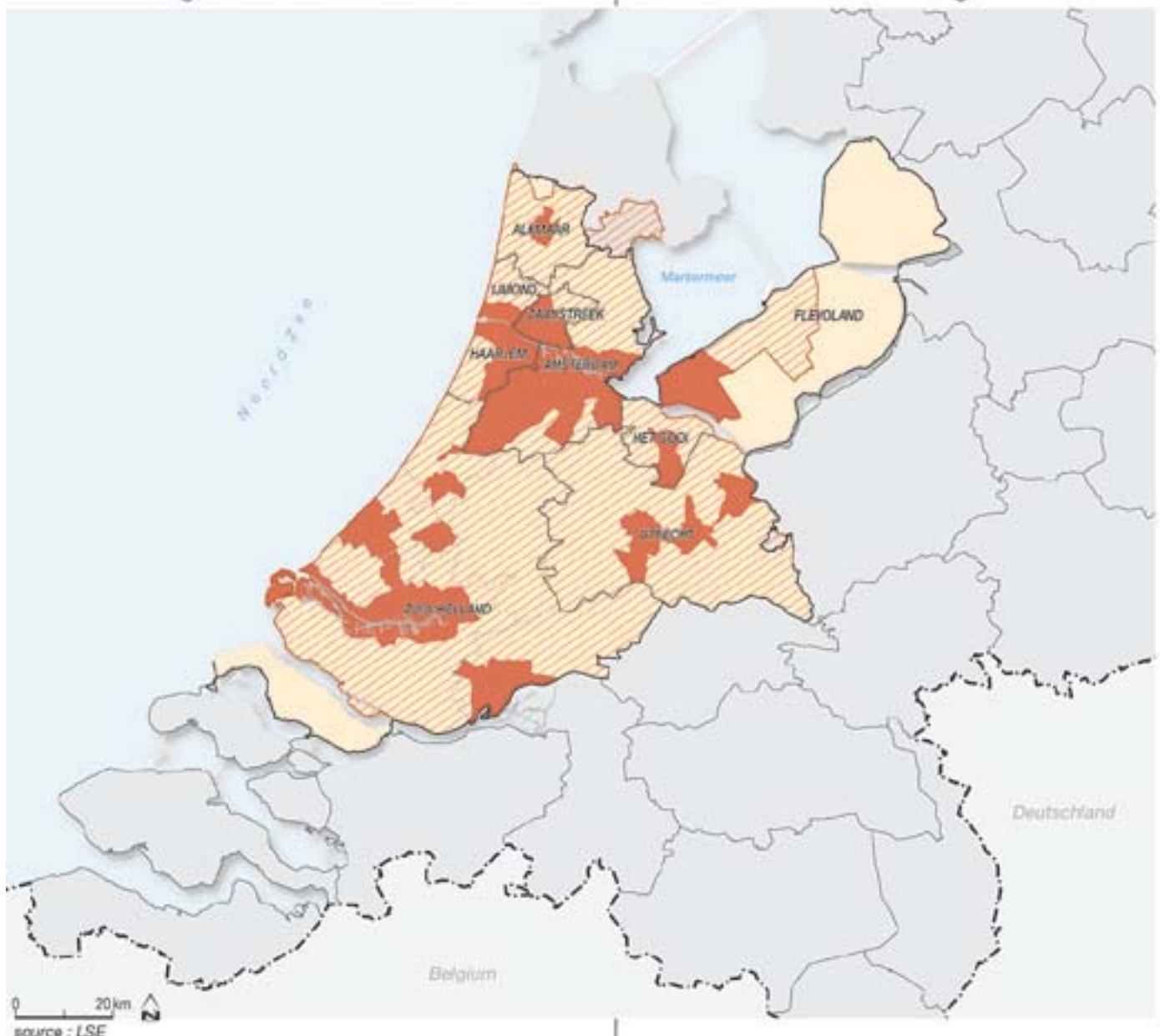


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| Agglomération économique | Economic core |
| Région Urbaine Fonctionnelle | Functional Urban Region |
| FUR approchée NUTS 3 | FUR adjusted at the NUTS 3 level |
| Province et arrondissement | |

1992

AMSTERDAM | AMSTERDAM

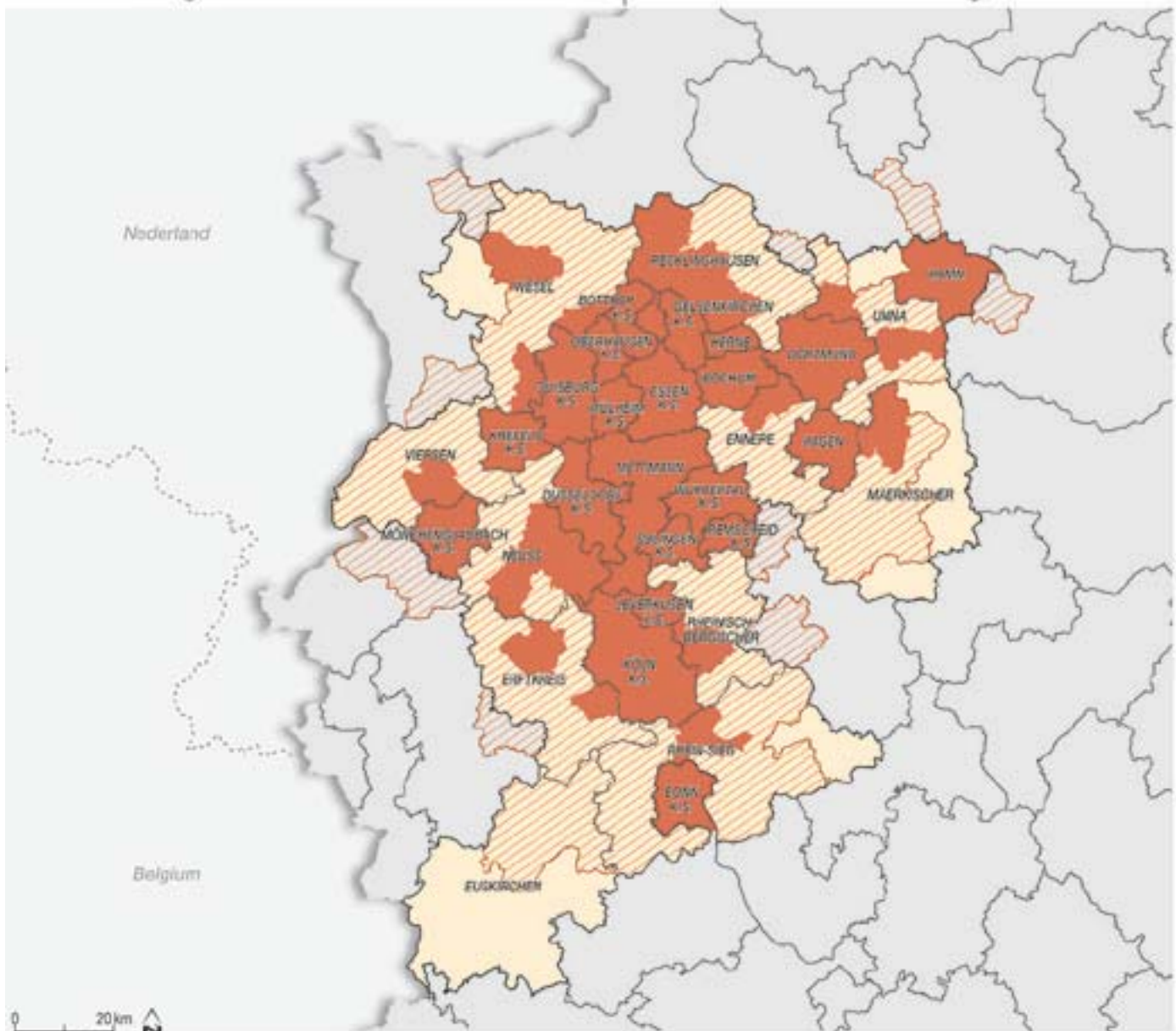
Région Urbaine Fonctionnelle | Functional Urban Region



Agglomération économique | Economic core
 Région Urbaine Fonctionnelle | Functional Urban Region
 FUR approchée NUTS 3 | FUR adjusted at the NUTS 3 level
 Comtés | Counties

1999

RHINRUHR | RHEINRUHR
Région Urbaine Fonctionnelle | Functional Urban Region



0 20 km
source : LSE

- Agglomération économique | Economic core
- Région Urbaine Fonctionnelle | Functional Urban Region
- FUR approchée NUTS 3 | FUR adjusted at the NUTS 3 level
- Département | Kreise



The Competitiveness of Cities:

Why it Matters in the 21st Century and How we can Measure It?

Pr. Ian Gordon
London School of Economics
and Political Science

The starting point of this project is an observation that increasingly places in Europe –regions, cities and even smaller areas as well as nations- are engaged in economic competition with each other. The competitive forces which drive the economy on and create value are essentially about the struggle between firms to sell their products in the marketplaces and the development of the macroeconomy.

Can Places Compete?

The starting point for this project is an observation that increasingly places in Europe – regions, cities and even smaller areas as well as nations – are engaged in economic competition with each other, and a belief that there are both more and less intelligent ways of pursuing this competition. Some of the initiatives we observe being enthusiastically promoted in particular places in order to boost their 'competitiveness' seem purely wasteful. Others may well have positive effects at the local level, but only at the cost of other rather similar places – pursuing a competitive game in which there may turn out to be no real winners, but which in any case contribute nothing to overall national or European welfare, or to improving the position of those areas most in need of an economic boost. On the other hand there are ways of promoting the competitiveness of particular places which add not only to their productive capacity and welfare, but also to that of their nations and of Europe as a whole. Indeed there is a potential for locally-based economic interventions to contribute to these overall goals in ways beyond those that can effectively be pursued through top-down national or European managed initiatives.

The ultimate aim of this project is to contribute to these more positive, constructive and generally beneficial types of competitive activity, with recommendations both in terms of specific types of policy and of governance structures which are more likely to promote strategies of this sort, rather than the wasteful forms which have been more evident in recent

years. But we have to start by understanding how it is that cities and regions actually compete, why such competition has become more important in Europe over the past twenty years or so, and how we might assess the competitiveness of particular places.

Although cities and regions in Europe have mostly come to adopt the language of competitiveness during these time, and to pursue initiatives which are designed to promote the economic positions of their areas, there has actually been an argument amongst economists as to whether places as such really should be seen as competing with each other. In particular, two American economic gurus (from nearby universities in Massachusetts), both of whom have had considerable influence with urban policy-makers, have been quoted as saying quite contradictory things about this issue.

One position, identified with Paul Krugman, says that:

'Cities don't compete, only firms do.'

This seems to be saying two things. The first is that the competitive forces which drive the economy on and create value are essentially about the struggle between firms to sell their products in the marketplace – or to make goods and services which will sell profitably in the product market. The other might be what emerges from many interviews with and surveys of firms, namely that what really matters to them is some combination of their own firms' capacities and the development of the macroeconomy.

However, a second very powerful position, from Michael Porter's (1990) book on *The Competitive Advantage of Nations*, observes that:

'Internationally successful firms derive key elements of competitive advantage – i.e. their ability to sell their products in contested markets – from particular characteristics of the regional environments in which they are based'.

In other words, whether firms are conscious of it or not, the evidence is that firms can be helped or hindered in their competitive efforts by features of the places from which they operate. These include national characteristics, including institutions and public policy, but there also seems to be a very strong (perhaps stronger) city-regional dimension to this, since clusters of internationally successful businesses in related industries are found within particular regions (not just within particular countries). In part the strength of these regions seems to be a result of this clustering, with the strength of some firms in specialised areas providing a source of advantage to other local firms in related activities. But additionally there seem to be some other attributes of these regions that provide general sources of advantage supporting the growth of these clusters. In principle at least then there is a role for any public agency which can help create these characteristics in a particular region, to contribute to the competitive advantage of firms based there. Thus, it seems 'places can help firms compete' – and if agencies representing these places consciously and effectively seek to do so, then the places themselves could be seen as actively competing, rather than just 'keeping score' or gambling on the successes and failures of firms that happen to be operating in their territory.

Parts of this argument are actually supported by Paul Krugman's own research, which shows how economies of scale operating within a city or region can reinforce patterns of growth or decline arising from chance factors or supportive public policies. However, he has a very important caveat to offer. There is an 'intellectually respectable case to be made' for policy intervention to boost competitiveness, both at the national scale and more locally. But in practice, he argues, almost all specific cases put forward fail this test, and turn out to be disguised efforts to promote special interests, in ways which typically involve much greater costs to other groups (within the nation or region).

The lesson is then that collective action could make a real difference to local productivity and prosperity – but is only likely to be positive in its effects if strategies are thought through on an economy-wide basis. A key starting point, emphasised in this project, is to identify the functional boundaries of coherent city-regional economies, as a basis then for analysis of the key elements in those economies and assessment of their performance.

What's New About this? Haven't City Regions Always Competed?

The general arguments of the previous section seem as though they could apply to almost any place and period, so it's not clear why issues of regional and urban competitiveness should have come to the fore now in Europe – or why we should believe that they now represent appropriate bases for collective action, rather than a new and more vocal set of claims for the community to act in support of special interests.



Regions, cities and even smaller areas as well as nations are they engaged in economic competition with each other over the past twenty years ? What's new about this ? Haven't City Regions always competed ?

C. Tarquis/laurif

In fact, European economic history throws up many examples of cities pursuing very active competitive strategies on behalf of local economic interests – particularly of traders – for example, the Hanseatic League, or Venice, renaissance Italian banking and textile centres, and later financial centres such as Amsterdam or London. But in the modern industrial era such initiatives, and some of the civic spirit associated with them, seemed to wane in importance – since for the key sectors what mattered was a combination of location, technology and corporate strength more than particular characteristics of the places they operated from or their reputations.

But as that era (often identified with Fordism) has come to a close in Europe, the situation has changed again, giving a

renewed importance to place-based characteristics – and efforts to enhance these. A way of understanding these changes is to think of firms as making use of three particular kinds of asset:

- ones which are specific to the company – its technology, management, designs, finances and reputation – available to any of its branches anywhere;
- ones which follow from location in relation to the material inputs, space, labour and markets required for routine business; and
- ones involving proximity to various kinds of more specific and differentiated local resource, including the potential availability of customers, collaborators, skill and information sources in unforeseen circumstances – now often referred to as urban assets.

Two sorts of change have affected the relative importance of these assets. On the one hand, there are very long established and continuing trends toward the cheapening of transport and communications and toward lighter products, which reduce the importance of locational assets (as we have defined them here). Initially, through much of the last century, the main effect was to increase the importance of company-specific assets, which were increasingly exploited through multi-plant and multinational companies, pursuing larger markets and cheaper sources of routine inputs. Within the last twenty years or so, however, another set of changes is widely recognised as occurring – associated with both a less predictable business environment and increasing importance being attached to competition in terms of distinctive product qualities (more than simply price). Their major effect has been to increase the importance of the more qualitative sort of urban assets. In Michael Porter's analysis these include potential access not only to high quality inputs, but also to reliable market intelligence (from demanding local consumers) and the stimulus of rivalry from competitive local firms.

The two sets of change taken together mean that increasingly places need to be able to deploy these kinds of qualitative urban asset, if they are not to be caught up in a 'race to the bottom' – in terms of their ability to match a wider and wider range of competitors for the cheapness with which they can supply routine kinds of space, labour and waste disposal.

In this new kind of qualitative 'territorial competition' there seems to be a much

stronger potential role for the agencies of local and regional governance to play than when everything depended on either company or locational assets (in the sense of accessibilities). Moreover, as these differentiated kinds of urban assets become more important for productivity and business success, there seems to be a role for governments to play in promoting general welfare and efficiency that can only effectively be pursued with the active involvement of these local or regional agencies.

The Markets that Cities and Regions Compete in, and the Ones that Matter

These fundamental kinds of economic change have not been the only factors in producing a much stronger sense within Europe that places have to engage more actively in competition for economic success. Two more specific factors have been:

- increasing international economic integration – notably the Single European Market opening up the high level services in which major cities specialise to competition from abroad; and
- local economic crises associated with industrial restructuring and the recessions of the last couple of decades.

But there is more than one kind of 'market' that places are competing in for economic success, and it is important to differentiate between these, since all are not equally important and the kinds of action that are required are not the same for each.

Functionally, places compete in four basic kinds of market:

- product markets, through facilitating the competitive success of either firms based in the area (which is Porter's focus) or of firms operating there (with which local agencies are more concerned, because of effects on local employment and incomes);
- inward investment by businesses and other mobile sources of employment
- desirable residents who can bring in economically valuable resources, whether in terms of their own spending power, or of the human capital and talents which they bring; and
- recognition and favours from higher levels of government, in terms of public projects, high status 'hallmark events' such as Olympic Games or eligibility for assistance under regional or social policies;
- There is no one recipe for success which is common to these different markets. For example, the most potent attractors for mobile firms – or even those factors required to hold on to potential out-movers – may make little or no contribution to the product market performance of established firms. This means that places have to make choices as to their priorities between these different markets, and also choose their specific policies and competitive strategies with an awareness of their relevance to the most important markets for them to succeed in – rather than being able to fall back on a general 'boosterist' rationale.



Clearly there are also issues of sectoral focus which raise similar issues of priorities and evidence that policies can work in relation to their specific targets. But, for a general consideration of the relationship between competitive processes and policy formation a more significant consideration is that each of these markets can operate over very different spatial scales. Thus places will have local, regional, national, European and global rivals to consider. It is important to get these in proportion and not to assume for example that the internationally oriented sectors of a major urban economy - or their principal international rivals - are what primarily matter. The best general rule to follow, at least in relation to product market competition, is that the competitiveness and productivity of all parts of the city or regional economy matter for overall success and standards of living. In most places, however, the obvious fact of life is that competition is likely to be most intense in relation to local rivals. And it is certainly easier to envisage ways in which local service firms can be helped to gain market share from those identifiable nearby centres, or ways of diverting potential investment of all kinds from nearby alternative destinations. The same also applies to attracting desirable residents, though in this case some of the key benefits to attracting them may not simply accrue to the immediate local area, since they choose to work and spend their money in other localities. This can be a major problem, since localised competitive strategies can seem the most obviously relevant, but are particularly likely to take on an unproductive and purely diversionary form - with out-

comes that are at best zero sum across a wider area, gains being balanced by losses. These are major reasons for focusing both analysis of and prescription for inter-place (or territorial) competition at the level of functional urban regions, rather than more local areas - which is a key ingredient of this project.

The more dynamic aspects of the notion of competitive advantage may be captured by measures of growth in sales, net output or employment.

With courtesy of the Wirtschaftsförderung Düsseldorf.

All forms of territorial competition are not equally desirable therefore, nor are all equally important. In terms of the major types of market identified above, we have reason to believe that product market competition will typically be the most important. In particular, there is evidence from the European TeCSEM network's studies that variations between one city and another in the growth performance of established local firms (rather than new firm creation or movements between areas) make the largest contribution to their overall success or failure (Cheshire and Gordon, 1998). Policies which can significantly affect this, either through enhancing the competitive capacities of these firms, or removing avoidable constraints on their ability to grow and operate efficiently - which may often be more important and easier to implement - have the most potential to contribute to local success.



And, what is more, they are obviously less likely to lead to zero sum or purely wasteful outcomes than those which depend upon diverting investment, desirable people or government support from other areas with comparably strong claims on these. At the local level too, policies to support product market competitiveness – through means other than subsidy or protection – are likely to produce the widest spread of benefits within the community. This is particularly so as compared with schemes to attract inward investment which frequently seem to yield gains only for those directly involved in development of new or upgraded sites – or non-local firms which can play off contending areas against each other to extract maximum concessions.

This last point has other implications. Places which simply set out to make themselves more generally desirable for business – in ways going beyond what is justifiable in terms of the productivity and quality of life of local firms and residents – will end up incurring costs of one kind or another which equate to the gains the community can expect to make from success. This is clearly true in relation to mobile investment, where mobile firms with a choice of potential reap all of the gains from competition to attract them, but can also be true in the other markets. If places are going to 'win' in this competition, by making gains that exceed the costs they can expect to incur, they will have to do something different which gives them an element of monopoly (counterbalancing that of mobile businesses). This means that they need to identify distinctive strengths which they can develop and market as Unique Selling Points over the medium-long runs. And they will need governance structures capable of sustaining and implementing such an approach, rather than seeking to demonstrate activity and immediately visible gains. These are issues taken up in late papers from this study.



*The importance of place-based characteristics for firms as making use of three particular kinds of asset :
ones which are specific to the company,
ones which follow from location in relation to the material inputs,
ones involving proximity to various kinds of more specific and differentiated local resource.*

R. Dizian/laurif

How do We tell Who's Competitive ?

An emphasis on place competitiveness implies some standards of evaluation of comparative performance, both so that individual places have criteria to judge how well they have been doing, and so that lessons can be drawn from comparisons between the characteristics (and activities) of winners and losers. Different criteria can produce quite different conclusions, however, and some care is needed to consider how far different sorts of measure actually reflect competitive performance, and how inappropriate choices of areas may distort perceptions of competitiveness.

From a product market perspective, where the issues are clearest, competitive advantage represents the capacity of a business, or in this context the businesses of an area: to sell its products in contested markets. The emphasis on contested markets is clearly important in order to avoid attributing competitiveness to cases which are protected from any strong competition.

The concept is clear, but there is no single indicator which reliably shows how particular places actually perform in these terms. Rather there are three sorts of measure each of which should be closely related to an area's competitive position in product markets but each of which is subject to some sorts of bias.

Export performance

Within particular activities the share of exports in sales seems quite directly to reflect how successful areas are in selling their products, for two reasons. Firstly, taken as a whole, export markets might be expected to be the most widely contested. And, secondly firms from all areas might be expected to face a comparable set of competitors there, which may well not be true in different national and regional markets. Even so, there are limitations, since by their nature some sorts of activity have very limited export market, and there may be variations in this even within sectors, reflecting different sorts of specialisation. Thus areas which have stronger concentrations of manufacturing (still the most traded part of the economy) or which have a comparative advantage in the most internationalised segments of financial services are naturally likely to show higher overall export ratios, whether or not they perform strongly relative to their competitors in those markets. Where available on a sectorally disaggregated basis, export ratios can be one useful indicator of performance, but they are not an adequate measure on their own – nor very relevant to sectors where trade remains limited. And, when divergences are found between regions, they may reflect the historic development and specialisation of different areas as much as, or more than, their current ability to penetrate and win new markets.

Growth

The more dynamic aspects of the notion of competitive advantage may be captured by measures of growth in sales, net output or employment. At an aggregate level these will include effects of business or plant moves, but to a large extent must reflect the degree of success of an area's businesses in winning new business. Again there are potential biases from differing mixes of activity, since areas specialised in currently growing markets will exhibit growth even when their local businesses are failing to hold their market share. A more fundamental source of bias, however, arises from varying supply-side constraints on expansion. This is particularly an issue within major cities where physical factors limit the ability of firms to translate increasing demand for their products into actual growth in output or employment from that site. This is another reason for working with whole functional economic regions, including their less constrained periphery as well as the core areas. But even so, since the cores tend to be much denser – and the supply of space consequently more inelastic – in the larger functional regions, there is still likely to be some bias against actual growth being recorded in those regions with larger population and employment bases. So growth too is a useful but imperfect indicator of competitive performance.



Productivity

Relative productivity levels are the most inclusive indicators of competitive performance, since they cover the whole economy, including activities from the most locally to the most internationally oriented. And the valuations which go into output calculations reflect market judgments on product qualities. As with the other indicators, simple measures of output per head will naturally be affected by the sectoral composition of activities in different areas, and particularly the distribution of highly capital intensive activities whose location implies nothing about areas' competitiveness. There are two more specific possible sources of bias, however. First is the issue of the extent to which levels of output per head in major cities reflect their ability to draw in inputs of highly skilled labour developed in other areas, for whose productivity they cannot take full credit. Secondly, the spatial constraints which depress growth rates in larger city-regions can be expected at the same time to push measured productivity levels up, for purely compositional reasons. This tends to happen since spatial constraints produce higher wage as well as rent levels, and thus tend to displace less productive activities from the city-region. The conclusion is that each of these indicators can provide some evidence about the relative competitiveness of places, at least if these are consistently defined in terms of functional economic units. But all have their biases and for a reliable assessment it would be necessary to look at all three, in relation to their particular patterns of specialisation and the types of non-local asset which particular places are able to draw on.



Places, Interests and Competition

Place-based competition has become an increasingly important feature of European economies during the last couple of decade, as an understandable response to changed forms of economic organisation, a new emphasis on quality, and generally intensified competitive pressures. In this new situation locally-based economic interventions have the potential to add significantly to the productive capacity of European economies. But there is no guarantee that they will actually have that effect. Indeed, as Krugman suggested, the bulk of the pressures for such interventions are liable to yield an overall negative balance of effects even for the area concerned. A critical analytical approach and suitably designed institutions will be necessary to secure more positive outcomes.

Relative productivity levels are the most inclusive indicators of competitive performance, since they cover the whole economy, including activities from the most locally to the most internationally oriented.

V. Gollain/taurif

Basically territorial competition involves sets of interests which happen to be associated with particular places, but which are by no means identical with the collective economic interests of these places. In all cases there are going to be, more or less predictable spillovers, both positive and negative, some affecting other sets of interest within a particular place, while others impact on the interests of other places, especially those which are nearby and/or functionally similar. The challenge for bottom-up approaches to economic and industrial policy is to find ways of developing and implementing strategies which can:

- respond to the particular opportunities, strengths and problems of particular places;
- but avoid licensing the pursuit of sectional and localist interests at greater cost to others inside and outside the places concerned.

This is problematic, because the logic of collective action suggests that it is just such combinations of interests – whether in the form of growth or anti-growth coalitions – which are most likely to come together and promote intervention – especially when accountable public agencies are too weak or fragmented to provide leadership. For the development of productive – rather than wasteful or zero-sum – competitive policies what is required is both:

- the recognition and internalisation of the main kinds of spillover – which in spatial terms means adoption of a city-regional approach, of the kind pursued in this project; and

- the development of a political and institutional capacity at this level, which embodies and reflects the whole range of place-dependent economic interests – not just those which most readily present themselves (namely those of the property sector, central business districts and/or traditionally dominant local activities).

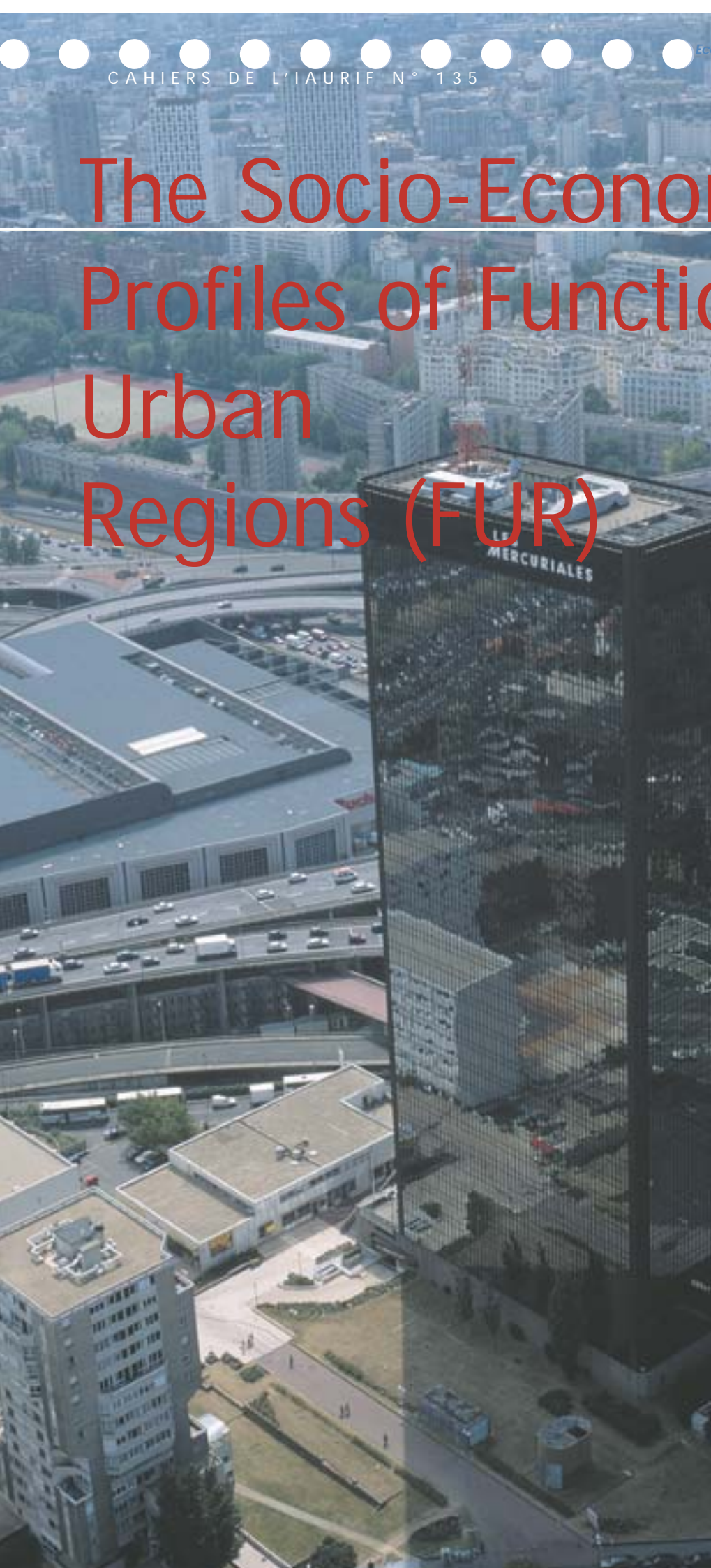
Neither of these requirements are simple to achieve or sustain, and are best seen as long-term goals which will need to be nurtured in the short-medium term by deliberate efforts to create vested interests in interdependence and a focus on creating city-regional assets of long term value.

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The Socio-Economic Profiles of Functional Urban Regions (FUR)



The Socio-Economic Profile of Paris

Thierry Petit
IAURIF

The Paris functional urban region (FUR) is characterised by the dominant position of the City of Paris, surrounded by a first densely populated urban ring and then a second one, which are less and less densely populated as the distance from the capital increases.

The Paris population is relatively younger than in the rest of France, but as the whole country it suffers an ageing tendency.

The Paris FUR economy, still highly concentrated, is undergoing a process of decongestion, deindustrialisation and fast development of service industries.

Paris remains the leading French region in terms of GDP.

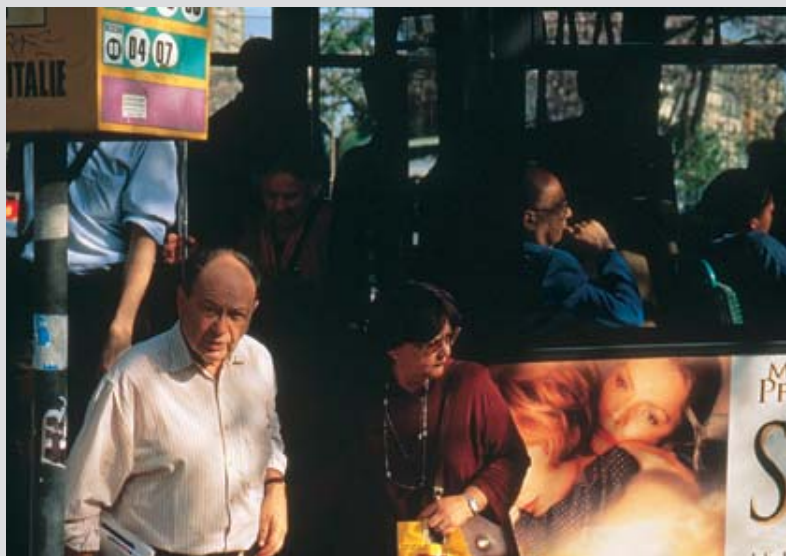
Gauthier/Dreif

The Paris FUR accounts for one fifth of the French population

A dominant position with its roots in history

After very rapid population growth in the 19th century and the first half of the 20th century, growth slowed considerably as a result of a national urban development policy aimed at limiting the expansion of the Paris FUR. Notwithstanding this, after several centuries of highly centralised political and administrative organisation, Paris remains by far the largest metropolitan area in France, with around 20% of the total population.

Since the end of the 1960s, the development of five new towns, located close to the central urban area so as to act as population growth centres, has had a great impact on the Paris FUR. Population growth in the new towns has been extremely rapid. At the same time, Roissy airport to the north of the capital has also emerged as a major focus of economic development. Lastly, there are several secondary growth points on the outskirts of the second urban ring. These were formerly local administrative centres, whose importance has been declining as urban development around the capital has absorbed them.



A younger and more economically active population than the French average

At the 1999 census, the Paris FUR had 11,750,000 inhabitants, a slight increase on the previous census in 1990 (+0.32% a year). Behind this low growth were two contradictory trends: first, population growth in France as a whole was high (+0.8% per year); but second, since 1975, the Paris FUR had recorded a significant migration loss, particularly among the working population with children and the elderly.

As the major employment area in the country, the Paris region is economically attractive, a factor that tends to limit migration loss, particularly during periods of economic growth. In view of this, demographic trends appear to be closely related to changes in economic conditions.

The age structure of the population appears to be relatively younger than in the rest of France and the proportion of economically active young persons, in particular, is higher. However, the Paris FUR has experienced trend ageing of the population, albeit less so than in the rest of the country. The ratio of the economically active population to the population of working age is higher in the Paris FUR than in the rest of France (80% compared to almost 76%).

As the major employment area in the country, the Paris region is economically attractive with some demographic trends that appear to be closely related to changes in economic conditions.

Guiho/Dreif

In France as a whole, male employment remains higher than female employment, but the gap has narrowed considerably as a result of fast growth in female employment, and a reduction in the length of working life due to the greater number of years spent studying and increasingly early retirement. This is also the case in the Paris region, where employment rates are higher than in the country as a whole, particularly for women – in spite of the stagnation in the number of jobs and the rise in unemployment in the 1990s.

The level of educational achievement also appears to be considerably higher in the Paris FUR, with 37% of persons in the 20-59 year age bracket being university graduates compared to only 26% for France as a whole.

The economy of the Paris FUR has been changing

The stagnation of total employment conceals deep change in the economy

According to Eurostat, in 1999, the Paris FUR had almost 4.9 million residents of working age in employment, i.e. 21.6% of the national total. Over the 1990/1999 period, the number of people in employment varied considerably: three years of declining employment were followed by three years of stagnation and then three years of growth. At the end of the period, the level of employment was hardly different from that of 1990.

The redeployment of jobs to the outskirts...

In terms of spatial distribution, with almost 70% of employment in only 5% of the Paris FUR, economic activity still appears highly concentrated. However, since the middle of the 1970s, there has been a significant redeployment of employment from the centre to the outskirts, at the expense of employment in central Paris and in favour of substantial employment gains in the outer suburban ring. The figures from the last census show that this trend still existed in the 1990 – 1999 period, with almost 210,000 jobs lost in Paris and 160,000 jobs gained by the outer suburban ring and 20,000 by the inner suburban ring. However, this "redeployment" has to be put into perspective, as employment created in the outer suburban ring has mainly been concentrated in the new towns and around Roissy-Charles-de-Gaulle airport.

... combined with deep economic change

This redeployment has coexisted with the continuation of two structural trends: deindustrialisation and the development of service industries. The Paris region has increased its specialisation: in 1999, services accounted for 79% of employment

compared to 71% for the country as a whole, according to Eurostat.

Among the main economic activities in the region, business services come first, followed by retailing and public administration. An analysis of the geographical spread of economic activities in the Paris FUR shows that its constituent territories are relatively specialised. Central Paris (encompassing Paris, the La Défense business district and the western inner suburban ring) is specialised in service industries requiring highly qualified staff, whereas the fast-growing outer suburban areas (the new towns and the Roissy airport area) have a greater concentration of high value added industries and a fast-growing services sector. The other parts of the outer suburban ring, where growth is more diffuse, have a large number of industries, retail outlets and warehousing/logistics facilities. Lastly, agriculture is still very present in the Paris FUR, as it occupies over 50% of its surface area.

Qualified employment has been increasing

In the wake of these changes, the share of salaried employment has increased to reach 92% compared to 88% for the country as a whole. The proportion of employers and self-employed workers has fallen, and now stands at only 8%.

Employment in the Paris region, featuring the fast development of the services sector, has recorded a substantial increase in executive employment: the proportion of executives and of people working in the professions is substantially greater in Paris (27%) than the rest of France (18%), according to Eurostat. This can be explained by the presence of a large number of corporate head offices, high-tech service businesses, and research and development centres. In addition, because of the French tradition of centralisation, most senior French central government officials are located in the Paris FUR.

The Paris region has increased its specialisation: in 1999, services accounted for 79% of employment compared to 71% for the country as a whole, according to Eurostat.

Guilho/Dreif



Greater employment flexibility

The trends described above have changed the conditions of employment.

Whereas up to now full-time permanent employment has been standard and widespread, and is still very much the norm, over the 1990s, in the name of greater employment flexibility, the number of part-time and temporary jobs increased. Since the sharp economic recovery in 1997, the share of full-time and permanent employment among newly created jobs has tended to rise again.

Part-time work, which mainly affects women, represents 13% of the working population in the Paris FUR, whereas fixed-term employment represents 6.4%. Nevertheless, there is less employment flexibility in the Paris region than in the rest of the country.

But a sharp increase in unemployment too

With an unemployment rate of 10.6% in 1999 (580,000 jobseekers), compared with 12.1% at national level, Paris appears to be relatively less affected by unemployment. However, according to Eurostat, unemployment in the Paris FUR between 1992 and 1999 rose by 2.5% compared to only 1.8% at national level. The Paris region seems to have been more badly affected by the 1993 recession than the rest of the country.

The sharp increase in employment that began in 1997 has not led, as one might have expected, to a decrease in the unemployment rate, as the economically active population¹ has continued to grow rapidly, particularly in the Paris region.

Finally, the proportion of long-term unemployed in the Paris FUR is far higher than in France as a whole.

Several factors explain this. The labour market in the Ile-de-France (greater Paris) region, although offering a vast choice of employment opportunities, would appear to be more selective, making it difficult for jobseekers to return to the labour market after a long period of unemployment and/or because they lack the qualifications for the more skilled work on offer in the Paris area.

Such persistence of a high proportion of long-term unemployed has been a contributory factor of the increase in social inequality.

Substantial wealth generation

Paris, the leading French region in terms of GDP

In 1999, the wealth generated in the Paris region represented 29% of the country's national product. With its more active and productive population, GDP per head in the Paris FUR (€33,300) was 43% higher than the national average. This gap remained stable throughout the 1990s.

The service sector accounted for 81% of regional value added, of which 71% was accounted for by business services, i.e. 10 percent more than the national average.

Furthermore, between 1990 and 1998, value added in service industries (+ 35%) was considerably higher than in industry (+ 4%). Value added in the construction sector fell 15% over the same period.

*In 1999, GDP per head
in the Paris FUR was 43% higher
than the national average.*

Gobry/Dreif



(1) The increase in the economically active population has been mainly due to the increase in the population of working age, but also to a slowdown in the trend for young people to stay longer in higher or further education. These trends are likely to be strengthened by the government's decisions in 1999 to reduce incentives that favour early retirement and to implement tax policies designed to reduce "unemployment traps".



High apparent labour productivity²

Average labour productivity in Paris was €73,000 in 1999, i.e. almost 25% higher than in France as a whole. One can see here the effects of generally better-qualified manpower in the Paris FUR with higher salaries and a higher cost of living. Whatever the sector of the economy is considered, productivity in the Paris region is higher than the national average.

Entrepreneurial spirit on the wane

In 1999, there were almost 570,000 businesses in the Paris FUR, of which 10% employed more than 10 people.

Between 1990 and 1999, the increase in the number of businesses was around 11%, with a particularly sharp rise in the private business services sector as well as in services for the public. In contrast, the drop in the number of businesses was significant in the transport, logistics and construction sectors, the being one of the likely effects of merger activity.

However, there has been a slowdown in the rise in the number of new businesses as a result of the dual impact of, first, a drop in the number of newly established companies (the business creation rate fell from 16% in 1990 to 11.5% in 1999) and, second, a rise in the rate of business failures (the failure rate was around 3% in 1999), although the number of business failures has fallen considerably since 1997.

An analysis of the structure of business creation and failures corroborates the transformation of the productive system in the Paris FUR. On the one hand, the highest rates of business formation have been achieved by the retailing and business services sectors, way ahead of the construction and manufacturing sectors. But, on the other hand, the greatest number of business failures has also been recorded in the retailing sector, followed by business services, and the construction and manufacturing industries.



Conclusion

The economy of the Paris region, which still dominates the country, has recorded a slower pace of development compared with the rest of France over the last 10 years. This relative underperformance is reflected by the less favourable trends in population growth, unemployment and job creation.

Nevertheless, the Paris FUR, with its younger and relatively well qualified working population, high value added businesses that hold their own internationally, and high apparent labour productivity still has many strengths.

For the future, several avenues can be explored to strengthen and sustain the FUR's positive momentum of economic development.

- Support for existing manufacturing industries to remain in the region, by providing them with the means to grow, while at the same time continuing to support the development of service industries. This requires the supply of suitable land and premises, but also the implementation of policies that foster the emergence of new activities and businesses.
- Fostering the active involvement of a greater proportion of the population of working age in the wealth creation process would strengthen social cohesion and the growth potential of the region.

The business creation rate fell from 16% in 1990 to 11.5% in 1999, and the number of business failure rate was around 3%.

Gobry/Dreif

Naturally, this requires that unemployment be reduced, but also, more generally, that policies aimed at making it easier for the inactive population of working age to enter the labour market and for certain categories of the economically active population to remain in the market. Such policies might include: assistance for childcare, support for the elderly working population, development of sandwich courses for students, help for company training programmes etc.

(2) The term "apparent labour productivity" for a given economic sector, geographical area or combination of both, refers to the ratio of value added to the number of jobs in the sector or area under review.

The Socio-Economic Profile of Dublin

Dr. Brendan Williams

Patrick Shiels

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The 1990s in Ireland have been characterised by rapid economic growth, with average annual GNP growth rates of 7 to 8%, greatly increased spending power, increased manufacturing output and service provision, improving educational standards and new infrastructure. The population of Ireland in 2001 reached its highest level in 120 years at 3.84 million with immigration at 46,000 per annum, of which a large part is to Dublin.

C.Tarquis/laurif



Dublin : the Irish economic growth ?

The transformation of the Dublin economy commenced during the 1980s with a substantial shift away from older manufacturing industry towards the services sector. This restructuring involved major closures of previously tariff-protected industries and by the early 1990s unemployment rose to a national level of 17% with higher levels in urban areas. The dramatic economic growth during the 1990s resulted in a reversal of previous economic trends and resulted in unemployment falling below 4% during 2001. These figures represent employment expansion over the period 1993 to 2000 of 150,000 to a then total for Dublin of 534,000. The underlying factors responsible for the Irish economic growth are believed to include the availability of a low corporation tax rate (12.5%) facilitating greater profitability for multi-national companies, membership of the EU and thus access the key European markets, the availability of an educated, young and flexible labour force, the provision of high quality telecommunications and the use of English as a working language. Some commentators also consider the close cultural ties between Ireland and the USA as a factor in the success of Ireland in attracting a large proportion of US investment in Europe.

While the process of economic globalisation has presented the region with significant opportunities the future and continuing economic development of the region is also threatened by global exposure of the export orientated sectors in the face of economic downturn.



'Primate city', Dublin acts as the political, commercial, administrative and cultural centre of Ireland.

Sunset

Dublin, a dominant city region in Ireland

Dublin city dominates Ireland to such an extent that it is classified as a primate city, similar to Paris and London their relationship with France and the UK, respectively. Dublin acts as the commercial, political, administrative and cultural centre of Ireland. The Dublin Functional Urban Region (FUR), defined as the labour market area of Dublin for the GEMACA II Project, has a population of 1.3 million and contains almost 40% of the population of Ireland, a greater proportion of total population than any other city in Northwest Europe apart from the Randstad in the Netherlands. The population of Dublin is increasing at a rate almost twice that of Ireland as a whole, with population in the Dublin FUR estimated to have grown by 8.2% between the 1996 Census and April

Nevertheless there remains a broad consensus to develop a high knowledge based and high technology based productive sector. The initial trend in 2002 is that while the new economy downturn has resulted in job losses and closures such as Gateway, Motorola and others the current skills and labour shortages have seen significant numbers of such staff immediately re-employed elsewhere. Future economic prospects since the September 11th terrorist attacks on the USA are considerably more uncertain, with the Irish economy predicted to grow by 3.5% during 2002, substantially below the 10% growth rate in 2000.

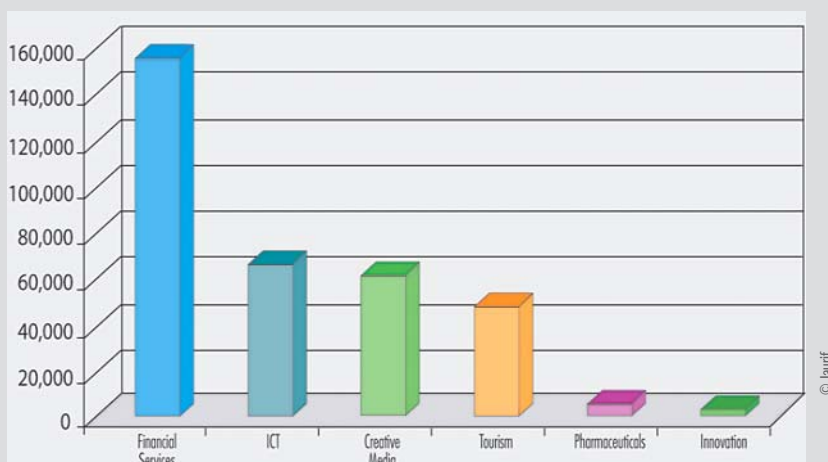
2001, almost twice the growth rate (4.4%) for the remainder of Ireland. The results of the 2002 Census, due at the end of 2002, are expected to show a dramatic population increase in Dublin and its environs. In economic terms, the regional economy of Dublin leads Ireland, with a per capita GVA (Gross Value Added) index in 1998 of 135, compared to 100 for Ireland as a whole. Over 80% of Government agencies are located in Dublin, which is also the location for about 70% of the headquarters of the major public and private companies. In addition, all of the Irish financial institutions have their headquarters in Dublin.

The population of Dublin is increasing at a rate almost twice that of Ireland as a whole, with population in the Dublin FUR estimated to have grown by 8.2% between the 1996 Census and 2001, almost twice the growth rate (4.4%) for the remainder of Ireland.

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Persons Employed in selected sectors in Dublin FUR 2000



Source : DIT analysis of GAMMA / IDS data.

Profile of economic sectors in Dublin

The broad Financial services sector is the leading sector in the Functional Urban Area of Dublin. In 2000, 155,000 persons were employed in this sector which includes domestic and international banking, insurance and pension funds. The second most significant economic sector in Dublin is Information, Communications and Technology (ICT), which employed 66,000 persons in 2000. The Creative/Media sector employs 61,000 persons in Dublin, a larger figure than expected but obviously a reflection of the cultural, social and political importance of Dublin as the capital city of Ireland. Tourism is the fourth largest sector in terms of employment in Dublin, with 46,000 persons engaged in this activity. The pharmaceuticals/healthcare products sector employs 4,200 persons in Dublin, a very small figure in proportion to the other sectors. Innovation activity is the smallest sector in Dublin, employing only 1,400 persons. This small size reflects the lack of a strong innovation culture in Ireland.

Between 1994 and 2001, the Dublin FUR accounted for 48% of the growth in the population over 15 years of age, 48% of the increase in total numbers at work and 48% of new private cars registered in Ireland. However, the FUR accounted for only 35% of the share in the total number of new dwellings produced in Ireland in the 1994 to 2001 period, well below the percentage share for the other three economic criteria. This trend indicates the disproportionate share of economic growth by Dublin in activity for the entire state during the 1994 to 2001 period accounted for by the FUR, well in excess of its national population share. Despite this growth, housing provision falls behind the other three categories substantially.

A direct result of the rapid levels of economic growth in Dublin is the high costs of housing, with the price of new housing in Dublin increasing almost 200% between 1994 and 2001, from € 81,993 to € 243,095. This price increase compares to a 151% price increase for Ireland as a whole. Currently, prices for new and second-hand houses in Dublin are 33% and 30% above the national average respectively.

The spatial expression of the growth of Dublin includes the continuing suburbanisation of office and commercial functions, characterised by the development of a number of major shopping centres and office parks along the ring motorway of the city. In addition to the trend of suburbanisation, the centre of the city is experiencing major urban renewal with the Dublin Docklands Area attracting major investment by international financial Companies in the International Financial Services Centre (IFSC). Over 9,000 persons are directly employed in the IFSC in over 485 international financial companies and a further 8,500 employed in related firms, with mutual funds under management valued at \$345 billion (387 billion euro).

Dublin also plays a vital role in terms of tourism in Ireland. Dublin Airport acts as the principal gateway to Ireland for visitors and has experienced dramatic growth in recent years, with the number of passengers using the airport increasing from 5 million in 1990 to almost 14 million in 2000. Resulting from tourism growth, the number of hotel bedrooms doubled between 1990 and 1999, with business and conference meeting forming an increasingly important component of hotel business. The importance of Dublin as a location for business meetings is highlighted by the fact that 85% of all conference visitor destinations in Ireland were in the Dublin FUR. The cultural position of Dublin has been enhanced in recent years with the opening of a number of new museums, tourist attractions and particularly the development of a designated cultural quarter of the city, called Temple Bar.



▶ A direct result of the rapid levels of economic growth in Dublin is the high costs of housing, with the price of new housing in Dublin increasing almost 200% between 1994 and 2001.

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Dublin : The Policy Context

The recent economic dynamism in the Dublin Functional Urban Region has posed difficulties for existing planning and transportation strategies, as original projections of population and traffic have been rendered obsolete. Therefore, a number of new strategies and policies have been formulated to address the rapid development of Dublin and maintain its competitiveness, including the first Strategic Planning Guidelines (SPG) for the Greater Dublin Area (1999, 2000) and the National Development Plan for the period 2000-2006.

These proposals aim particularly to deal with the infrastructural development required nationally and with particular emphasis on the development of public transport in Dublin. Major projects underway in the Dublin FUR at present include the completion of the ring motorway network around the western edge of the city, the motorway from Dublin to Belfast and the port access tunnel by which heavy goods vehicle will access Dublin port along a seven kilometre underground route.

Future Urban Development Policy Initiatives

During the period 2000 – 2001, a consultation paper on the National Spatial Strategy has been widely debated and the announcements of key decisions on such policy is expected during the summer of 2002. Analysis of the proposals indicates decisions on several major areas with particular relevance to the Dublin FUR are well advanced. The aspiration to distribute new industrial service and enterprise development within Ireland has already been reflected in reduced grant aid to business locating in Dublin since January 2000. Attempts to redirect such development will have investment consequences for the Dublin FUR if an economic slowdown occurs. Redirecting urban growth to alternative areas with the capacity to absorb both the positive and negative externalities of such growth may prove more difficult than expected. The consideration of new institutional arrangements for land use and transportation in the Dublin FUR is also at consultation stage. This policy document recognises the need for structural changes in key urban management process for the Dublin FUR. In particular the sharing of administrative and executive power over several layers of government is seen as creating overlapping responsibility and competing or conflicting interests. The need to link transportation planning with planning policies is recognised.

No single agency is responsible for the co-ordination and integration of a policy and urban management response to the region's problems. Consequently there is an absence of any comprehensive approach to urban development issues. The need for effective urban management has increased with rapid economic development as existing resources including infrastructure is fixed in the short term.

The introduction of the Planning and Development Act 2000 confirms the priority attached to urban development issues. The Act codifies nine previous Acts and makes significant changes in many issues of particular importance in the Dublin Region such as social and affordable housing and strategic development zones. In the housing provisions of the Act, a controversial obligation on planning authorities in preparing housing strategies is the general policy that up to 20% of land zoned for residential or residential and other mixed uses shall be reserved for social and affordable housing.

In a wider context, the difficulties involved in regulatory reform in relation to rapid economic change were recognised in the recent OECD review of regulatory reform in Ireland (2001). The attempts to use such reform to enhance productivity and address critical bottlenecks such as physical infrastructure are assessed and the importance of housing transport and environmental services are emphasised.



The Socio-Economic Profile of the Randstad

Thierry Petit
IAURIF

The Randstad is a conurbation located in the west of the Netherlands, bounded by the North Sea coast. It takes in the historic maritime and trading centres of Amsterdam, Rotterdam, The Hague and Utrecht. Each of these cities has long enjoyed a degree of political self-government. Over the years, each has developed its own economic strengths, resulting in the polycentric region we know today.

C.Tarquis/IAURIF

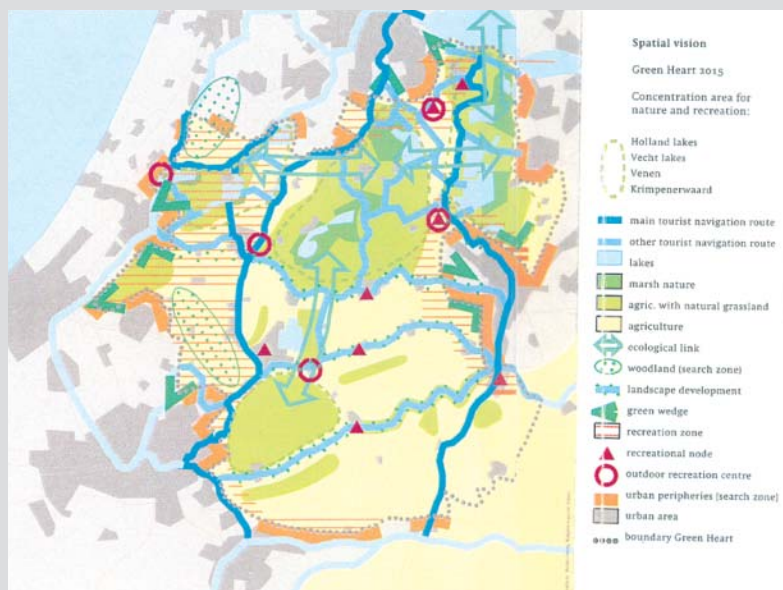
A polycentric urban region

With nearly 7 million inhabitants in 1999, the Randstad is home to 44% of the country's population, although it extends over only 21% of the national territory. The population density per square kilometre is therefore particularly high compared with the rest of the country (nearly 970 compared with 333). Despite this, the Randstad can boast a large non-urbanised zone (the «Green Heart»), situated at the centre of the urban belt formed by the four main metropolitan areas. The fact that the population is relatively concentrated in the urban zones has helped to curb urban sprawl. Thus, 65% of the population of the Randstad live in the urban areas concentrated around the municipalities of Amsterdam (720,000 inhabitants), Rotterdam (590,000), The Hague (440,000) and Utrecht (230,000).

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F. Dugeny/Laurif

Green Heart



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The Randstad and Green Heart concept is the idea of an urban belt - comprising the cities of Rotterdam, The Hague, Amsterdam and Utrecht - encompassing a central area made up of open agricultural and natural landscape. To this day, the physical planning policy applied to this area has been based on this concept developed in the 1950s and on the determination to keep the expansion of built-up urban neighbourhoods under control.

Population growth

Between 1990 and 1999, the population of the Randstad grew by nearly 510,000 (+7.8%), with an increase of 145,000 in 1999 alone. More than half of this growth was due to migration, the net movement of people into the area amounting to an annual average of 32,000 in 1990-99. This net increase in the population has led to a process of suburbanisation around the four main cities, especially within the «Green Heart», which is therefore at risk.

An ageing but very active population

The age breakdown of the population does not differ markedly from that in the Netherlands as a whole. The under-15s represent nearly 18% of the population, the 15-64 age group 69% and the over-65s 13%. However, the nineties saw a relative ageing of the population, with an increase in the 50-64 age group and a decrease in 15-24-year olds.

The number of people who are economically active and available for work has grown much faster than the total population over the same period (+18.6%). In fact, the increase in population as such accounts for only half of this growth. Further factors are the improvement in employment, which has encouraged people previously registered as unemployed to come onto the labour market, plus an upward trend in the number of working women.



Finally, in the early nineties and, above all, in 1998, the government tightened the conditions of eligibility for disablement benefits. In 1990, the number of disabled declared people, was close to a million. It is possible that the new policy was a factor in prompting some of those of working age to seek employment again.

By 1999, there had been a 30% increase, compared with 1990, in the number of women registered as part of the working population, whereas the increase in the case of men was only 10%. The ratio of the working population to the total population in the Randstad went up by 7.5 points between the two dates. It reached 68.1%, mainly reflecting the 11-point rise in the ratio for women (57.3% in 1999) compared with scarcely 4 points in the case of men (78.9%).

Highly qualified labour force

The basic educational level of the working population in the Randstad appears higher than the national average, with a greater proportion of higher education graduates (nearly 30%). This certainly has something to do with the concentration of high value-added services in the region.

During the past ten years the educational level has generally been rising. The proportion of the working population without any qualifications has declined sharply from 41% to 31% in the 25-59 age group, while the percentage of those with university graduate degrees has increased from 23% to 30%. Age is significant here, since the younger generation is proportionately better qualified.

A successful economy with an emphasis on business services (B2B)

In the past few years, the Randstad has reaped the benefits of the national economic development strategy based on wage restraint, increased labour flexibility, the lower cost of less qualified labour and a policy shift away from income guarantees for the jobless towards incentives to return to work.

Thus, with nearly 3.1 million people in gainful employment in 1999 compared with a little over 2.5 million in 1990, the rate of increase in employment in the Randstad has been high for an urban region of such a size. With 560,000 jobs created over nine years, employment has grown by over 22%, i.e. two points higher than in the Netherlands as a whole during the same period. Women have contributed most to this growth, taking 62% of the new jobs compared with 38% in the case of men.

This strong growth in employment has fuelled a major shift in economic activity towards service industries. Nearly 92% of the 413,000 jobs created between 1994¹ and 1999 relate to services. The sectors most productive of new jobs include: business services, which accounted for 160,000 new jobs (a 50% growth rate in five years); public services (health, education), with 125,000 new jobs (an increase of nearly 25%); and lastly financial services, which have generated 33,000 new jobs in absolute terms (a 27% increase). Thus, over the past few years, we have seen an increase in financial and head office activities in the Randstad, especial-

ly in the trading zones of Rotterdam and, above all, Amsterdam and its international airport, Schiphol.

The Randstad's main sectors of activity are trade (15.6%) and business services (15.3%), followed by manufacturing (11%), general government (8.3%), transport, logistics and telecommunications (7.7%) and the financial sector (5.2%).

Comparing these percentages with the country as a whole, the Randstad seems particularly specialised in financial services (specialisation rate² of 1.36), business services (1.27) and transport and communications (1.26).

Over the four years for which data are available (1994-1998), the trend in the number of firms indicates which are the fastest growing sectors. Among the 41,000 firms set up between 1994 and 1998 (representing an increase of around 14%), 13,000 were accounted for by the business services sector, 7,500 by construction, 5,000 by trade and 4,000 by personal services. In relative terms, the biggest increases were recorded by construction and personal services, each registering nearly 40%, followed by business services (+30%).

(1) Because of a change in nomenclature, there are no comparable employment statistics broken down by activity before this date.

(2) The specialisation rate expresses the ratio of the proportion of jobs in a given sector of activity to the proportion of jobs in the same sector recorded for a larger unit of reference, here the Netherlands. The extent to which the rate is greater than one measures the degree of specialisation.



Over the past few years, financial and head office activities are increasing, especially in the trading zones of Rotterdam and, above all, Amsterdam and its international airport, Schiphol.

DR



Increase in part-time working

In 1999, part-time employment as a proportion of total employment in the Randstad came to 31%, similar to the level in the country as a whole. Most part-time work is by women and nearly 60% of working women have a part-time job, compared with only 12% of men. Surveys suggest that, under the current institutional arrangements, part-time work is largely a matter of personal choice.

The relative share of part-time work and its distribution by sex vary considerably according to age. Thus, members of the youngest age group (15-24) of either sex are more likely to accept part-time jobs than their elders, with 32% of men and 47% of women in this category working part-time and 39% of both sexes combined. In the older age groups, men are less willing to take this type of job and the gap between men and women widens considerably. For example, in the 25-49 age group, the average proportion is 29%, but only 9% of men work part-time compared with 57% of women.

Over the last ten years especially, it would appear that part-time employment has been the main driving-force behind job creation in the Randstad. It has also been the chief access route to employment for women, while men have mostly taken up full-time jobs. Thus, 58% of new jobs (i.e. 329,000 out of 560,000) are part-time. Of these, 83% have been taken up by women, who have taken up only 44% of new full-time jobs.

A remarkably low unemployment rate

Thanks to sustained economic growth since 1995, which has generated many new jobs, unemployment has dropped sharply in the Randstad. It stood at only 3.9% of the working population in 1999, according to official estimates, after reaching a peak of 8% in 1995. The unemployment rate appears to be very uniform between the sexes and across age groups: it is only higher among the 15-24-year olds, especially women.

The main differences can be attributed to the level of qualification of the unemployed, with the less qualified showing the higher levels of unemployment. Finally, the long-term unemployed have also benefited from the downward trend in unemployment, their percentage of the total number of unemployed having remained fairly stable since 1990 (at around 50%).

Half the wealth produced in the Netherlands

The Randstad's share of the country's GDP came to 49% in 1998, while it accounted for 45% of total employment in the Netherlands. More than 54% of the GDP contribution comes from market services, of which business services alone account for 30%, hotels, restaurants and retailing 15%, and transport and telecommunications 9%. The industrial sector accounts for 21% of the GDP contribution, of which 15% manufacturing and 4% construction. Lastly comes the third main component of the Randstad's GDP contribution, i.e. non-market services, with 19%, of which 10% for the health sector and personal services, and 9% by general government, social security and education.

Overall productivity (GDP per person employed) is comparable to that in the country as a whole. There are, however, some sector differences. The sectors with the highest rates of productivity are, first, energy suppliers, followed by business services, manufacturing, transport and agriculture thanks to the presence of high added-value activities such as flower-growing.

The Randstad seems to have a higher level of productivity than the rest of the country in the competitive sectors, especially manufacturing, agriculture and transport, but a lower level of productivity in non-commercial non-market services (government, education, health, etc.).



A rapid population and sustained economic growth

During the nineties, the Randstad experienced a rapid population growth and even faster growth in its working population, thanks to the increase in the number of working women. During this period of sustained economic growth, a new better-educated and more flexible labour force made it possible to meet the demand for manpower, especially through part-time work.

Although the number of people employed has increased in all sectors, the fastest growth has been recorded in business services due to national policies aimed at encouraging companies with an international profile to locate their head offices in the Randstad. At the end of the period, the Randstad was beginning to have problems recruiting qualified manpower, and this was pushing up wage rates.

The Randstad seems to have a higher level of productivity than the rest of the country in the competitive sectors (manufacturing, agriculture and transport), a lower level of productivity in non-commercial non-market services (government, education, health etc.).

Kerstin Manz/laurif

The Socio-Economic Profile of London

Pr. Paul Cheshire

London School of Economics
and Political Science

London is fundamentally monocentric, nevertheless, and dominates its country's national, economic and cultural life even more than Paris. Some 22.5% of Britain's population live within the London FUR producing nearly 30% of Britain's GDP.

F. Dugény/Aurif

Since 1993 London has seen a remarkable period of continuous economic and demographic growth.

Net gains from international migration, in particular, have been a feature of this historic and dynamic period in London's evolution.

C. Tarquis / Iaurif



London is less compact than Paris (Bertaud & Malpezzi, 2002). This is partly the result of the inertia of history. Its city walls ceased to have any function 300 years earlier and the early development of a suburban rail system caused rapid outward extension. But it also reflects a planning system in force since 1947 tightly constraining urban extension and causing an outward leapfrogging of the city region to far flung but high density satellite nodes. This dominance is longstanding. Dr Johnson in the 18th Century could assert "when a man is tired of London, he is tired of life; for there is in London all that life can afford". But we must distinguish between levels of dominance and trends or changes. The absolute dominance has persisted since Roman times but - taking a long view - has frequently waned on a temporary basis over the past 2000 years.

In modern times the growth of the great industrial cities of the 19th Century eroded London's dominance which was re-asserted in the early 20th Century with both the growth of services and the new consumer directed industries. From the late 1930s to the early 1980s, however, London's dominance was again in decline. There was substantial loss of population and an even greater loss of jobs. Decentralisation extended well beyond the London region and industrial employment declined precipitously. The brief relative recovery of the

early 1980s was ended abruptly with the recession of 1990 which - for the first time since 1914 - was more severe in London than it was elsewhere in Britain. London's unemployment rate - about half that of Britain as a whole from 1930 to 1970 rose above the British average. Echoing this relative decline, democratic government for London - in some sense flourishing since the City of London asserted its independence from the crown in the early Middle Ages - was abolished in 1985.

But the years since 1993 have seen a remarkable period of continuous economic and demographic growth in London. The success of the UK economy has been more than matched by growth in the capital. An elected government for Greater London was re-constituted in 1999 (and the people of London re-asserted their independence by electing an 'unofficial' candidate). The new body's London Plan (GLA 2002) showed that the population of Greater London had increased by 600,000 within the last 15 years, with employment growth of about 700,000 in the last decade. Net gains from international migration, in particular, have been a feature of this historic and dynamic period in London's evolution.

Population and its evolution

London's population has grown slowly over recent years; between 1981 and 1997 it increased by 5.8% compared to an increase of 4.7% in Britain as a whole. The rate of change has been substantially greater in inner London than in outer London, but less in Greater London than in the Outer Metropolitan Area. A key factor has been international migration. From the late 1980s, with a second strong boost in the late 1990s, the overall balance of migration into London was reversed through a declining rate of outflow and substantial increases in the rate of immigration from overseas.

One element in this new inflow was drawn from other high wage economies, notably in the EU. But the greater part was from poorer countries with a significant element made up of asylum seekers for whom London was clearly the destination of choice within the UK. In the years 1991-4 the net inflow into Greater London from overseas averaged 29,000 per year; by the years 1998-2000 it was averaging 113,000 per year. As shown in Gordon et al (2002) this inflow, mostly of young adults, is the key element in recent growth of the city's resident workforce – though strong overall population growth reflects the fact that a younger London population is now generating above average rates of natural increase, in contrast to patterns in the quite recent past. In 1997 the proportion of London's population over 65 was 16% compared to 18.1% in Britain as a whole. Younger people were concentrated in inner London even more than were patterns of growth. Again this is in contrast to trends of the 1950s or '60s when inner London's population was

ageing.

The number of households in Greater London has been rising steadily since 1981, to 3 million in 1996. Growth has been particularly strong in inner London. The growth in the number of households has been faster than population growth, since the average number of people in each household has fallen steadily over the same period. The average number of people per household in inner London is 2.2, less than the average in outer London (2.4), which is close to the average for Great Britain.

If the current trends in births, deaths and migration are maintained, the population of Greater London is expected to continue

London's distinctive strengths, lie in a combination of: sheer scale, range of specialist services, large and flexible labour market, strong international connections, access to commercial, vibrancy of London's business.

D.Lecomte/Laurif

to grow by another 3% by the year 2006.

Employment and the economy

London's distinctive strengths, compared with other British city-regions, lie in a combination of:

- Sheer scale, and accompanying diversity;
- The range of specialist services that London can offer;
- A large and flexible labour market, offering a great variety of advanced skills;
- Strong international connections of all kinds;
- Access to commercial and cultural expertise;
- The vibrancy of London's business and social life.

London's main continuing disadvantage is that space is limited and (hence) expensive. This means that producing relatively standardised commodities and routine services tends to be more expensive than in other places that may lack London's qualitative strengths.



One consequence is that London's economy has to keep adapting, because of the incentive to routinise established production processes (in offices as much as factories) and get them undertaken somewhere else.

But it also means that London's overall balance of economic advantage depends upon the changing character of economic organisation, the dynamism of product markets and the relative emphasis placed on price as against variety and responsiveness. For almost 50 years of the last century, when mass production for the domestic economy was dominant, and price was the key factor in competition, London's overall, net advantage over other centres was in decline – and was further undermined by falling transport costs. Over the past 20 years or so, however, with a generally increased emphasis on qualities-based competition, widespread internationalisation, and greater fluidity in business relations, the London's qualitative strengths have re-asserted themselves.

Dividing the London region into three concentric rings we find that overall there was a substantial increase in jobs over the period 1978 to 2000. In the innermost zone – Inner London – this increase was only 4% but a significant decline in the first part of the period was handsomely offset by rapid job growth during the second half of the 1990s. There was a fractional net loss of jobs in the next zone – Outer London – while in the outermost zone there was a substantial absolute and proportionate (27%) increase in jobs. In every zone manual jobs declined and non-manual jobs grew. Also of interest was that the geographic patterns of employment change in each zone re-inforced the historically stronger areas. In each zone job gains were concentrated in the west and south: job losses in the east and north.

Employment and sectoral specialisation

Two fundamental trends – still underway – reflect London's relative advantages. One involves a sectoral shift, away from goods-related activities toward services of many kinds, but especially those involving high levels of face-to-face contact, notably in the office economy. This is a universal trend in advanced economies but in London these changes started earlier, proceeded much faster, and played to the city's established strengths – encouraging an increased specialisation in activities in which London had always excelled, but now enjoyed more rapidly expanding markets. Nevertheless, for an extended period during the 1980s, the scale of employment decline in the goods-related sectors (manufacturing, transport and wholesale distribution) substantially out-weighed the job gains in expanding service activities.

The second great trend has been one of decentralisation, as growing incomes and productivity have driven demands for lower residential and employment densities, leading more or less inevitably to an overspill of large numbers of people and jobs (especially in space-hungry manufacturing and freight distribution) into areas of the city-region well beyond the Greater London boundary. These remain, however, integral parts of the metro economy.

With 21.2% of total employment in Real estate and business activities compared to 14.4 nationally this was the relatively most salient sector in the region's economy; while with only 11.1 compared to 17.5% nationally (or 25.7 in the Birmingham region) employment in manufacturing was the relatively least important element in London's economy. Over the period



The two worst problems in the region in the 1990s were house prices and transport. House prices in Britain are notoriously volatile and the cost of housing is expensive. A few new rail or Tube lines have been developed in the last decade.

D.Lecomte/aurif

1978 to 2000 there was a 56% loss of jobs in manufacturing in the region compared to an increase of 101% in Business services.

Another and more detailed way of looking at the specialisation of London's economy is to see what disaggregated sectors accounted for more than 40% of British employment. Data at this level are only available for Greater London so the 40% threshold is demanding. What we find is that: Financial markets, security broking & fund management (68%), Sound publishing (63%), Film/video production & distribution (59%), Radio & TV (53%), Specialised financial services (48%), Artistic & literary creation (45%), Publishing (42%), Employers, professional & union organisations (42%) and Newspapers etc (41%) were these most highly over represented sectors. All were rapidly growing and together they generated 214 000 jobs.

London's jobs are overwhelmingly non-manual. In 1970 there were 1.5 non-manual jobs for every manual job in Greater London: by 2000 this ratio was 3.6. Londoners' are now younger and, over the age of 16, they have higher economic activity rates than those in the country as a whole. For example the economic activity rate of those over 50 in London was 73.6% compared to 70.0% in Britain (or 58.3 in Liverpool). They are less likely to be economically active between 16 and 20 because they are more likely to be in full time education: 66.5% are, compared to 60.4% in Britain as a whole or only 50.4% in Glasgow. This reflects one of the most salient features of London's labour force. It embodies a far higher level of human capital than any other city in Britain. Almost a third of the FUR's workforce have the equivalent of a first degree compared to not much more than 20% in Birmingham.

Earnings and prices

Historically graduates have been a relatively high proportion of the labour force but it has been rising. This is reflected in wages in London relative to Britain. Over the 25 years to 2000 earnings of full time workers in London rose from about 1.15 to 1.3 times the national level. This – especially accompanying the relative re-centralisation of population – has injected additional spending power into the metropolitan economy, boosting the rate of growth of consumer services. It has also been accompanied, however, by increasing inequalities and sharpening residential segregation. There has been a significant tendency for the London differential to accrue disproportionately to the higher earning, more skilled groups, and least to the unskilled with public sector workers in particular faring relatively poorly in London.

Much of the 'London differential' reflects the high educational and skill levels of London's workforce and its occupational mix. For an average occupation the margin between London and national pay was only about 17% compared to the 30% differential for earnings overall. But at the top end lawyers and financial service professionals got 30% or more above their national counterparts, while workers in construction and printing also did relatively well. At the bottom end groups including both health professionals and sales assistants received only 5% or so above the national average for the occupation, representing significantly lower real earnings.

Offsetting these higher earnings anyway were higher prices – especially the price of housing. On the best estimates available, for a typical person consuming

the national average 'basket' of goods and services, the cost of living in London is some 11 % above the national average. Putting together these relative cost of living estimates with the evidence on earnings differentials, it seems then that in terms of purchasing power most, but by no means all, of London's employed population are significantly better off than their counterparts in other regions: however if account were also taken of the skill level and occupational structure of London's population this conclusion would probably not hold. If they retained their skills and it was possible to do the same jobs, Londoners would probably have greater purchasing power if they lived elsewhere in Britain.

Unemployment

The growth of the 1990s meant that, by 2000 unemployment and inactivity rates (5.3% and 21.4% respectively) in the London region were close to the national average. Indeed the relative decline of unemployment in the London FUR was faster than in any other large British city-region. That they were still so high, given a very strong pressure of demand for labour, reflects a declining but residual element of structural unemployment from those 'bumped down' in the recessions of the early 1980s and early 1990s. For Greater London the figures at 6.9% and 24.3% respectively were less favourable. Within the London region not only did sharp discrepancies in local unemployment rates persist but they had even intensified (Buck et al 2002) reflecting the general increase in inequality in London.



The key problems: housing and transport

There is little doubt that Londoners would agree that the two worst problems in the region in the 1990s were house prices and transport. House prices in Britain are notoriously volatile and the cost of housing is expensive. This primarily reflects highly restrictive planning policies which have been squeezing housing land supply since 1947. In a year – 2001 - of exploding prices new house construction reached its lowest level since 1926.

In London the situation is similar but far worse. Prices in London have risen faster than elsewhere in the country and faster than in the South East and have also been more volatile. Between the late 1980s and 2000 house construction in London fell by 20%. Between the low point of 1993 and 2000 house prices in London more or less doubled compared to a 55% increase in Britain as a whole: in the autumn of 2002 the mean house price in Greater London was £200 000. Regional differentials in incomes are far less than regional house price differentials – so affordability problems are concentrated in London and the South East. Putting incomes and prices together we find that earnings in London have risen by perhaps 2.2% per annum, since 1970 while house prices have risen by 3.7% per annum – increasing average affordability problems by perhaps 1.5% per annum if measured on price-to-income terms. This long term increase in the differential in the South East has been around 1%, however, which is not out of line with the country as a whole.



London goes through regular spates of policy-making. It has, for example, faced four different systems of local self-government during the past forty years. An economic development strategy, a transport strategy and a spatial development strategy have been published.

D.Lecomte/laurif

Transport is the other issue which dominates all discussions about problems and policy in London. A few new rail or Tube lines – or parts of lines – have been developed in the last decade, including the Jubilee Line extension, additions to the Docklands Light Railway, the Heathrow Express and Croydon Tramlink. However, the condition of the core Underground and commuter railway systems has continued to deteriorate since it was officially condemned as substandard in the 1989 Central London Rail study. None of the schemes – including the relatively low-cost Thameslink proposals – proposed in that study has been built.

In 2002 major additions to the London's transport system remain as elusive as ever. Yet, the number of people entering central London in the morning peak – seen to be at crisis level in 1989 - has shown a further 2% growth while the main transport systems have deteriorated and become more unreliable.

Policy

London goes through regular spates of policy-making. It has, for example, faced four different systems of local self-government during the past forty years. The recently elected Mayor of London has published an economic development strategy, a transport strategy, and a spatial development strategy, with seven additional strategies to come. The boroughs and the City of London also produce planning and economic policies.

But there are other kinds of policy. Within the Treasury, the Bank of England and key regulatory bodies, other kinds of policy planning occur that have profound implications for London. Financial and business services are the subject of a range of international and national regulations and, of course, the policy environment is important for maintaining London's competitive position.

Some policy-making (for example the Mayor's and the boroughs') is highly visible. Other policies (notably some elements of central government activity) are less publicised. But in a country where central government is responsible for the overwhelming majority of decisions about public expenditure and, indeed, is the planning authority of last resort, the actions of government matter enormously to London.

Decisions made (or not made) during recent or future years will potentially have profound impacts on London's economy. Five examples of such policy decisions are:

- Whether or not the UK should join the Euro;
- Whether or not new, tall, buildings should be allowed in London;
- Whether or not to attempt to large projects, such as the Olympic Games or major new infrastructure;
- How and whether to expand London's airport capacity;
- How to fund and manage major new infrastructure projects, particularly the Tube.

Such decisions will depend on central government, the Mayor and the boroughs. Other governmental institutions will also have a role to play. It is clear that even after the GLA has operated for over two years, there is still significant fragmentation in the making and delivery of policy in London.

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The Socio-Economic Profile of RheinRuhr

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RheinRuhr is without doubt the economic core of the Federal State of North Rhine-Westphalia. Due to its size in terms of population and export/import figures, the RheinRuhr functions as a big market of European importance. One fundamental threat for RheinRuhr is without doubt a decreasing population that results in an ageing demographic profile.

(1) Institut für Landes- und Stadtentwicklungsforschung des Landes Nordrhein-Westfalen.

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*RheinRuhr is without doubt
the economic core of the Federal State
of North Rhine-Westphalia. Duisburg
specialises in transport.*

With courtesy of the Gesellschaft
für Wirtschaftsförderung Duisburg mbH.

A polycentric conurbation

The German urban system covers a number of large urban agglomerations which are relatively balanced, but spread over the whole country. Some of these agglomerations - particularly Hamburg, Berlin, Munich, Stuttgart, RheinMain, and finally RheinRuhr- are classified as 'metropolitan regions' in the State's spatial planning documents. During the urban history of Germany a dense, or rather a number of dense, urban networks were created that form the polycentric landscape nowadays. Numerous trade relations in the Middle Ages, scattered regionalism and particularly the decentralised federal system after the Second World War led a distinct urban system with many of small and medium-sized cities and some larger ones, with no single city holding a clearly dominant position. In particular, metropolitan functions in Germany are not concentrated in one dominant centre such as Paris, London or Dublin and are distributed mainly in the aforementioned urban agglomerations.

*Cologne with almost
one million inhabitants
is the most important centre
for insurance in RheinRuhr.
It also specialises in business services
and almost joins the rank
of Düsseldorf.*

With courtesy of the Amt für Wirtschafts-
und Beschäftigungsförderung der Stadt Köln.



The conurbation RheinRuhr, however, is a specific case. It can not only be considered as an agglomeration with a distinctive region but also with some metropolitan functions. It is rather striking that it consists of a complex system of numerous cities that constitutes a polycentric, dispersed urban patchwork. Thus it is not surprising that RheinRuhr is common perceived as only a 'region' in functional terms as it has no common history, neither in economic nor in cultural terms. It is not covered by an administrative institution or by any type of governance structure that adopts the 'territory' of the RheinRuhr FUR.

Nevertheless, RheinRuhr is without doubt the economic core of the Federal State of North Rhine-Westphalia. About 11.7 million people live in an area that extends from the city of Bonn in the south to the city of Hamm in the north-east and from the Rhine river in the west and the Bergische Land in the south-east. Its economic and functional centre is comprised of twelve cities of more than 200,000 inhabitants and five cities with more than 500,000 with the city of Cologne ranking first in population with almost one million inhabitants. More than 60% of the Federal State's and more than 10% of the German population live within the borders of the RheinRuhr FUR.

Spatial and structural 'diversification'

However, the relative balance in the size of the larger cities masks the existing functional hierarchy. Generally speaking, the metropolitan functions of the cities of Essen, Dortmund and Duisburg, lag far behind that of Duesseldorf. Cologne's significance ranks between the former and the latter. However, some functional specialisation can be discerned. Duesseldorf can be regarded as the most important wholesale centre. The only stock exchange in North Rhine-Westphalia is located there. Moreover, it leads in producer services, such as auditing, legal advice and advertising and it is first in public administration, as it is the capital city of North Rhine-Westphalia. Cologne, on the other hand, is the most important centre for insurance in RheinRuhr, and leads in household services, which includes the fast-growing media sector. However, other cities join the rank of Duesseldorf and Cologne regarding other metropolitan functions. Essen specialises in trade and also to some extent in producer services, Duisburg in transport, Dortmund in insurance, and Bonn in public administration.

Considering the economic profile of RheinRuhr as a whole, the spatial and structural specialisation becomes much more obvious. In particular, the industrial heterogeneity is very distinctive. Manufacturing cores with an above average share of employees can be found for instance in Hagen, Wuppertal, Solingen and in the hinterland of the cities along the Rhine (Bonn, Cologne and Duesseldorf). The former traditional coal and steel core in the 'famous Ruhrgebiet' (located in the northern part of the RheinRuhr FUR), particularly represented by the cities of Duisburg, Oberhausen, Gelsenkirchen,



*Düsseldorf can be regarded
as the most important wholesale centre.
The only stock exchange
in North Rhine-Westphalia
is located there.*

With courtesy of the Wirtschaftsförderung
Düsseldorf.

Dortmund and Essen, has suffered enormously since the beginning of the restructuring crisis during the 1960s and 1970s. Today, in most of these cities, the share of jobs in the manufacturing sector is below average compared to the Federal State level. Duisburg, Gelsenkirchen and the northern periphery of the FUR RheinRuhr (e.g. Hamm, Recklinghausen) are dominated by infrastructure and logistics services. Other sub-regions have a strong position in construction such as the cities of Bochum, Essen, and most of the hinterland in the Rhine basin. Business services, however, have traditionally dominated in Duesseldorf, Cologne and Essen. Bonn is traditionally dominated by political transaction services, which is also strongly represented in Bochum, Duesseldorf and Cologne.

As elucidated above, economic transaction services (finance & insurance) dominate chiefly in Duesseldorf and Cologne, but further specialisation can be found in Moenchengladbach and Oberhausen. Finally, household and personal services have an above average share in Bochum, Bonn, Dortmund, Essen, Gelsenkirchen, Cologne and Recklinghausen. It has to be noticed that this sketched profile is marked

in general by structural changes, which take place in all parts of the region, but their intensity and direction is relatively dissimilar. Despite of these different roots, all sub-regions have experienced deep industrial restructuring processes since the 1960s. In contrast to other conurbations, regional differences and related specialisation became deeper in the course of the 1980/90s and onwards. Thus, today the regional profile of RheinRuhr illustrates sharp differences in the industrial and services structure.

Unbalanced spatial development of population

The demographic and settlement development in RheinRuhr will have a great impact over the coming decades. Demographic ageing ('greying') and immigration will have strong influences on the social-cultural appearance of RheinRuhr, on the one hand, as well as on economic development, due to a shrinking labour force and demand in general. Another challenge will be the uneven spatial distribution of the different demographic aspects. The RheinRuhr, in general, is already coping with shrinking and expanding sub-regions, whereby this trend can be expected to strengthen in the coming years. In other words, RheinRuhr will be reshaped by these trends, which will have strong impacts on the spatial order of urban and rural settlement patterns, on the demand for social and transport infrastructure, and finally on continuing ecological damage.

During the 1990s the population trend in North Rhine-Westphalia showed a natural decrease. Regular migration flows have held the total number of inhabitants steady or have led to a slight increase at the beginning of this decade. Here one has to distinguish between migration flows by the indigenous German population, and in-migration from other countries to North Rhine-Westphalia. In absolute terms, these are roughly the same, so that one can conclude that the migration flows of Germans over the past ten years have been almost equal in magnitude to those by foreigners.

Taking into account the relation between North Rhine-Westphalia and what is by far its largest urban region, RheinRuhr, a slight decrease in terms of population can be identified for both demarcations, the FUR and the MUR of RheinRuhr. This trend is, however, more noticeable concerning the MUR, because a gradual spatial decentrali-

sation of services, jobs, retail, etc. and housing to the area surrounding the MUR/FUR contributes to a further urbanised landscape and, in terms of population, a shrinking core area. In recent years, the RheinRuhr FUR could experience a positive migration balance about 5,000-20,000 inhabitants a year. The RheinRuhr MUR had to cope with a negative migration balance since 1997 of about 10,000 inhabitants a year.

Considering intra-regional development, the picture is, however, rather more complex. Although the trend of development of the 10 biggest cities in RheinRuhr show a rather constant pattern, the exact numbers at the local level indicate two major trends. Cities such as Essen, Duisburg, Dortmund, or Gelsenkirchen have suffered greatly from the structural changes particularly during the 1980s, but also during the 1990s and into the current decade with a loss of jobs and consequently population caused by out-migration to other areas. At a time when the population trend in Germany can be seen as rather stable, low birth rates have been offset by high rates of immigration; such a decrease in terms of population in these cities is observable, even though a further de-concentration of population at the edges of such urban areas or to their contiguous municipalities is evident elsewhere. In Cologne and Düsseldorf, for instance, the trend is rather stable or has developed in a positive manner. This can be traced back to the growing attractiveness of these cities as business and housing locations.

The general outlook for RheinRuhr is that the absolute population will decrease, whereas the average age will increase. Particularly after the year 2015, the number of deaths will increasingly outweigh the number of births and this deficit will eventually exceed the positive migration balance. In particular in the bigger county-free cities (i.e. non-incorporated metropolitan boroughs) the population decrease will be

relatively sharp, whereas the positive migration balance will lead to a population increase in the more remote 'hinterland' (counties) of the urban agglomerations. Up to the year 2015, the cities of Essen and Dortmund, for example, will see a fall in their total populations of -13.7% and -10.9% respectively. Strong rates of growth can be noticed in the comparably sparsely populated counties, such as Euskirchen (+6.7%), Rhein-Sieg (+10.0%), or Viersen (+6.4%) at the edges of the FUR RheinRuhr. All in all, the tendency of spatial demographic transformation during the 1990s, as outlined above, will continue up to the year 2015, or even accelerate towards the year 2040.

'Greying' in RheinRuhr

As a consequence of the aforementioned trends, the aspect of 'greying' (ageing) will become increasingly apparent. In the year 2015, most of the labour force will be in the age group between 45 and 60, whereas the proportion of the younger working generation (between 30 and 40) is comparatively low. In addition, the absolute numbers of those who have already retired will be somewhat higher in comparison to the year 1998. These trends will become more extreme in the decades ahead. The absolute numbers of people of prime working age will become comparatively low, whereas the proportion of those in retirement will be very high. The low birth rate indicates that this trend can be expected to last through the second half of this century.

Spatial diversification of employment

Considering the relative change in the numbers of employees in a spatial sense, not only do weaknesses and strengths



become obvious, but also a spatial shift – or rather deconcentration – of employees from the core to the surrounding areas is recognisable. Within a time-span of 10 years (between 1987 and 1997), several Nuts-III regions, led by the Ruhrgebiet, lost employees. The city of Gelsenkirchen (-16.4%) and the city of Duisburg (-14.7%) suffered most from this negative development. The cities of Cologne, Düsseldorf, Mönchengladbach, Hamm, and the county of Wesel, however, lost less than 3.1%. The winners are in particular the counties close to the Rhine, such as Euskirchen (+8.8), and Rhein-Sieg-Kreis (+8.9), but also the counties at the eastern edge of the Ruhrgebiet, such as Unna (+9.5%) and Märkischer Kreis (+1.1%). These trends support, not surprisingly, the primary theses that correspond to the demographic trends as elucidated above, namely that the hinterland is always in an advantageous position by comparison with the core cities.

Uneven unemployment

The same spatial disparities can be found regarding unemployment in RheinRuhr. Rather positive or stable trends can be identified in Cologne, the county Mettmann, or the city of Duesseldorf, with rather negative trends in the cities of the Ruhrgebiet such as Gelsenkirchen, Duisburg or Dortmund. Whilst the absolute numbers of unemployed men of the age of 15 to 25 or particularly of the age of 25 to 50 increased, the numbers of female unemployment remained stable during the 1990s. The overall unemployment rate in RheinRuhr, however, experienced a slight decrease in the last decade.



With courtesy of the Stadtplanungsamt Dortmund.



Spatial-economic performance

Some key indicators to measure the regional performance in this regard have been discussed and finally illustrated in the article «the economic positioning of metropolitan areas in North Western Europe». Additionally, by means of the GDP at purchasing-power parities at NUTS III level some inner-regional disparities should be highlighted. The GDP at purchasing-power parities curves show a relatively positive development in all the demarcated sub-regions belonging to the RheinRuhr FUR. However, the sub-region Cologne/Bonn and Düsseldorf plus their surrounding areas achieved a much higher level within the time-span between 1985

RheinRuhr is coping with shrinking and expanding territories. This trend can be expected to strengthen in the coming years. Dortmund has experienced a fall in its total population and has suffered greatly from job cuts between 1980 and 1990.

With courtesy of the Luftbild-Blossey, Hamm.

and 1996 than the various areas belonging to the Ruhrgebiet or the 'Bergische City-Triangle' respectively. The latter two therefore fall well below the average level for the RheinRuhr FUR and North Rhine-Westphalia.

The economic dynamism of the 1980s, despite structural problems in the Ruhrgebiet, is easy to detect by considering the numbers for the entire RheinRuhr FUR.

The economic recession at the beginning of the 1990s, as well as strong investments at that time in the former GDR, led to a slight change of the continual trend in the 1980s. Moreover, the superior economic position of the bigger cities like Cologne, Düsseldorf and Bonn in the southern part of the RheinRuhr FUR becomes obvious, whilst the cities of the Ruhrgebiet more or less still remain at a lower level of development. Larger differences can be identified primarily between 1990 and 1995 at the regional level. Here a few NUTS-III regions, such as Düsseldorf, Essen, Mettmann and Bonn improved their performance, whereas others have seen a decline, e.g. Duisburg, Leverkusen, or Gelsenkirchen. Considering the whole RheinRuhr FUR, or even the whole of North Rhine-Westphalia, it becomes obvious that economic development stagnated in this part of Germany between 1990-1995, whereas in Germany as a whole a continuation of the steady trend since 1980 is noticeable. In other words, the strong intra-regional differentiation is well balanced at the FUR-level. Even in some sparsely populated counties outside of RheinRuhr, such as Borken or Coesfeld, the economic output is quite high due to the number of SMEs there. Furthermore, in North Rhine-Westphalia a number of other quite prosperous urban regions, such as Ostwestfalen-Lippe and Aachen, also mitigate the overall statistics.

However, it is striking that when comparing RheinRuhr with the federal state of North Rhine-Westphalia the levels of GDP per capita are almost the same. This might be surprising considering that urbanised regions in advanced economies normally have better economic outputs than fairly 'sparsely' populated areas. These similar trends can be traced back to the fact that the 'hinterland' of RheinRuhr has developed very positively due to the emergence of many successful SMEs and considerably smaller urban regions of

North Rhine-Westphalia, located outside of RheinRuhr, (such as Aachen, Münster, and Bielefeld-Paderborn-Gütersloh) have developed specific modern economic profiles (e.g. ICT, multi-media, and bio-tech).

The contemporary state of affairs

- The overall regional economic performance is, compared to the EU average, relatively high, whilst the levels for RheinRuhr are only at the average level in relation to North Rhine-Westphalia as a whole. Due to its size in terms of population and export/import figures, the RheinRuhr functions as a big market of European importance.
- Some branches, such as mining and steel works as well as some manufacturing and construction enterprises, have difficulties in keeping their position in decreasing markets caused by the strong competition from low-wage countries. This can be stated particularly for the Ruhrgebiet, where additionally other branches that are very much related to the aforementioned ones, such as transport and the chemical industry, indicate decreasing figures in terms of employees.
- The latter aspect has a strong influence on the labour market. The unemployment rate is high in RheinRuhr compared to some other metropolitan regions in the NWMA.
- Another current challenge is to cope with the mismatch of supply and demand concerning highly skilled employees.
- Development policies in RheinRuhr involve a strong response to the restructuring processes and also aim to strengthen the intra-regional labour division in certain fields of competencies. These fields include the media, logistics, environmental industries, bio-tech and ICT sectors.

- A steady economic separation of the Ruhrgebiet from other stronger performing regions in North Rhine-Westphalia must be mentioned, although intensive economic and regional policy incentives have been implemented to compensate for this long-lasting trend.
- Due to uneven development in RheinRuhr, there remain many of areas where future-oriented industries are poorly represented.
- One fundamental threat for RheinRuhr is without doubt a decreasing population that results in an ageing demographic profile. Furthermore, intra-regional migration flows, mostly from the core to the hinterland, results in a more dispersed settlement structure that leads to enormous traffic problems.



The economic positioning of metropolitan areas in North Western Europe

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The purpose of this article is to present an assessment of the economic positioning of metropolitan areas in North Western Europe in relation to each other, at the end of the 1990s, in both static (level values) and dynamic terms (trends). Given the conditions in which "regional" statistics are produced in Europe, it is difficult to compare the economic performance of metropolitan areas in these regions. The "regional" statistics produced annually by the national statistical offices and Eurostat relate to political and administrative entities that are totally irrelevant to metropolitan areas and their spheres of influence. These data therefore cannot be used for reliable comparative studies of economic trends in metropolitan areas. To produce meaningful comparative studies on this subject, it is first necessary to give satisfactory answers to three key questions.

Cobry/Dreif

What territories should we compare?

It is of crucial importance to define the appropriate territories on which to base a comparative study of metropolitan areas. The economy of a metropolitan area is based mainly on corporate activity. When deciding where to locate and where to develop their activities, companies pay no attention whatsoever to the administrative boundaries of French regions, Belgian provinces, German Länder or British counties. They conduct their business in territories chosen on the basis of criteria such as the supply of labour, access to markets, transport-communication infrastructure, sub-contractors, services and research centres, as well as the availability of commercial property. In other words, they conduct their business within the limits of functional regions. Therefore, before comparing the economies of metropolitan areas, they must be defined on the basis of such criteria.

(1) Method

The scope of the territories called FURs was defined in two stages.

1 – Definition of the economic core of an urban region: it encompasses all the adjacent municipalities whose employment density exceeds seven jobs per hectare.

2 – Definition of the economic sphere of influence of an urban region: it takes in all the municipalities located outside the core economic area that have in common the fact that over 10% of their economically active population work on a daily basis in the economic core of the urban region of which the municipality forms part.

These definitions were produced using the data from the latest census material available when the study was launched, that is, in early 2000.

In the GEMACA study, the criterion used for defining the scope of regional territories was the labour pool or labour market area, also known as the job catchment area. The scope of the labour market area is very broad: it takes in almost all the infrastructures and services that companies need in order to conduct their business. These regional territories, called Functional Urban Regions (FURs), were defined on the basis of common criteria¹ so as to make them as comparable as possible. Fourteen such territories were identified from all the FURs in North Western Europe with a population of over one million inhabitants, namely: Dublin, London, Birmingham, Manchester, Liverpool, Glasgow, Edinburgh, Paris, Lille, the Randstad (Amsterdam-Rotterdam), Brussels, Antwerp, Rhein-Ruhr (Düsseldorf-Cologne) and Rhein-Main (Frankfurt). From now on, in this article, the words region and metropolitan area are synonymous with FUR.

Defining the territories to be compared is relatively simple, but it raises a second much more difficult issue.

What statistics should we use?

As we have seen, FURs were defined on the basis of municipalities. Collecting comparable annual statistical data on functional city regions in six countries posed a major problem: such data did not exist at municipal level, with the notable exception of data collected in population census years. So, to take up this challenge, it was decided to

produce annual data at the level of each region as a whole, and not at municipal level. The GEMACA team did this in co-operation with the national statistical offices (NSO) of the countries concerned and Eurostat.

A great deal of the data thus produced originated from the Labour Force Surveys conducted every year by the NSOs, and coordinated by Eurostat. These large-scale surveys provided reliable statistical data at national level and at the level of the major regions. Eurostat was responsible for making the regional data from the various countries comparable with each other.

On the basis of the Labour Force Surveys for the period 1992 to 1999, the NSOs and Eurostat produced the statistical data required on households, the economically active population, the job market and unemployment. These statistics related to FURs in the case of four regions (Paris, Lille, Brussels and Antwerp), and to very similar territories in the case of the other regions concerned. However, some NSOs met with technical difficulties, so it was not possible to collect exhaustive data on every year and every region.

The production-related data (GDP) used to assess the economic positioning of the regions concerned related to all the statistical territorial units at the NUTS 3 level closest to the FURs. They were produced by Eurostat.

The third key question concerns the choice of indicators. Needless to say, a truly satisfactory answer to this question depends on the availability of the data.

What indicators should we adopt?

In the preceding article, Professor Ian Gordon underscores the fact that there is no reliable single indicator of the economic performance of metropolitan areas. He therefore suggests three performance indicators: first, export performance; second, output and employment growth; and third, productivity. But, in his view, none of these indicators is totally unbiased. Because of the lack of data on exports at the level of FURs (or similar territories), the first indicator cannot be used.

Our comparative assessment of the economic positioning of city regions is based on four main indicators: population, employment, production (output) and unemployment. This fourth indicator is required because, in our view, a region that does not feature full employment cannot be rated as a "high performance" territory. We emphasise that these four indicators are highly correlated. Therefore, in order to assess the economic positioning of the regions concerned in relation to each other, all four of them have to be taken into consideration.

The results of the assessment presented below have to be interpreted cautiously, for two reasons. First, allowances must be made for the fact that the economic cycles of European countries are not synchronous and particularly affect the major metropolitan areas. Therefore, the period over which inter-regional comparisons are made is debatable. Second, many of the data used were collected by sampling (Labour Force Surveys), so their degree of accuracy must not be exaggerated.

*In order to compare
the economic positioning of the regions
four main indicators have been taken into
consideration : population, employment,
production and unemployment.*

Gobry/Dreif



Readers are therefore invited to focus more on proportions and trends rather than absolute figures.

Readers will find maps of the functional urban regions on pages 22-31.

Economic positioning of the regions in static terms (level values)

The size of metropolitan areas in terms of population, jobs and production

The size of a metropolitan area is a factor of support for the competitiveness of the companies located within its boundaries. The economic benefits of critical mass are numerous. Compared with smaller towns and cities, a large metropolis provides companies with a broader range of services, a more skilled and diversified labour force, a larger customer base, more specialised suppliers and greater scope for outsourcing. It also provides better access to knowledge, information, institutions, research, innovation, finance and more interpersonal communication due to greater proximity. Furthermore, in a large metropolis, it is easier to gain access to inter-city or international high-speed transport networks (high-speed trains, airports) and to broadband (high bit rate) communication networks. Finally, in a large metropolis, competitive pressure is greater, which encourages companies to innovate and to differentiate their products. All these benefits of large metropolitan areas make it easier for companies to enhance their productivity, the prerequisite for maintaining their European and global competitiveness and even, in some cases, for ensuring their very survival.

The size of the metropolitan areas in terms of population, jobs and GDP

That said, large metropolitan areas also have drawbacks compared with smaller towns and cities. These obstacles to corporate high performance include greater congestion, pollution and insecurity, as well as the higher cost of land, which discourages inward investment in innovation and forces ordinary businesses to leave.

London: Europe's top economic region, ahead of Paris and the Rhine-Ruhr area

In terms of size (population, jobs and production), the differences between the 14 regions are very great: the population of the London area is 16 times that of Edinburgh and its output 20 times as large (see Table).

London, Paris and the Rhine-Ruhr regions are North Western Europe's three largest economic areas. Their populations range from 11.7 to 13.2 million inhabitants. According to the three criteria mentioned above, London is the top economic area in North Western Europe, and probably in Europe as a whole too. Close behind London come the Paris and Rhine-Ruhr areas. A study of the comparative level values of these three areas shows, first, that the percentage of the population of London that is economically active is relatively high, and, second, that there is a relatively large output gap between the Paris and Rhine-Ruhr areas, whereas they are of comparable size in terms of the other criteria.

Four regions have populations ranging from three to seven million inhabitants: the Randstad, the Rhine-Main region, Brussels and Birmingham. The populations of the seven other regions are less than 2.7 million inhabitants. The relative size of the Dublin area varies according to the criterion used: it comes 13th, just ahead of Edinburgh, in terms of population, but gains two places in terms of the number of jobs or of GDP, ahead of Antwerp and Liverpool.

FURs	Population			Jobs in 1999		GDP in 1999	
	Years	Population (thousands)	Share of national population	Jobs * at the place of residence (thousands)	Share of national total	GDP (billions of Euros)	Contribution to national GDP
London	1997	13 230	22.9 %	6 350	24.1 %	413.2	30.2 %
Paris	1999	11 750	20.5 %	4 890	21.6 %	395.2	29.3 %
RheinRuhr	1997	11 700	14.5 %	5 110	14.3 %	302.4	15.3 %
Randstad	1999	6 980	45.2 %	3 090	40.9 %	185.3	49.6 %
RheinMain	1997	4 010	5.0 %	1 700	4.7 %	132.7	6.7 %
Bruxelles	1999	3 670	35.9 %	1 390	35.1 %	96.4	40.9 %
Birmingham	1997	3 070	5.3 %	1 320	5.0 %	55.9	4.1 %
Manchester	1997	2 680	4.6 %	1 220	4.6 %	52.3	3.8 %
Lille	1999	1 940	na	640	na	na	na
Glasgow	1997	1 770	3.1 %	730	2.8 %	46.5	3.4 %
Antwerpen	1999	1 540	15.1 %	610	15.4 %	38.9	16.5 %
Liverpool	1997	1 370	2.4 %	530	2.0 %	22.6	1.7 %
Dublin	1996	1 300	36.6 %	670	43.2 %	42.3	47.5 %
Edinburgh	1997	830	1.4 %	400	1.5 %	20.8	1.5 %

* Year 2000 for UK FURs.

Sources : Population census, Labour Force Surveys and Eurostat

The weight of five regions relative to their national economies as a whole is very great: the Randstad accounts for 45% of the population of the Netherlands and 50% of Dutch GDP; Dublin 37% of the population and 47% of GDP; Brussels 36% of the population and 41% of GDP; London 23% of the population and 30% of GDP; and Paris 20% of the population and 29% of GDP.

In terms of size (population, jobs and production), London is the top economic area in North Western Europe, and probably in Europe as a whole too.

D. Lecomte/Aurif



On a European and global scale, the economic vigour of the London and Paris areas is considerable. Thus, in 1999, the GDPs of London (EUR 413bn) and Paris (EUR 395bn) surpassed that of the OECD member country ranked 9th according to this criterion (the Netherlands, whose GDP amounted to EUR 374bn).

To complete this comparative overview of the regions in terms of level values, we shall now go into more detail by reviewing the following items: age structure of the population, level of education, participation rate, part-time work as a percentage of total employment, the relative weight of the industrial and service sectors, output per job, output per inhabitant and unemployment. Each of these indicators shows marked differences between the regions.

The competitive advantage of a young population

A young population helps to sustain the vigour of a regional economy. In 1999, the age structure of the 12 regions for which data existed was very different.

The Graph is an age structure indicator showing the ratio of people aged 65 and over to people aged under 25 in 1999.

In 1999, the average ratio for all the regions was 47% in 1999. Between the youngest region and the oldest, the ratio varied from 24% to 66%. On average, the population of the 12 metropolitan areas was younger than that of Europe as a whole.

Dublin stood out sharply from the rest of the regions as having the youngest population: young people outnumbered elderly people by four to one.

The Paris, Lille, Manchester and London areas also stood out as young. The good ranking registered by Paris was mainly due to the fact that the over 65s represented a relatively small proportion of the total population of the region in 1999.

The populations of the city regions in Belgium and Germany were relatively old. In the most elderly region (the Rhine-Ruhr), the ratio of young to elderly people stood at only three to two.

Level of education

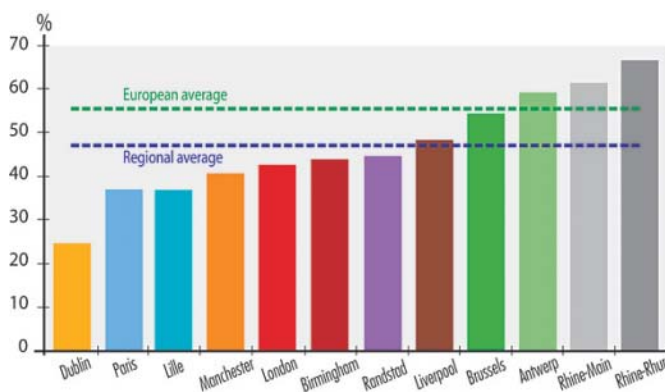
The population of metropolitan areas also differed from each other in 1999 by level of training. Labour Force Surveys provided data on the highest education obtained by the populations of 11 regions.

The Graph shows the percentage of the population aged 25 to 64 who were higher education graduates in 1999.

The proportion of the population who were higher education graduates was greater in the metropolitan areas than in the European Union as a whole (27% compared with 21%).

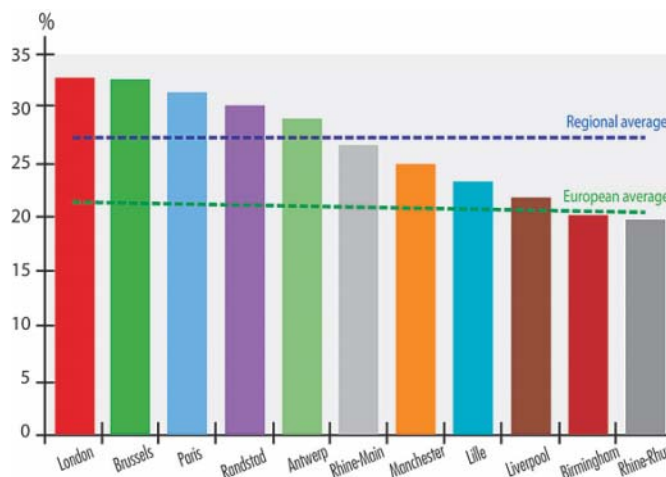
London and Brussels had the largest populations of university graduates. The number of university graduates was above the regional average in Paris, the Randstad and Antwerp. By contrast, the regions whose major urban development had occurred during the second industrial revolution (Manchester, Lille, Liverpool, Birmingham and the Rhine-Ruhr region) had smaller populations of university graduates than the rest.

Age indicator: the population of 65 year olds and over in relation to the population of under 25s



Source: 1999 Labour Force Surveys

Higher education graduates as a percentage of the population aged 25 to 59



Source: 1999 Labour Force Surveys

Participation rate of the economically active population

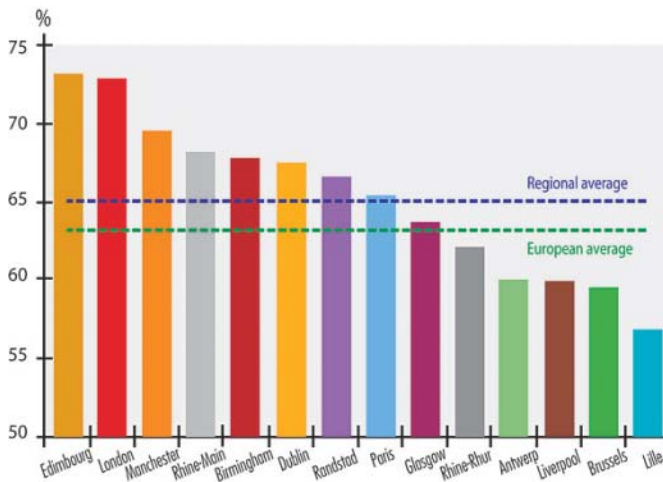
The participation rate of the economically active population is measured by the employment rate, that is, the percentage of residents aged from 15 to 65 years old who are effectively in employment. The employment rate indicates the job creation performance of a country or region.

In Labour Force Surveys, the jobs occupied by the population surveyed are counted as being at the employees' place of residence. So the job data for 1999 included jobs located both inside and outside the FURs, as some people employed within FURs did not reside there. The number of jobs occupied by the population residing in a given FUR therefore did not exactly match the total number of jobs in this region. However, as the FURs had been defined as the labour pools or the labour catchment areas of city regions, the differences between the number of "jobs filled" and the number of jobs located in the FURs concerned were relatively small.

In 1999, on average, the residents of European metropolitan areas who were of working age were more economically active than the population of Europe as a whole (65% participation rate compared with 62%). However, the average employment rate in European metropolitan areas was low compared with the United States (74.2 %) or Japan (74.4%). The regional differences in the employment rates recorded were great not only between the different North Western European countries, but also between different parts of each country, such as Edinburgh and Liverpool, the Rhine-Main and Rhine-Ruhr regions or between Paris and Lille. Thus, for example, the participation rate of the population of working age is 25% higher in Edinburgh than in Lille.

At a summit meeting in Lisbon in March 2000, Europe's political leaders set as a strategic objective the achievement of a 70% employment rate by 2010. In 1999, London and Edinburgh alone surpassed this rate.

Employment rate in 1999



Source: 1999 Labour Force Surveys

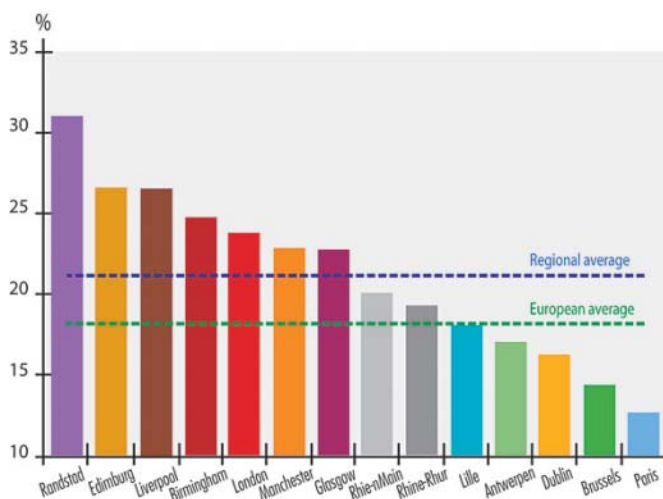
The percentage differentials are even more striking when expressed in absolute terms. To reach the same employment rate as London (71.3%), at constant population levels, Brussels needs to create 290,000 jobs, Paris 525,000 and the Rhine-Ruhr area 835,000.

Part-time employment

In 1999, part-time employment as a share of total employment was higher on average in the metropolitan areas than in Europe as a whole. But the rate differentials between regions were great, ranging from 31% in the Randstad to 13% in Paris.

The part-time employment rates recorded in Dublin and metropolitan areas in Germany and the United Kingdom were very close to the national rates. The situation was very different in the Randstad and Paris: in the Netherlands and France, the national rates (39% and 17% respectively) were much higher than in these two FURs.

Part-time employment as a percentage of total employment in 1999



Source: 1999 Labour Force Surveys

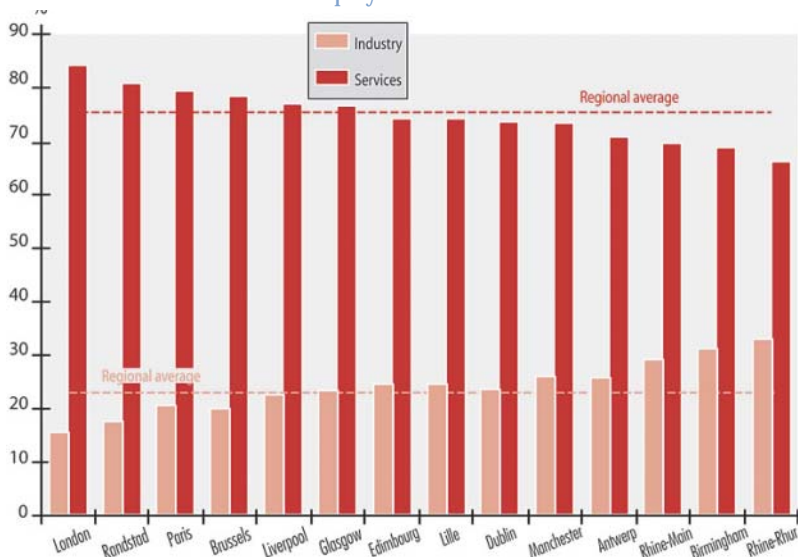
Development of the services sector

Over the last four decades, the main driver of employment growth in Europe has been the services sector. The number of jobs created in this sector over this period has grown nearly twice as fast as that of the total number of jobs created. The share of jobs in the industrial sector has therefore fallen sharply. These two structural trends have been particularly marked in the metropolitan areas because service sector job creation has tended to concentrate in large towns and cities. The share of service sector activity in the metropolitan areas of North Western Europe in 1999. The industrial activity includes the construction sector.

The city regions that have benefited the most from the ongoing structural trends have been those with high rates of service sector employment. These regions are also those that are likely to suffer the least from further desindustrialisation.

In two of the regions, London and the Randstad, service sector employment as a percentage of total employment exceeds 80%. In three regions - Rhine-Ruhr, Birmingham and Rhine-Main - the rate of service sector employment is less than 70%.

Service and industrial sector employment in 1999



Source: 1999 Labour Force Surveys

Apparent labour productivity

The economic output of a country or region is measured by its Gross Domestic Product (GDP). This is the sum of the value added by the various economic sectors, plus taxes and less product subsidies. Apparent labour productivity is the ratio of gross domestic product to the number of jobs. The regional estimates for 1999 relate to 13 FURs defined as "adjusted NUTS 3 areas", that is, the NUTS 3 areas that most

closely match the FURs, the definition of which is based on municipalities.

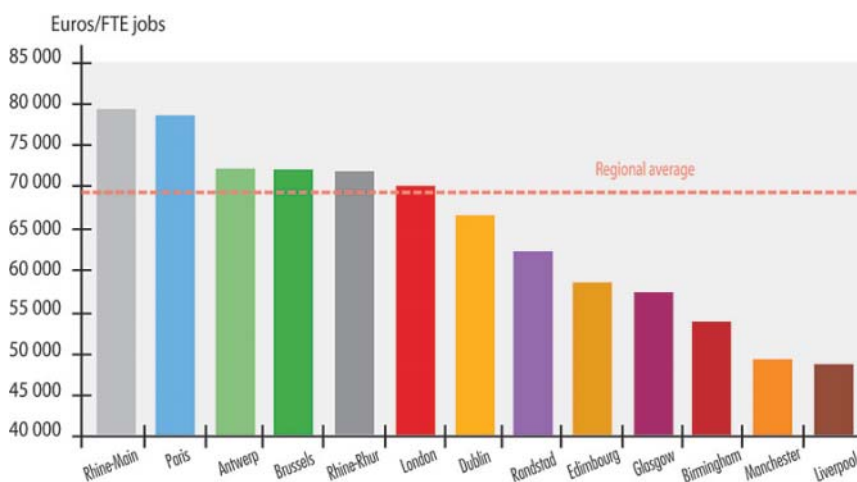
The numerator shows the value of GDP in euros, and the denominator the estimated number of full-time job equivalents ("fte jobs") to take into account the fact that the rates of part-time employment as a share of total employment vary considerably from one region to another.

In 1999, in the 13 FURs, GDP per "fte job" averaged EUR 69,000.

The Rhine-Main and Paris FURs were those with the highest productivity rates, which were nearly 15% higher than the average for the regions concerned.

By contrast, the productivity rates of the Randstad, Edinburgh, Glasgow, Birmingham, Manchester and Liverpool FURs were 10 to 30% lower than the average for all 13 regions.

GDP per full-time job equivalent in 1999



Source: Eurostat and GEMACA estimates

GDP per inhabitant, GDP per job, % population 15-64 years old and employment rate in 1999

Production per inhabitant

The best indicator of a FUR's economic performance is output per inhabitant (GDP/inhab.). GDP indicates a FUR's capacity for wealth creation.

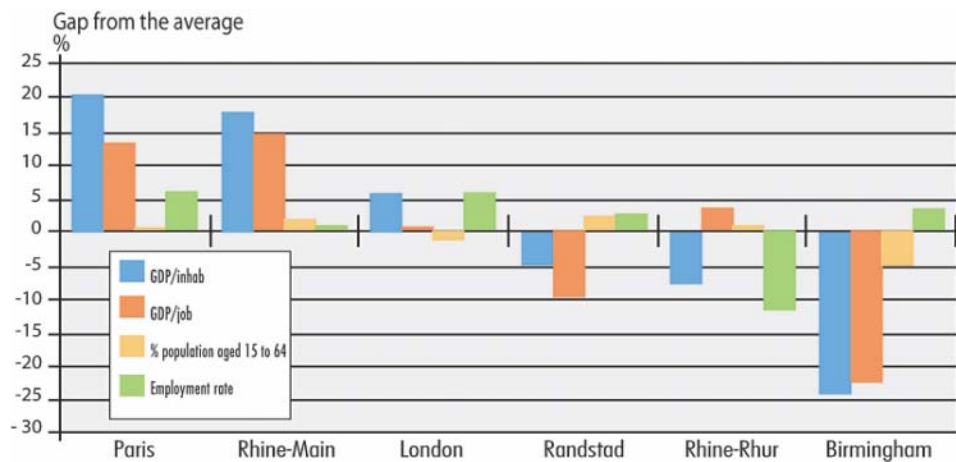
GDP per inhabitant is made up of three components:

- productivity (GDP/fté job);
- the population of working age as a percentage of the overall population;
- and the employment rate (fté jobs / population of working age).

The Graph shows values for these components in 1999. Each region is positioned in relation to the average for all 13 FURs. In the graph, the number of regions represented is limited to six in order to make it clearer.

Three of the FURs have a GDP per inhabitant rate that is higher than the average. The Paris and RhineMain FURs lead the field, with Paris slightly ahead of RhineMain (21% above the average for the 13 regions). This outperformance by Paris can be explained by its relatively high productivity per job and fté employment rate. The third criterion, the percentage of the population aged 15 to 64, is close to the average.

The good performance of the Rhine-Main region in 1999 was based on the



Source : Eurostat and GEMACA estimates

high level of productivity per job, whereas the two other components were close to the average.

London comes third with GDP per inhabitant 6% above the average. The gap between London, on the one hand, and Paris and the Rhine-Main region, on the other, can be explained by London's lower productivity per job.

The GDP per inhabitant of the three other city regions in the graph are lower than the average. The gaps in relation to the average are as follows:

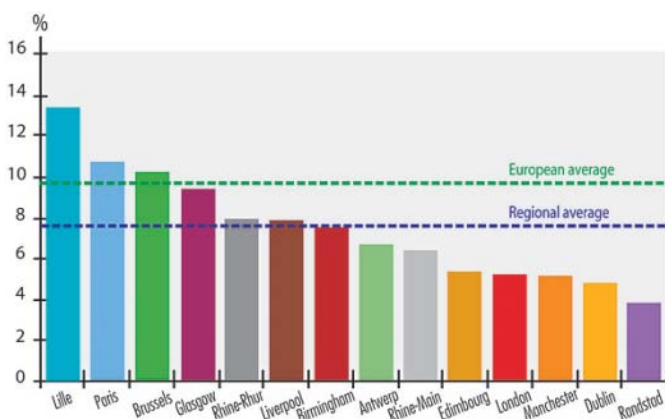
- the Randstad is 5% below the average because of its relatively mediocre labour productivity;

- the Rhine-Ruhr region is 8% below the average because the participation rate of the population of working age is low;
- Birmingham is 24% below the average because of poor productivity and the small percentage of the total population that is of working age.

Unemployment rate

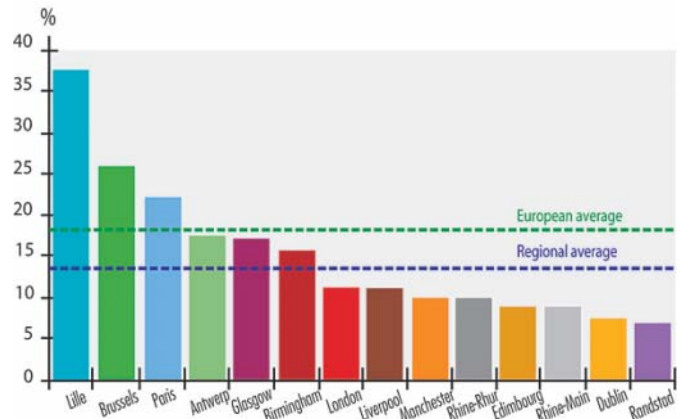
In Europe, 16 million people were unemployed in 1999, that is, 9.4% of the working population. In the 14 regions, the average unemployment rate (7.6%) was lower than in the European Union as a whole. However, there were very significant differences between these regions, with unemployment rates ranging from 3.9% to 13.4%.

Unemployment rate in 1999



Source: 1999 Labour Force Surveys (year 2000 for UK regions)

Unemployment rate among young people in 1999



Source: 1999 Labour Force Surveys (year 2000 for UK regions)

In three regions - the Randstad, Dublin and Manchester - the unemployment rate was less than 5%. In three others - Lille, Paris and Brussels - it was over 10%. And in Paris, it was twice as high as in London.

In all these regions, the young were the most affected by unemployment, particularly in Lille, Brussels and Paris, where the unemployment rate in the 15 to 25 age group exceeded 20%.

This comparative study of the economic positioning of city regions in North Western Europe in static terms (level values) has highlighted the existence of considerable differences between them regarding their size and their internal characteristics.

Let us now compare their economic positioning in dynamic terms by considering four key trends: population growth, employment growth, production (output) growth and unemployment. This is followed by an overview.

Economic positioning of the regions in the 1990s in dynamic terms (trends)

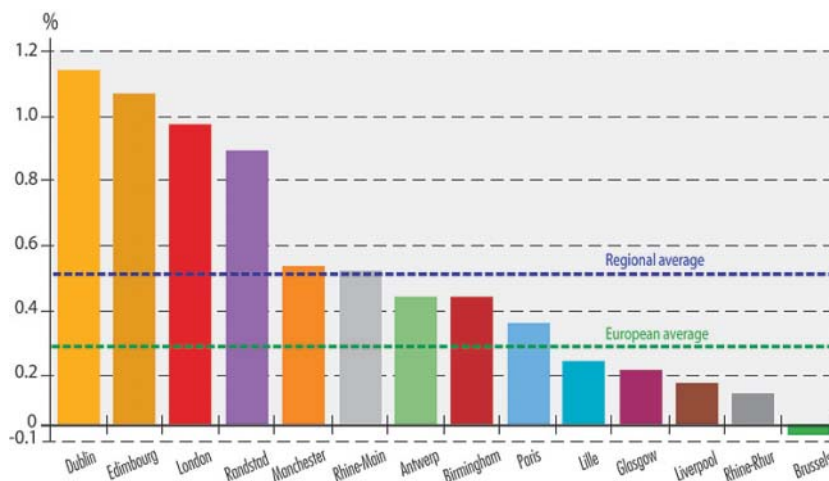
Owing to the unavailability of statistical data on certain regions, the period over which the annual trends in population, jobs and unemployment are calculated can vary from one city to another. Readers who wish to know exactly over which periods the trends have been calculated can refer to the table on page 76.



Besides its population growth, the Dublin urban region was the best performing as regards to its GDP growth from 1995 to 1999.

C. Tarquis/laurif

Annual average population growth



Sources: population census data and GEMACA estimates

Population growth

The Graph shows the trend in population growth in the FURs over the 1990s.

The total population of the 14 city regions grew at a faster average annual rate (+0.47%) than the total population of Europe (+0.3%). The development of city regions ("metropolisation") therefore continued in the 1990s, but at a very different pace from one FUR to another.

- Four regions stood out from the rest in terms of very vigorous population growth. Their total population grew at twice the average rate for the 14 regions. These four regions were Dublin, Edinburgh, London and the Randstad.
- In five regions, the population grew at less than half the average rate for the 14 regions. These demographically less dynamic regions were Lille, Glasgow, Liverpool, the Rhine-Ruhr region and Brussels.
- In the rest of the 14 city regions, the population grew at relatively moderate rates of between 0.3% and 0.5%.

Eight FURs recorded faster population growth than Paris, notably London, whose growth rate was three times that of Paris. Between 1990 and 1999, the population of the Paris metropolitan area grew at an annual average rate of 0.32%. This resulted from two contradictory factors: strong natural growth, estimated at +0.79% per annum, and a net migration loss, estimated at -0.47% per annum.

Employment growth

Labour-Force Surveys provide estimates of the number of jobs, which are counted as being located where the employees live. The data available for all the FURs relate to the years 1994 and 1999 (year 2000 for city regions in the UK).

Over this period, employment in the 14 FURs grew at an average annual growth rate of 0.9%, that is, almost the same rate as Europe as a whole (1.0%). In spite of being in the same international economic environment, the job creation rates of these regions differed considerably.

- Two regions achieved remarkable results:
 - Dublin was by far the most dynamic region, with a job growth rate of 6.5% a year, i.e. seven times the average for the 14 regions. Around 180,000 jobs were created in the region over the period, that is, as many as in London or Paris, which are 10 times larger.
 - The Randstad also obtained remarkable results, by creating three times more jobs per year than the average. Around 410,000 jobs were created in the region, i.e. more than the combined total achieved by the London and Paris metropolitan areas.
- Edinburgh, Manchester and Antwerp created 50% more jobs than the average for the 14 regions.
- In four regions, the employment growth rates were 50% lower than the average. These least dynamic city regions were Lille, Birmingham, the Rhine-Ruhr region and the Rhine-Main region.

- Employment growth in the Brussels, Paris (0.8%) Glasgow and London (0.5%) metropolitan areas were relatively moderate.

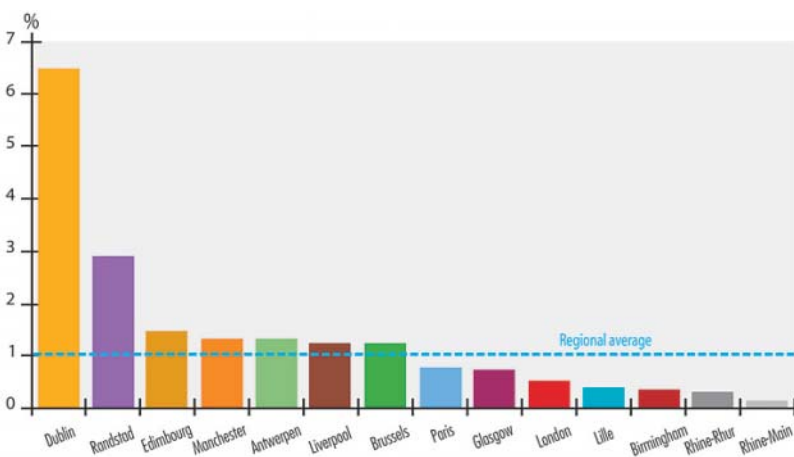
Production growth from 1995 to 1999

Two indicators allow us to compare the trends in regional output in different countries:

- volume GDP growth, i.e. unaffected by inflation;
- GDP in purchasing power parity terms, i.e. adjusted for differences in prices between countries, and expressed per inhabitant in order to make more meaningful comparisons possible with regions whose population numbers are changing.

Owing to a break in 1995 in the series of statistics, due in part to a change in the rules governing the European system of integrated economic accounts (SEC 95), the period on which are based the regional trends shown below covers the years 1995 to 1999. The data relate to 13 FURs defined on the basis of their "NUTS 3 adjusted areas". The data for the Lille FUR are not available.

Annual average employment growth rate from 1994 to 1999 (2000 for UK regions)



Sources: 1994 and 1999 Labour Force Surveys (year 2000 for UK regions)

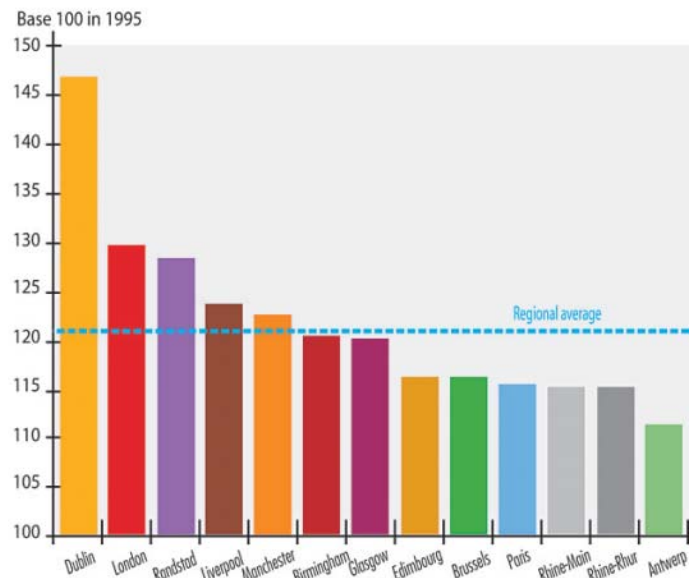
Volume GDP growth

Volume GDP growth between 1995 and 1999 in the 13 regions averaged 10.8%, a slightly smaller increase than the average for EU15 member countries (12.6%).

Growth in output over the period was very variable from one city region to another.

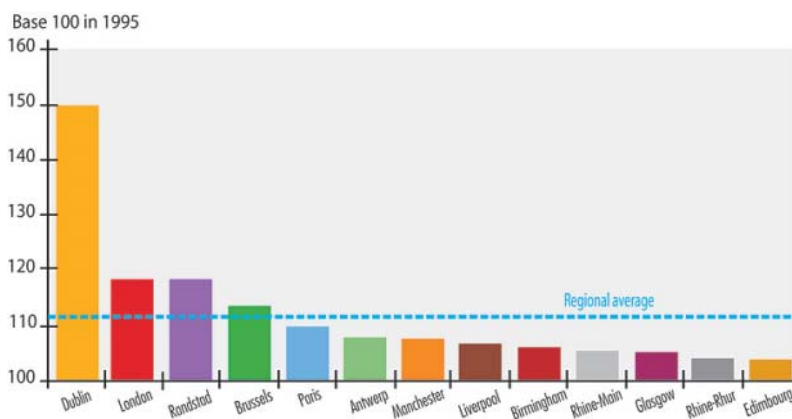
- Three regions achieved remarkable results: Dublin, London and the Randstad. In these regions, output grew 50% more than the average for the 13 regions. We have already highlighted Dublin's outstanding performance: volume GDP growth rose by 50% over four years.
- The city regions in Germany and Scotland produced mediocre performances, being 50% below the average for the FURs.
- In the other regions, GDP grew at a rate close to the average. The Paris area's GDP (9%) grew half as fast as that of London or the Randstad (18%).

Changes in GDP per inhabitant from 1995 to 1999 in purchasing power parity terms



Source: Eurostat and GEMACA estimates

Changes in the volume index of GDP from 1995 to 1999



Source: Eurostat and GEMACA estimates

GDP growth per inhabitant in purchasing power parity terms

In purchasing power parity terms, GDP per inhabitant grew between 1995 and 1999 by 21% on average in the 13 regions, i.e. at almost the same rate as the average for the EU's 15 member states (20%).

Over the period, the differences in GDP growth per inhabitant were not so great as the differences in volume GDP growth. The results of nine regions are relatively closely clustered together within a 15 to 24% range.

The remarkable performances recorded by Dublin, London and the Randstad in terms of the volume GDP index are confirmed when price differentials and population growth are taken into account. These three city regions lead the pack.

The trend in unemployment from 1994 to 1999/2000

Unemployment fell sharply in the United States in the 1990s, whereas in Europe it was still a major problem at the end of the decade in 1999.

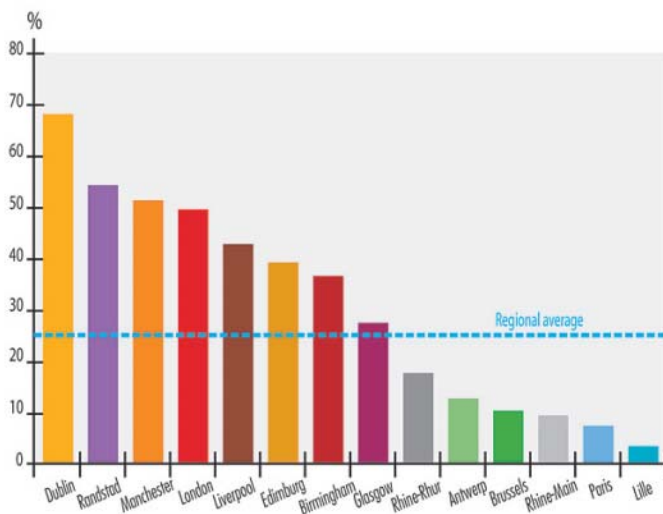
From 1994 to 1999 (2000 in the United Kingdom), the average unemployment rate across the 14 city regions fell from 10.3% in 1994 to 7.6%, i.e. a 26 % reduction.

But the changes in the unemployment rate varied a great deal from one FUR to another.

- In Dublin, the Randstad, Manchester, London, Liverpool and Edinburgh, unemployment fell by over 50% more than the average for all 14 regions. Dublin, which had the highest rate in 1994, recorded the biggest drop in unemployment.
- Compared with the other city regions, the fall in unemployment in Birmingham, Glasgow and the Rhine-Ruhr regions was close to the average.
- The French, German and Rhine-Main city regions underperformed: their unemployment rates did not diminish significantly, as they fell by half as much as the average.



Changes in unemployment rate from 1994 to 1999 (2000 for UK regions)



Source: Labour Force Surveys

From 1994 and 1999-2000, the Randstad recorded a fall in unemployment by over 50% more than the average. The Randstad was then the best performing in the group of city regions that have more than seven million inhabitants.

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International Association
Cities and ports
(IACP)
1997

Comparing the economic vigour of North Western Europe's city regions

To arrive at an overall assessment of the comparative economic vigour of the metropolitan areas in North Western Europe, all the indicators reviewed above have to be taken into consideration, because they are close interrelated. The Table provides an overall view, showing how the city regions are positioned in relation to each other in terms of the relative changes in the four indicators used.

The comparative economic vigour of North Western European FURs

	Population growth	Employment growth	Volume GDP growth	Reduction in unemployment	Rating of economic vigour
Regions with 7 million inhabitants and over					
Randstad	1	1	1	1	4
London	1	=	1	1	3
Paris	=	=	=	-1	-1
RheinRuhr	-1	-1	-1	=	-3
Regions with 2 to 4 million inhabitants					
Manchester	=	1	=	1	2
Birmingham	=	-1	=	=	-1
Bruxelles	-1	=	=	-1	-2
RheinMain	=	-1	-1	-1	-3
Regions with less than 2 million inhabitants					
Dublin	1	1	1	1	4
Edinburgh	1	1	-1	1	2
Antwerpen	=	1	=	-1	=
Liverpool	-1	=	=	1	=
Glasgow	-1	=	-1	=	-2
Lille	-1	-1	na	-1	?

For each indicator, the regions were rated by comparison with the average trend for the 14 regions as follows:

- 1 when growth is 50 % higher than the average;
- = when growth is close to the average for the 14 regions;
- 1 when growth is less than 50% of the average.

The last column on the right, headed "Rating of economic vigour", shows the cumulative result of the four indicators, and provides an overall rating of the comparative economic performances of North Western Europe's city regions over the period.

The regions are listed in three groups based on population size.

In the group of city regions that have seven million inhabitants and over:

- the Randstad has the best performance record, as it outperformed the average for the 14 regions on all four counts;
- London comes second with three scores that exceed the average by over 50%;
- the Paris area's two rivals significantly outperform the French capital, whose economic vigour is rated as "average" by three indicators; nor has this region significantly reduced its unemployment rate;

- the Rhine-Ruhr region was the worst-performing of all the major regions.

In the group of city regions with two to four million inhabitants:

- Manchester was the best performing, as it both created more jobs and cut the number of unemployed more than the others;
- overall, Birmingham, Brussels and the Rhine-Main region underperformed the average for the 14 regions.

In the group of city-regions with populations of less than two to four million inhabitants:

- Dublin performed very well according to each indicator. In the 1990s, It was economically much more vigorous than the other regions;
- Edinburgh scores well according to three indicators, but its GDP growth was 50% lower than the average;
- the overall results for Antwerp and Liverpool were "moderate".
- Glasgow and Lille (whose positioning is based on three indicators) are outdistanced.

At the beginning of this article, we advised readers to interpret its contents with caution. However, there is no doubt that Dublin, the Randstad, London, Manchester and Edinburgh were the best-performing economic areas in North Western Europe over the period studied.



Transport, Accessibility and Economic competitiveness

Wolfgang Knapp

ILS¹

Transport and communication systems are crucial to metropolitan region's development. Accessibility, i. e. the ease of spatial interaction, the potentiality of contacts with activities of supplies or as the attractiveness of a node in a network (taking into account the mass of other nodes and the costs to reach those nodes via the different networks), is considered as an important determinant of regional development. The quality of transport and communication infrastructure in terms of capacity, connectivity, travel speeds etc. among others determines the quality of locations (measured as accessibility) relative to other locations, i. e. competitive advantage of locations. The GEMACA Project looks, therefore, into the question of transport and accessibility, too. Besides a qualitative analysis of the transport systems based on expert reports, the internal and the inter-regional accessibility of the studied fourteen metropolitan regions was analysed, notably with the help of a sophisticated

(1) Institut für Landes und Stadtentwicklungsforschung des Landes Nordrhein-Westfalen (ILS)



E

uropean Metropolitan Areas and Travel

What Town Are We Travelling In?

The idea of the compact, mixed and densely inhabited centre commonly associated with European cities now applies only to relatively small areas in the major metropolitan regions. Cities have developed far beyond their historic centres, and these new developments have taken the form of sparsely inhabited semi-urban, semi-rural areas. New centres have also grown up and many suburban areas have acquired important functions which were originally the preserve of the historic city centres. In fact, to a greater or lesser degree, all the urban regions now appear to be polycentric, even if the historic centres of, for example, London, Brussels and Paris are still very important.

This form of urban development is the consequence of a large number of convergent factors, including changes in socio-economic trends (increase in revenue, increase in the number of working women) and life style (amount of leisure time); the rejection of a certain number of constraints associated with traditional urban centres (noise and air pollution); and the decentralisation of economic activities and services and leisure. Underlying these developments is a massive use of the motor car, accompanied by heavy public investment in road infrastructure. Property price differentials between the city centres and the suburbs has also been a contributing factor.



The management of road traffic congestion and public transport saturation is a challenge for all the metropolitan regions of the area.

Gobry/Dreif

Challenges Faced by Regional Transport Systems

Congestion

Even if the internal accessibility of all the regions of Northwest Europe is relatively good, the management of road traffic congestion and public transport saturation is a challenge for all the metropolitan regions of the area. However, due to a lack of homogeneous data and to the difficulties inherent in comparing subjective impressions, it is difficult to make comparisons between the regions. From the point of view of economic performance, it is nevertheless possible to claim that whilst workers do their best to adjust their working hours, itineraries and chosen mode of transport to the difficulties they encounter in getting to work, business clients are still very sensitive to the amount of time they spend travelling, especially to and from the airport.

The Importance of the Increasing Interaction Between Freight Distribution, Logistics and the Development Processes of the Metropolitan Regions

Another issue facing all the regions is how to deal with the rapid increase in freight transport. For example, in the region of the Ruhr, freight transport by road increased by 14% between 1995 and 1999. Forecasts taking 1995 as a starting point suggest that between now and 2010 this kind of traffic will increase by a further 40%. In addition, it is suggested that cities, which traditionally played the role of points of goods transhipment, are evolving into mere links in the long-distance commodity chain. It is the peripheral areas of the agglomerations that are now the best sites for these new logistic and distribution functions. However, these developments will have important ramifications concerning the functioning and balance of the regions; cities will continue to sprawl and intra-urban transport will become less efficient.

How to deal with the rapid increase in freight transport ?

Gobry/Dreif



All the metropolitan regions are confronted with problems involving the homogeneity of coverage offered by their public transport systems.

F. Dugény/Laurif

The Absence of Public Transport Systems Effectively Covering the Entire Metropolitan Region

To a greater or lesser degree, all of the metropolitan regions are confronted with problems involving the homogeneity of coverage offered by their public transport systems. Such services can be improved not only by developing the networks, but also by introducing new means of transport and integrating already existing local transport systems at the regional level.

The Need to Promote Sustainable Development

The question of accessibility is at the heart of the issues concerning sustainable development. The exclusive use of cars does not satisfy the requirements of a sustainable balance between the mobility needs and economic interests of citizens and the protection of the environment. There is a need to seek original alternatives based on new principles of transport organisation and the construction of a more compact urban form which can provide a platform for efficient public transport. These objectives are

included in the spatial planning and transport organisation documents of all the metropolitan regions studied in the project. For example, the central government of the Netherlands is working on a new national transport policy and has initiated a program designed to improve accessibility in the Randstad. This program includes the introduction of toll booths on roads leading to the region's four main cities.

Another example of a new kind of transport policy is the one that has been developed in the Dublin region since the mid-1990s. The 1995 Dublin Transportation Initiative (DTI) advised against the construction of additional roads in sensitive inner urban areas and recommended that more emphasis should be placed on the provision of public transport systems.

In the Paris region, a regional commuting and travel program has been in place for two years. The program, which defines principles of organisation for people and freight, has the following objectives: to decrease car traffic, to develop public transport, to promote less polluting forms of transport, and to improve freight delivery management. Finally, in the Brussels region, a «Réseau Express Régional» (Regional Express Train Network) is set to be introduced in 2010.

Rail links between the metropolitan regions (2000)

Accessibility of the 14 GEMACA metropolitan regions

Transport infrastructure endowment, transport services and volumes

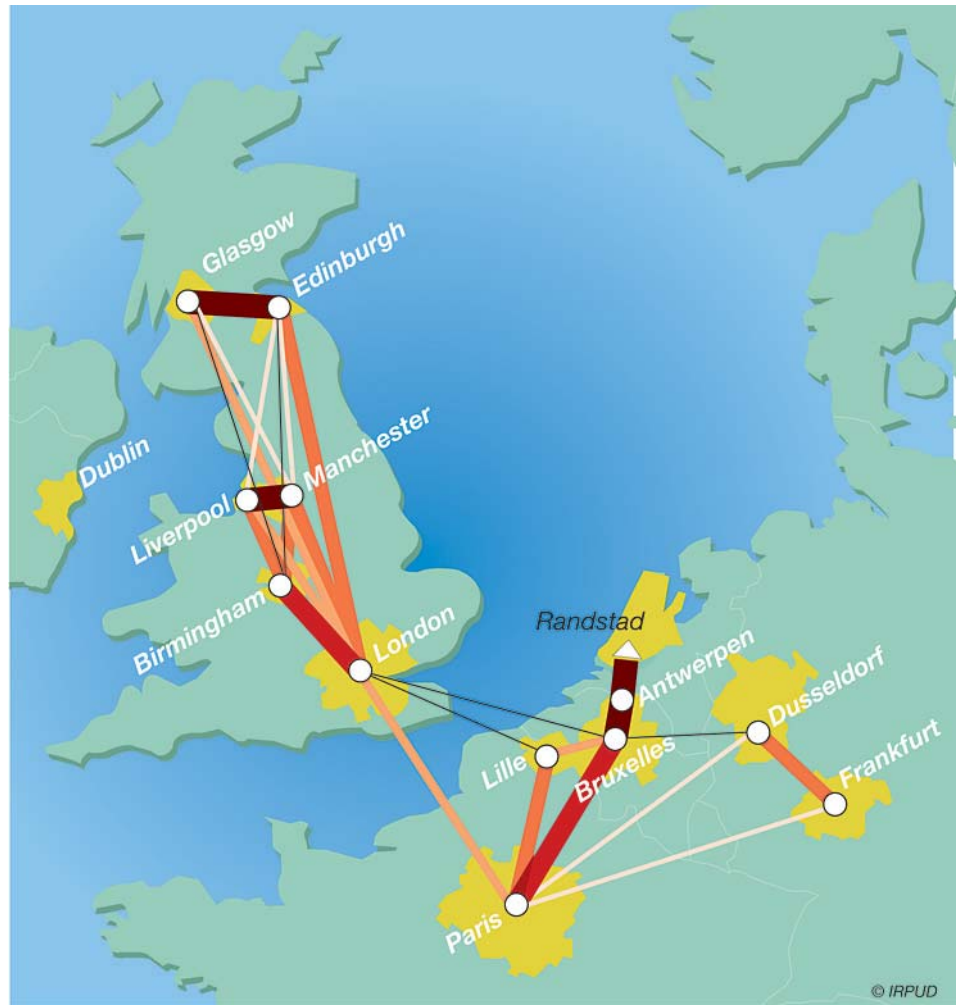
Indicators on the infrastructure endowment and especially the actual use of that infrastructure in terms of transport services offered and in terms of actual transport volumes can be seen as a simple form of an accessibility analysis.

Usually, infrastructure density indicator such as network length per area or per inhabitant serve as a base for the comparison of the infrastructure quality. However, looking at the very heterogeneous data set calculated, it is nearly impossible to conclude on the quality of the infrastructure endowment of the metropolitan regions.

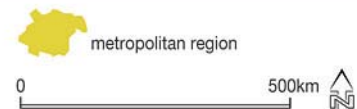
In the table hereafter, the RhineRuhr and Brussels regions are ranked first for the level of infrastructure per inhabitant and per km². The poor ratio of road per inhabitant for London and Liverpool and of railway per inhabitant for the Randstad should also be noted.

The reasons for the differences observed in the various regions are to be found in the history of their urban development. The industrial regions have inherited the extremely dense and closely-knit regional rail networks built in the 19th Century. These networks are now often under-exploited or even abandoned.

Traditionally polycentric regions have developed extremely dense regional networks which, however, often fail to serve local destinations, especially in built-up areas. On the other hand, monocentric regions have dense and efficient networks in and near the centre of the city and a noticeable lack of infrastructure serving their periphery.



Number of direct trains :



Region	Motorways and main roads			Railways			Airports
	km	m/km ²	m/1,000 inhabitants	km	m/km ²	m/1,000 inhabitants	
Antwerp	311	161	222	346	179	247	0
Birmingham	365	119	122	470	153	157	1
Brussels	818	130	234	1,147	182	328	1
Dublin	155	53	119	221	75	169	1
Edinburgh	109	44	138	187	75	236	1
Glasgow	195	65	111	359	119	204	1
Lille	272	124	141	474	216	245	1
Liverpool	136	145	87	248	264	158	1
London	1,199	102	96	1,968	167	158	5
Manchester	307	143	106	565	264	194	1
Paris	1,411	80	120	2,243	127	191	3
Randstad	869	144	127	848	141	124	2
RhineMain	801	120	200	1,229	184	307	1
RhineRuhr	1,680	162	144	2,429	234	209	3

In view of the competitive performance of metropolitan regions the actual use of that transport infrastructure is more important than indicators on the infrastructure endowment.

Rail Links Between the Metropolitan Regions

Train connectivity can be viewed as an important indicator of the potential of economic interaction between urban regions. Northwest European metropolitan regions are geographically close to geographical proximity and rail services, particularly high-speed services, can be efficient, especially for business travellers.

Logically enough, the densest networks are to be found between the urban regions closest to each other. This can clearly be seen in the cases of Glasgow and Edinburgh, and Antwerp and Brussels.



The opening of the Channel Tunnel has given rise to a large number of through train services between London and Paris.

F. Dugény/Laurif

The opening of the Channel Tunnel and the construction of new high-speed train links in France and Belgium have given rise to a large number of through train services between London and Paris and London and Brussels.

There are also frequent services between Brussels, Antwerp and the Randstad.

On the other hand, the number of direct train connections between Dutch, Belgian and French metropolitan areas and the two German regions is comparatively small.

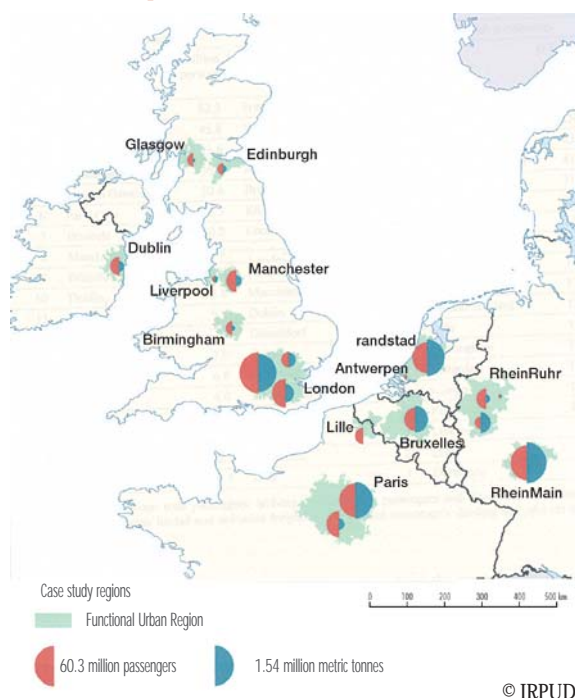
Air Transport Volume

International air transport infrastructure exploitation data (number of passengers, freight tonnage) are another indicator of the relative competitive positions of the fourteen metropolitan areas.

In terms of the number of passengers, London Heathrow is Europe's biggest airport. Every year, over 60 million people use this international hub. Next come Frankfurt and Paris Charles de Gaulle, each with around 40 million passengers per year. Amsterdam Schiphol comes fourth. Following this principal hubs, the second

airports of London and Paris (Gatwick and Orly, respectively) process more passengers than those of the remaining metropolitan regions. Despite being the European Union's unofficial capital and the seat of a large number of international organisations, Brussels can lay claim to only about 20 million passengers a year. Dublin (12.8 million passenger) has nearly as many passengers as much more densely populated regions like Düsseldorf and Manchester. In terms of total cargo traffic, a group of four leading airports – Frankfurt, London Heathrow, Paris Charles-de-Gaulle and Amsterdam Schiphol – are ahead of the rest of the field with an annual freight volume of well over a million tonnes each. Brussels has only half the freight volume of Schiphol and Cologne has only a third.

Air Transport Volume (1999)



Another indicator of a region's level of international accessibility is the number of direct air links to foreign destinations. In this regard, the quantity and availability of regular flights to twenty major airports around the world for each of the 14 regions have been listed hereafter.

The four leading metropolitan areas in terms of total volume of passengers – London, Paris, RhineMain and the Randstad – are also ranked first in terms of international links. They offer frequent regular flights to all the destinations on the list.



Port activity

Rotterdam is by far the largest European port with over 300 million tonnes per year. Antwerp is ranked second with an annual freight volume of around 120 million tonnes, only a third of the figure for Rotterdam.

Rotterdam's dominant position is even more marked in terms of container traffic. Apart from Antwerp and Liverpool, the volume of container traffic in the other metropolitan regions is insignificant.

In terms of total cargo traffic, a group of four leading airports (Frankfurt, London Heathrow, Paris Charles-de-Gaulle and Amsterdam Schipol) are ahead of the rest of the field with an annual freight volume of well over a million tonnes each.

F. Dugény/laurif

Inland port traffic volume is highest along the Rhine. With nearly 50 million tonnes a year, Duisburg is the largest river port in Europe. Its total freight volume is close to those of the sea ports of London and Amsterdam, and higher than those of Liverpool and Dublin. Paris ranks second with 18 million tonnes. Next come the ports of the two German metropolitan regions. However, neither region achieves an annual tonnage of 10 million.

Regular passenger flights for the week starting July 3, 2000 from 14 regions to a selection of 20 of the world's biggest airports

From/to	Amsterdam	Atlanta	Bangkok	Chicago	Frankfurt	Hong-Kong	Los-Angeles	London	Madrid	Mexico	Milan	New-York	Osaka	Paris	Sao-Paulo	Seoul	Shanghai	Singapour	Tokyo	Toronto	TOTAL
London	331	49	32	78	191	35	77	-	165	3	176	213	12	317	12	5	3	46	39	42	1,826
Paris	119	21	14	28	120	7	32	316	144	7	130	81	10	-	21	8	7	16	33	19	1,133
Frankfurt	69	21	25	35	-	17	23	191	69	7	76	66	12	120	24	13	9	25	23	14	839
Amsterdam	-	14	6	10	69	4	9	331	56	0	74	39	5	122	1	1	0	13	11	13	778
Brussels	70	14	0	14	71	0	14	256	68	0	94	37	0	85	2	0	0	3	4	0	732
Dublin	40	7	0	7	27	0	6	394	9	0	15	39	0	86	0	0	0	0	0	0	630
Manchester	96	7	0	7	51	7	0	182	19	0	18	21	0	75	0	0	0	7	0	7	497
Glasgow	38	0	0	7	12	0	0	263	6	0	5	7	0	70	0	0	0	0	0	7	415
Edinburgh	50	0	0	0	25	0	0	264	7	0	0	0	0	57	0	0	0	0	0	0	403
Dusseldorf	35	0	0	7	55	0	10	123	14	0	46	14	0	63	0	0	0	0	0	2	369
Birmingham	79	0	0	7	45	0	0	1	7	0	23	7	0	77	0	0	0	0	0	0	246
Antwerp	28	0	0	0	0	0	0	28	0	0	0	0	0	0	0	0	0	0	0	0	56
Liverpool	21	0	0	0	0	0	0	20	7	0	0	0	0	0	0	0	0	0	0	0	48
Lille	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0



Rotterdam is by far the largest European port with over 300 million tonnes per year.

C. Tarquis/aurif

Accessibility of North West European Metropolitan Regions in the Pan-European Context

More complex accessibility indicators take account of the connectivity of transport networks by distinguishing between the network itself and the activities or opportunities that can be reached by it. Accessibility is a construct of two functions, one representing the activities or opportunities to be reached and one representing the effort, time, distance or cost needed to reach them.

In order to measure the current locational qualities of metropolitan regions in north-west Europe in terms of accessibility, an existing pan-European accessibility model has been adjusted. Whereas accessibility is usually calculated for cities or regions, the model applied originally calculates accessibility for some 70,000 raster cells of 10 kilometres width thus reflecting that accessibility is continuous in space (Spiekermann / Wegener / Schürmann).

- Accessibility has been calculated for road, rail and air for the year 2001 for the centroids of NUTS3 regions and for all municipalities of the fourteen metropolitan regions of GEMACA.

- For each of the municipalities, accessibility is calculated by taking into account the population of each of the 70,000 raster cells in Europe and the travel time from the municipalities to each cell, i.e. travel time is used as proxy for the generalised costs of transport.
- Current travel time for rail and air have been taken from actual time tables. Frequencies of services are considered for flight connections in a way, that scheduled flight services of only one flight a day or even less lead to additional time penalties in the accessibility model. Travel time data for road have been estimated based on assumptions for travel speeds on different road categories in different countries.
- Out of different accessibility types 'potential accessibility' has been used here for the assessment of the competitive locational position of the metropolitan regions. The potential accessibility is based on the assumption that the attraction of a destination increases with destination size that is usually represented by population or economic indicators (GDP, income), and declines with distance, travel time or cost. Here population is used as destination activity.
- In order to allow an easy comparison of the metropolitan regions and of the distribution of locational qualities within the regions, the accessibility indicators are presented in standardised form. For this, the average of the NUTS3 region weighted by population is used.

The results of the accessibility model can be compared in different ways. On the one hand, comparisons within a functional urban region are possible, e.g. between municipalities in the core urban area and those at the edge of the region. This helps to identify those areas of a functional urban region which have competitive European-wide accessibility and those which have not. On the other hand, it is also possible to compare the whole functional urban region or even selected municipalities of that region with other regions and their municipalities. This helps to assess the accessibility performance of a functional urban region or selected parts of it in a comparative manner.

Port traffic 1998

Maritime (global)		Maritime traffic by container		River traffic	
port	tonnes (by million)	port	1000 UVP (equivalent to 20 feet)	port	tonnes (by million)
Rotterdam	306.6	Rotterdam	6.011	Duisburg	49.7
Antwerp	119.8	Antwerp	3.266	Paris	18.1
London	56.4	Liverpool	487	Köln	8.6
Amsterdam	55.7			Dortmund	5.5
Liverpool	30.3			Frankfurt	3.9
Dublin	18.5			Düsseldorf	3.5

Accessibility by Road

Accessibility by Road

Dublin has the lowest road accessibility index of all the metropolitan regions. Due to its geographical isolation and its dependence on ferry services to the United Kingdom, road accessibility is only around 20 percent of the European average and does not vary much within the region.

London has the highest road accessibility index in the United Kingdom with score of up to 155 percent of the European average. The highest accessibility indices are to be found in the centre of the urban region and along the M25 orbital motorway. However, on the edge of the metropolitan region, accessibility by road is slightly under the European average.

Paris's road accessibility index is nearly twice the European average. As well as a corridor of northbound motorways, the city of Paris has the highest road accessibility index in the region. Accessibility drops markedly as one gets further away from the heart of the city, but this drop is less pronounced along the radial motorways. The road accessibility index for the outer fringe of the metropolitan region is no higher than the European average.

The RhineRuhr region is characterised by a very high road accessibility index. Maximum values are about 245 percent of the European average, giving the region the highest road accessibility index in Europe. But even the lowest in the region is 215 percent. The cities of the centre of the urban region are the most accessible, while the municipalities of the south-eastern fringe have the poorest accessibility in the region.

Accessibility by Rail

London's rail accessibility index reaches points of up to 170 percent of the European average. Areas of high accessibility are much more concentrated in the centre of the urban region and less evenly spread than in the case of road accessibility, for which figures are relatively high. The lowest values in the

metropolitan area are around 110 percent. Paris has a rail accessibility index of up to 215 percent of the European average. The highest index is to be found in the city of Paris itself. The suburbs of Roissy and Massy, with their TGV stations, have rail accessibility indices of over 200 percent. However, the index of some communes on the outskirts of the metropolitan area is less than the European average.

The RhineRuhr region boasts some very high rail accessibility indices with peaks of around 235 percent of the European average. Even the lowest values attain 165 percent. In general, cities in the south of the region (Cologne) have higher accessibility indices than do cities in the north (the Ruhr area).

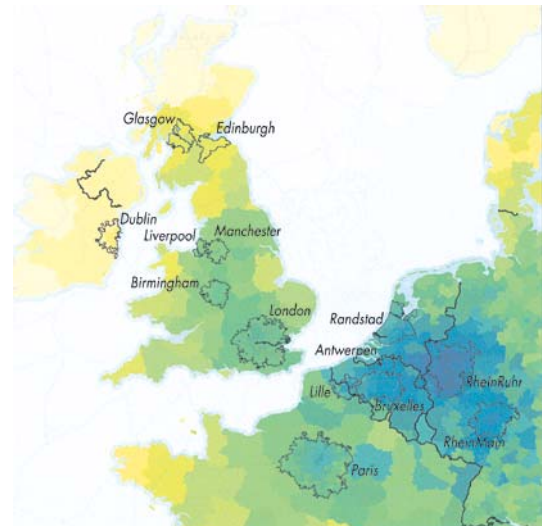
Accessibility by Air

Calculations concerning accessibility by air produce very different results from those effected for the other two categories. Naturally, the cities located near or around Europe's main airports are those which attain the highest values. The highest values for London, Paris, Brussels, the Randstad, RhineRuhr and RhineMain are over 180 percent of the European average.

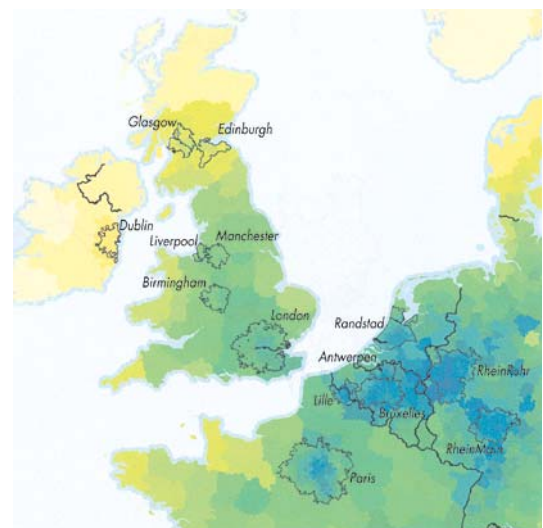
More remote metropolitan regions such as Dublin, Glasgow and Edinburgh have above average air accessibility values. Dublin (130 percent) performs even better than Glasgow (115 percent) and Edinburgh (110 percent).

The following graph is a summary of the accessibility indices of the 14 metropolitan regions. It shows the index of accessibility by road, train and air in relation to the European average and includes differences in values within the regions studied.

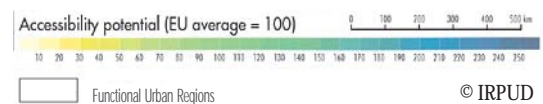
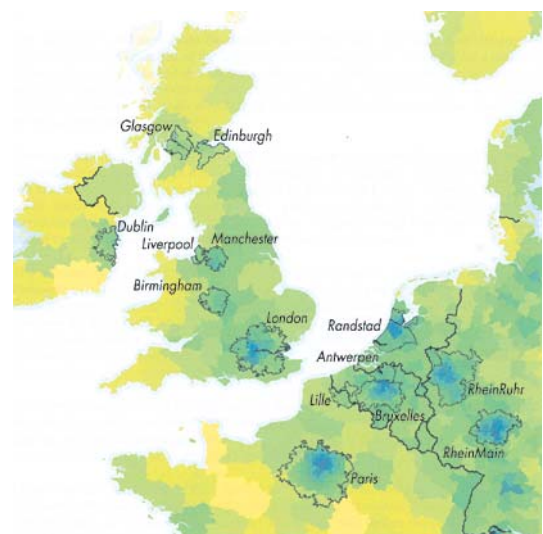
Dublin's road and rail accessibility indices reflect its geographical isolation on an island on Europe's north-west frontier. However, the region does have good air links, with an accessibility index markedly above the European average. These links are one of the main competitive advantages of this relatively isolated region.



Accessibility by Rail



Accessibility by Air



The metropolitan regions of Glasgow and Edinburgh suffer from their geographical position at the periphery of Europe, located over 300km from other UK metropolitan regions, which are situated in England. Consequently, accessibility by road and rail are only half the European average. Air links are slightly above this average figure, but do not represent a compensatory factor, as is the case for Dublin.

Liverpool, Manchester and Birmingham are less remote than the regions mentioned above. However, accessibility by road and rail is only a little above the European average. One of the assets of the Manchester and Birmingham metropolitan regions is their accessibility by air, which is markedly above the European average.

Situated very close to the European continent, London is the best performing metropolitan region in the UK in terms of accessibility. Rail accessibility increased markedly in the 1990s with the opening of the Channel Tunnel and will further improve with the opening of the Channel Tunnel high-speed rail link. However, the region's highest road and rail accessibility indices are only 170 percent, much lower than the metropolitan regions of continental Europe.

With its three international airports, the strongest index for London is air accessibility. Paris occupies an excellent competitive



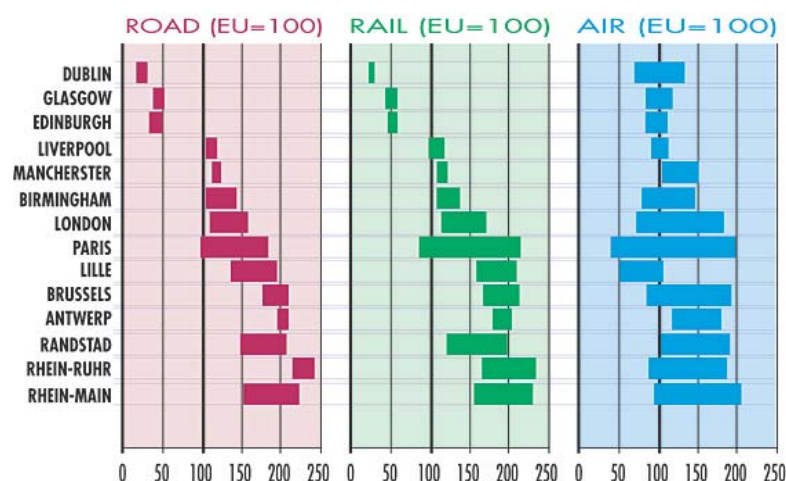
In terms of accessibility, Lille is located in a favourable position between the capital cities of Paris, London and Brussels, due to the opening of the Channel Tunnel.

Ph. Guignard/Urbaimages

position in the European transport system. The French high-speed rail network, as well as good air connectivity, make up to some degree for the disadvantage of being relatively far away from the high density Dutch-German "Blue Banana" area. Air and rail accessibility indices are among the highest in Europe. However, intra-regional disparities in accessibility are the highest of all the metropolitan regions.

Lille is located in a favourable position between the capital cities of Paris, London and Brussels. Due to the opening of the Channel Tunnel and the new high-speed links between the three capitals, Lille has a very high rail accessibility index. Lille's road accessi-

Comparative accessibility of the regions



lity is even better than that of Paris. The city does have one disadvantage, however, in that it lacks an international airport and its air accessibility index is consequently the lowest of all fourteen metropolitan regions. Brussels benefits from a very central location in Europe. Thanks to its dense motorway and rail networks, the Belgian capital's road and rail accessibility indices are very high compared to European averages. Rail accessibility will be yet further improved when the high-speed links with the Randstad and with Germany come into operation. The region's potential for accessibility by air is among the highest in Europe.

Antwerp is similar to Lille in that it is an intermediate region between very large metropolises. Good road and rail links to those agglomerations give the city a very high accessibility rating in both categories. The new high-speed link from Brussels to the Netherlands via Antwerp will further improve rail accessibility. Antwerp does not have its own international airport, but is well served by the nearby facility in Brussels. The city's air accessibility rating is thus only slightly lower than that of its larger neighbour. One of the competitive advantages of the region is the port of Antwerp.

The Randstad region is very well integrated into the dense Dutch motorway and rail networks. Road and rail accessibility ratings are only slightly lower than for the highest ranked European regions. It is interesting to note that accessibility indices are higher for municipalities near the Belgian and German borders than for those in the heart of the region. Since Amsterdam Schipol is a major hub in the European air network, the region's air accessibility index is among the continent's highest. Rotterdam's port, which is the largest in Europe, is one of the metropolitan region's major competitive advantages.

From the point of view of transport systems and accessibility, the RhineRuhr region benefits from one of the best competitive positions in Europe. Due to high population densities and closely-knit motorway and rail networks, its road and rail accessibility indices are the highest in Europe. Accessibility by air is slightly lower than for the highest ranked regions, mainly because neither Düsseldorf nor Cologne airports are major European hubs.

RhineMain's performance in the European transport system is not quite as good as RhineRuhr's in terms of road and rail accessibility. However, thanks to intercontinental routes similar to those of London and Paris and to its more central geographical location, RhineMain has the highest air accessibility index of any metropolitan region in Europe.

The Relationship between the level of Regional Development and Different Levels of Accessibility

The traditional concept of (time-space) accessibility has its limitations. Moreover, changes in the field of transport and communication will fundamentally change the way relevant infrastructure influences metropolitan spatial development and make the relationship between infrastructure and the spatial organisation of economic and social activities more complex than ever.

An Ambiguous Relationship

Following many scholars in the field of regional science, the level of regional development in European regions appears to be clear related to the different levels of accessibility, but the direction of the causal relationship remains ambiguous here. Infrastructure endowment can be interpreted as well as a cause as a consequence of regional development. The positive correlation between infrastructure endowment and the levels of economic indicators may merely reflect historical agglomeration processes rather than causal relationship effective today. Moreover, the dynamics of regional development and their relationship to infrastructure investment remain impossible to explain. Whereas levels of GDP and levels of accessibility are usually correlated, variations in regional GDP over time cannot be clearly correlated to variations of accessibility.

Beyond Time-Space Accessibility

Whereas the role of transport infrastructure, travel costs and time remains strong in enabling spatial interaction especially of persons (e. g. commuting, face-to-face contacts) and certain goods and also in certain industries and subsectors, it must be emphasised furthermore that in most of the more dynamic sectors of the economy conditions for efficient transportation go beyond time - space accessibility. Efficient circulation of goods and information requires now, above mere accessibility, some form of organisational proximity between firms.

Brussels benefits from a very central location in Europe. The Belgian capital's road and rail accessibility indices are very high compared to European averages.

DR





Infrastructure endowment can be interpreted as well as a cause as a consequence of regional development.

Guilho/Dreif

It depends on the capacity to control flows, on their adaptation to production rhythms and constraints, on their reliability and flexibility, as well as on the efficiency of the associated flows of information. 'Proximity' in circulation of goods and information appears to be more of an organisational than a geographical nature and future dealing with 'accessibility' has to enlarge this concept in order to include more organisational dimensions.

The same applies on the role of accessibility in context of telecommunication too. In the case of immaterial flows accessibility becomes a problem of being or not being connected to the telecommunication infrastructure network, since spatial distance does no longer have a significant influence on the cost of transmission of information. However, the need for proximity will never disappear completely, because certain types of interactions cannot take place without spatial proximity. According to the thesis that telecommunication and face-to-face contacts are complementary means for the coordination of activities, more intensive use of telecommunication will not replace travelling for face-to-face interactions. Moreover, the mere accessibility of information puts aside the cognitive dimension, which is analysed through the distinction between information and knowledge and between tacit and codified knowledge.

Transport and communication technologies impact on the spatial organisation of economic and social activities, and thus have a very important role on sustainability of metropolitan regions. As they imply mobility, energy consumption, air pollution, they have huge negative environmental impacts.

J.C. Pattacini/Urba Images



The 'accessibility' of knowledge is not a mere problem of spatial accessibility, but an issue of creation of specialised resources through collective learning processes, which require organisational proximity.

Accessibility and Sustainable Mobility

Finally, we have to keep in mind that transport and communication technologies impact on the spatial organisation of economic and social activities, and thus have a very important role on sustainability of metropolitan regions. As they imply mobility, energy consumption, air pollution, and, when overexploited, congestion costs, they have huge negative environmental impacts, especially in the case of metropolitan regions. Mobility and accessibility should be considered to be two different concepts. Mobility, defined as the actual interaction based on the ease of contacts/flows (i. e. travel time, capacity of links), creates social costs and, through congestion of the network, impinges on accessibility itself, defined as the potential interaction among sites based on ease of contact/flows. Sustainable policies should therefore reduce mobility and/or change modes of mobility without limiting accessibility.

Office real estate and the competitiveness of cities in North-Western Europe

Renaud Diziain

IAURIF

Over the last 15 years, vast office construction programmes have been completed in most European metropolitan areas. They have resulted in the emergence of new business districts, reflecting the strong development of service industries in Europe's urban economies. The increasing contribution of these service industry growth centres to wealth creation has led the public authorities to pay greater heed to office real estate as a factor of corporate competitiveness, and therefore as a factor of the efficiency of regional clusters. This article presents the results of research conducted under the GEMACA II¹ project on the part played by office real estate in the economic competition between the major urban regions

(1) This research was conducted in collaboration with the European Research & Consultancy Department of Jones Lang LaSalle, which provided most of the statistical data on which the interregional comparisons were based.

The development of service industries and investors' very strong response

In spite of the slow growth of employment in the cities of north-western Europe, except in Dublin and the Randstad, demand for office space has been increasing strongly for around 15 years. The growth in services (consultancy, finance, etc.), the shift of industrial companies to service provision and the dramatic development of telecom and IT-related activities in the late nineties have created these new needs for office space.

As a result of growing demand for rental property, property development has emerged as the main pattern of office production. It originated in the United Kingdom in the 1950s, and spread across Europe's main capitals in the 1970s, before reaching regional metropolitan areas such as Lille or Dusseldorf (Rhine-Ruhr) more recently.

The growth of space for service-sector activities was underpinned by the massive arrival of banks and investors at a time when capital was abundant. The "financialisation" of the property market led the production of office space to be driven by the logic of supply and demand, thereby exposing the markets to greater cyclical fluctuations. The inertia of the production process due to construction lead times can result in a lag between the supply of space by developers and corporate demand that is increasingly sensitive to cyclical economic risks. The resulting imbalance produced alternating periods of overproduction and supply scarcity featuring sharp price swings.

Functional urban regions (FURs)

The analysis focused on the 10 metropolitan areas in North Western Europe whose population exceeds 1 million inhabitants and whose office stock exceeds 2 million sq. m., namely: Brussels, Dublin, Edinburgh, Lille, London, Manchester and Paris, as well as the Randstad, Rhine-Main and Rhine-Ruhr conurbations.

For this comparative market study, each metropolitan area was divided into functional urban regions defined

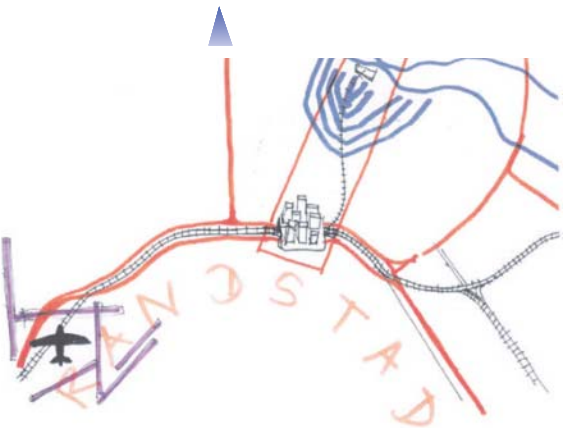
in terms of their respective labour pool (see the articles "the Socio-Economic profiles of Paris, Dublin, Randstad, London and Rhine-Ruhr"). This makes for comparisons that are more meaningful between property markets in metropolitan areas that have only one centre, such as London and Paris, and those that are polycentric, such as the Randstad, Rhine-Ruhr and Rhine-Main conurbations.

The greater mobility of capital and the grouping of property market players in vast pan-European networks have encouraged national markets to open up more to foreign investors. In recent years, the increase in the share of foreign direct investment in property in Paris (50%), Brussels (45%) and London (30%) reflects an underlying trend towards cross-border investment flows.

Thanks to the scale and professionalism of their respective markets, Paris and London account for over half of total cross-border transactions in north-western Europe.

Planning of a new office center in Randstad: the Zuidas (south axis) district half way from the center to the airport.

Source : Dienst Ruimtelijke Ordening/Atelier



Zuidas in Randstad is emblematic of emerging business districts in Western Europe: a development occurring outside traditional CBD, towards public transport interchanges and in an increasingly mixed-use environment.

Source : Dienst Ruimtelijke Ordening/Atelier



National legal and tax arrangements are as diverse as ever

Although the influence of foreign investors has changed certain local practices, the harmonisation of national property market regulations appears to be both complex and a still remote prospect. The market environment is still very much affected by local factors, such as administrative procedures, as well as legal and tax arrangements. Property taxes are numerous and very specific to each country. Comparative research on occupancy costs shows that corporates in London pay higher property taxes than their counterparts in Paris or Frankfurt. In France, however, property revenues and capital gains are more heavily taxed than in other European countries.

The rules governing commercial property leases reflect the great diversity of European real estate law. The French property tax regime favours occupiers, who are entitled to terminate leases at the end of each three-year period. This is seen as an obstacle to the adjustment of rents to changes in market conditions and a brake on the renewal of office stock by reducing the security of investments.

By contrast, the tax regimes for property leases in the United Kingdom and Ireland clearly favour landlords: tenants have to make firm 10 or 15 year commitments, and rents may be revised every five years, but only upwards. Because of the rigidity of this regime, in spite of recourse to subletting, people increasingly circumvent it, and it does not make for greater market fluidity.

Less government regulation and the growing influence of the private sector

In continental Europe, office construction remains highly regulated, but the trend is towards market liberalisation and greater scope for private sector initiative.

Policies aimed at exercising direct public authority control over corporate location have been gradually phased out. In London, the "Location of Offices Bureau" was abolished in the 1980s. In Paris, since the abolition of the "occupier approval" procedure in 2000, private companies have been entirely free to locate wherever they wish. Speculative developments alone remain subject to public authority authorisation in some parts of north-western Europe. The Dutch government has given up implementing its 'ABC-Location' policy aimed at forcing large corporations that generate "private motor vehicle traffic flows" to locate to sites situated close to public transport/mass transit facilities.

Some countries have liberalised their land and real estate policies to give private sector participants greater powers. The most significant instance of this is in the Randstad, where the activities of private developers and investors have increased considerably in spite of the traditionally major part played by municipalities in property development.

Policies aimed at exercising direct public authority control over corporate location have been gradually phased out. In London, the "Location of Offices Bureau" was abolished in the 1980s.

D.Lecomble/laurif

Increase in partnerships between the public and private sectors

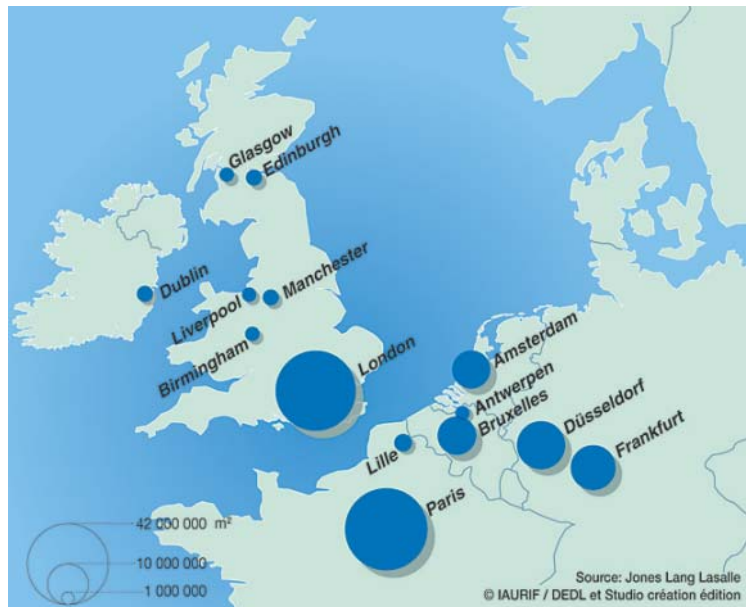
The public authorities still play a key part in programming service sector sites. In Europe, after urban centres became saturated, planning consent in the 1990s favoured the development of new business districts, which currently account for most office construction programmes. The public authorities have actively supported urban regeneration projects (derelict ports and industrial wasteland) and major capital investment programmes, as in Paris (La Plaine Saint-Denis), the Randstad (Rotterdam) and Dublin (Docklands). Even in London, the public authorities played an active part in the redevelopment of Canary Wharf. These revitalised areas being showcases for the international reputation of the cities concerned, they are architecturally ambitious projects (very high rise construction projects in The Hague, Frankfurt and Dublin).



Local government authorities and real estate professionals have been working more closely together than in the past, notably in Paris and the Randstad, with a view to avoiding the errors of coercive planning incompatible with the way the private sector operates (corporates, developers, investors). In London, partnerships between the private sector and local authority groupings have been encouraged and institutionalised to prevent the drawbacks of a negotiated urban planning and development procedure that gives rise to endless recourse and review action, which paralyses the production process.

Service growth areas and urban planning

The regional planning strategies currently implemented by many cities in north-western Europe share two key ideas: first, to encourage the location of service sector growth areas close to multimodal transport/mass transit facilities; second, to ensure that office growth areas are developed coherently in terms of the overall conurbation, notably in regions where local governance is fragmented. For example, the absence of a regional authority in Dublin turned out to be an obstacle to the rapid and co-ordinated development of the entire conurbation in the early 1990s. Today, a plan drawn up by the government for the Dublin region gives local authorities guidelines on the development of service and office sites close to strategic transport facilities. In Brussels, internal administrative constraints on the functional urban region (FUR) have given rise to the inconsistent provision of transport facilities to serve business districts: the FUR features three administrative areas, each of which has drawn up its own development plan without really consulting the others. Likewise, in the Rhine-Ruhr conurbation, the absence of a regional governing authority has handicapped the international promotion of service sector real estate, which is split into several competing local markets.



The dominating positions of Paris and London

Paris and London stand out clearly from the other regions in Europe in terms of the size of their office stock, which exceeds 40 million sq. m. Their office capacity is around three times as large as that of north-western Europe's major polycentric metropolitan areas. Thus, the office space capacity of the Randstad amounts to 15 million sq. m. of office capacity, of which over a third is located in Amsterdam (6 million sq. m.). The office capacity of the Rhine-Ruhr conurbation amounts to 14.3 million sq. m. spread between Cologne, Dusseldorf, Essen and Dortmund. The other major metropolitan area of the Rhine has an office capacity of 12.5 million sq. m., mainly concentrated in Frankfurt (9.5 million sq. m.). Brussels is also a major service sector growth area, with an office capacity of over 10 million sq. m.

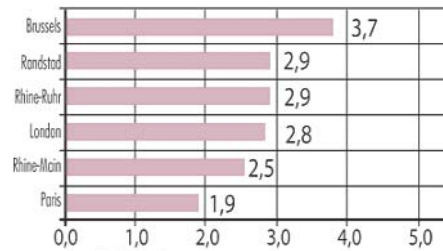
In spite of the fast pace of building conversions into service sector commercial space in Manchester and Lille (2.5 million sq. m.), these cities remain regional markets that are second to their capital city. Dublin and Edinburgh, in spite of having a smaller stock of office space (2 million sq. m.), benefit from their international reputations for being home to major political and financial institutions. The office capacity of the other conurbations with populations in excess of one million inhabitants stands at around 1.5 million sq. m. The metropolitan areas of Paris, London and Brussels feature a particularly large stock of office space relative to the size of their populations and employment markets. Such over-concentration of offices in the economic and administrative capitals of centralised countries is due to the presence of large corporations and public sector institutions, with all the support services they generate (finance, marketing, communications, etc.).

	Office stock ¹ (in sq. m.)	Ratio of office stock (sq. m.) / total employment in 1999	Ratio of office stock (in sq. m.) / population in 1999
Paris	42,500,000	8.1	3.8
London	40,900,000	6.5	3.5
Rhine-Ruhr	14,300,000	2.6	1.0
Randstad	13,300,000	4.7	2.3
Rhine-Main	12,500,000	3.8	1.9
Brussels	10,200,000	6.9	2.8
Lille	2,500,000	3.9	1.4
Dublin	2,000,000	1.3	1.3

(1) Office stock in functional urban regions in 2000

Average annual construction
1988- 1992 as % of the office stock

Source : Jones Lang LaSalle – Müller 2001

Average annual construction
1998- 2002 as % of the office stock

Source : Jones Lang LaSalle – Müller 2001

Another strong construction
cycle

Thanks to economic growth in the late 1980s, office construction increased at an unprecedented rate in most cities, especially London, Paris and Frankfurt, where the increase in the office stock was greater than the average for the other cities.

The excessive amount of purely speculative developments (with up to 70% of commencement of works pre-let), compounded by a recession from 1991, caused the vacancy rate to rise quickly to a record level (10%) by the mid-1990s.

From 1996 to 1999, the revival of economic growth and the development of the new economy led to the almost complete absorption of available office space in most

European cities. The vacancy rates fell more rapidly in the London and Dublin areas, where demand was the strongest. Lagging behind the economic cycle, office construction did not satisfy demand immediately. In 2000, the average vacancy rate in the cities of north-western Europe stood at 3% of the existing office stock. In the same year, most construction programmes were pre-let in cities such as Frankfurt (70%) and Paris (80%).

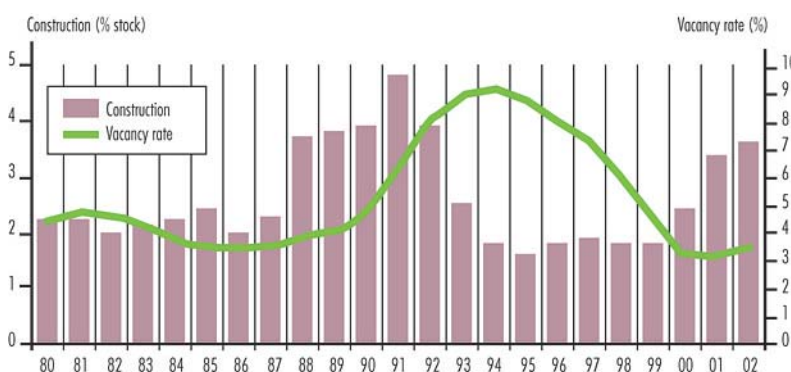
The volume of construction works commenced between 1998 and 2002 in north-western Europe was comparable to the figure for the early 1990s. Secondary markets accounted for a larger share of construction works than during the preceding cycle. Office production was particularly high in Brussels (3.7%), Dusseldorf (3.2%) and the Randstad (2.9%).

The volume of office construction has been exceptionally large in Dublin (10% of the office stock). The more moderate increases in the office stock in London, Paris and Frankfurt is due to the fact that the refurbishment of existing office space accounts for a growing share of the supply of new or renovated premises. The renewal of the office stock began more recently in Manchester and especially Brussels, where the entire central business district has been renovated.

The relatively small share of purely speculative developments has been the main difference compared with the previous construction cycle. This shows that market participants have become more cautious: investors, in particular, only commit their capital to developments that have been partly pre-let. Overall, the production market has become more transparent and rational, avoiding the excesses of speculation. So there is not much risk of oversupply, except in markets that are expanding fast, such as Dublin.

Economic and real estate
cycles

This upturn in the markets has featured greater synchronisation of property cycles in Europe's major regional markets due to the increasing convergence of Europe's service-oriented economies. In the past, office market cycles used to lag each other, with the same movements affecting the UK, French, German, etc. markets in turn. This convergence is apparent in the almost simultaneous changes in office transaction rates, which, in Paris and Central London, reached record levels in 2000, only to fall by 30% the year after.

Office Construction and Vacancy rate :
Cities in north-western Europe

Source : Jones Lang LaSalle – Müller 2001

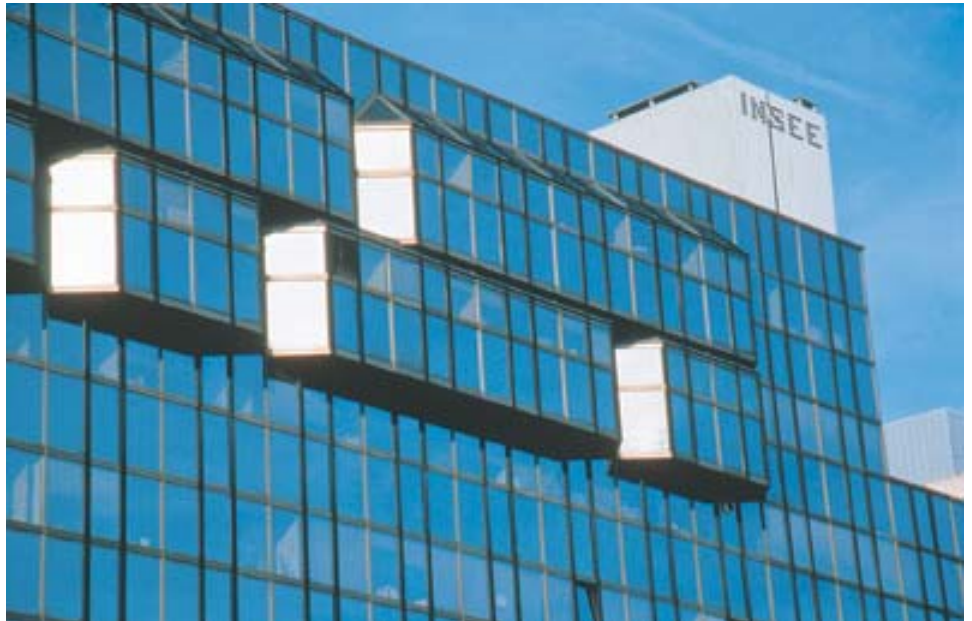
The most striking feature was the sharp rise and rapid fall across all markets in demand for office space by “new economy” companies (from the TMT or Technology, Media and Telecommunications sectors), which, in 2000, had accounted for up to 25% of office space take-up in London, Paris, Amsterdam and Dusseldorf. Similar patterns of behaviour were recorded across the cities concerned by “traditional economy” companies, such as banks and financial services. They simultaneously restructured their property portfolios due to recent mergers and internal reorganisation (relocation of back-office activity, etc.).

The adjustment recorded since 2001 (falling demand and rental values) across all markets in north-western Europe is mainly of macroeconomic origin, unlike in the previous cycle, which featured the over-supply of office space. The economic prospects underpinning demand are more favourable than in the 1990s². The Paris and London markets are the healthiest in terms of forward supply and growth outlook. Stimulated by strong demand in the ICT (Information and Communication Technology) sector (Amsterdam, Dusseldorf and, especially, Dublin), the high-growth markets are the most vulnerable to a fall in demand and to the risk of over-production.

Office occupiers are increasingly mobile

Although the increase in office space has slowed, occupier turnover has tended to speed up. In Europe, office space transactions have grown faster than the office stock. Until 1997, occupier turnover was “stimulated” by falling property prices, which enabled companies to occupy larger and better quality office space. In the late 1990s, the more competitive environment led to a wave of mergers and acquisitions and corporate restructuring.

(2) Source : CDC-Ixis



Although the increase in office space has slowed, occupier turnover has tended to speed up.

A. Mèrat/laurif

In Paris and London, where the main driver of demand has been corporate relocation, occupier turnover over the last 10 years has risen from 5% to 6%. In markets where occupier turnover has been lower, such as the Rhine-Ruhr conurbation, most office space is owner-occupied rather than tenant-occupied.

Rationalisation of office occupancy and control over property costs

For 20 years, one of the drivers of growth in available office space was the continual increase in office space occupied per employee. This was due to the relative decline in the number of administrative jobs and the correlative increase in the number of more qualified jobs requiring more work space. However, since 2000, corporate occupancy rates in London and Paris have shown a fall in the average amount of space occupied per job. This fall can be explained by two factors: first, the current high levels of rents; and second, more importantly, changes in the organisation of work (shared offices, open-plan office space, etc.) leading to lower rates of office space occupancy.

Companies are increasingly keen to cut their property costs. They favour flexible and scalable office space, which makes it easier for them to redeploy staff in line with changing economic conditions. The search for more efficient property management has led companies to become office tenants, or even to outplace or outsource all property-related services in order to concentrate their resources on their core business activities.

Office rents: UK markets are the most expensive

A comparative survey of prime office rents (for new offices in central business districts) reveals a clear-cut “league table” of office rents in major cities of north-western Europe. Changes in office rent indices over 25 years show, on the one hand, that there have been sharp cyclical fluctuations, but also, on the other hand, that cost differentials have remained stable, except in Amsterdam and Brussels, where rental markets have become more expensive.

Prime office rents (euros per sq. metre per year)

London	1,366
Paris	700
Frankfurt	570
Edinburgh	495
Dublin	495
Manchester	409
Amsterdam	363
Dusseldorf	306
Brussels	248

Source: Jones Lang LaSalle 2002

This "league table" shows a strong correlation between property prices and the size of a city. Businesses benefit from external cost savings in proportion to the size of the city in which they are located and accept to pay higher rents in large cities. However, London's status as a global financial centre and the high quality of its stock of property assets are not satisfactory explanations of the fact that office rents are twice as high in London as in Paris.

Commercial property and economic competitiveness

Surveys of multinational companies³ show that the supply of real estate is not one of the key criteria of choice when companies have to decide in which European city to locate or relocate. In fact, property comes far behind the economic environment (the strength of the economy, access to a market, etc.) and human factors (labour skills, levels of training, language, etc.). Unlike emerging markets to the south and to the east of Europe, the markets of north-western Europe's major metropolitan areas are sufficiently well structured and professionalised to be able to supply commercial property that meets the standards required by international corporations.

(3) Healey and Baker 2001

In other words, commercial real estate does not give these cities any decisive competitive advantages in their competition to attract international companies. However, the property market is obviously an indirect factor of the economic competitiveness of cities and conurbations. An efficient commercial real estate market is a prerequisite for a quick and appropriate response to the development needs of the most dynamic economic activities. Although market forces favour the influence of private sector players, institutional factors have a key part to play as well. Urban development policies can ensure that office space is located coherently in terms of transport networks, access to labour pools and major facilities. They also impact directly on the process of production of new property or the regeneration of existing property. Thus, in the Netherlands, the corollary of the policy of public control over land is high land prices and the relative scarcity of developable land. In the United Kingdom, the absence of planning results in an excessive amount of litigation, which causes paralysis. Conversely, in the Rhine-Ruhr conurbation and Paris strict planning also has its drawbacks (planning permission).

The process whereby central business districts are brought up to standard will intensify in the coming years. But this process will meet with resistance due to the rigidity of urban planning rules (building density, height, etc.), as in Brussels, or constraints arising from the protection of a historic city centre, as in Edinburgh, which limits the scope for expanding central business districts. The attractiveness of a market also depends on the efforts made by urban development players to give all participants a clear vision of their urban plan or to make their market more transparent in the eyes of property market professionals. Finally, the public authorities have numerous means of action to influence markets, through taxation and regulations.

Stadttor is one of the most recent office construction in Dusseldorf.

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Office Market Overviews

By Jeremy Kelly, Jones Lang LaSalle

Brussels ▼



- Brussels is the administrative centre of Europe. As well as the EU itself, a number of other international organisations are headquartered in Brussels, which has stimulated strong growth in support services. Over two-thirds of the office stock is in the city centre, with Quartier Leopold forming the prime district (particularly for EU related activities). The Decentralised and Peripheral 'areas are attracting increasing activity, particularly from Technology/Media/Telecoms companies (TMTs), seeking high-quality space suitable for modern usage.
- Take-up in Brussels has been very strong over recent years, underpinned by demand from EU organisations. More recently demand has come from companies in the Technology, Media and Telecom sectors. Over one-third of all leasing transactions in 2000 has been attributable to TMT companies. In 2001, office take-up (540 000 m²) suffered from the bursting of the high-tech bubble, annual take-up was 25% down the previous year. Although office demand slowed, vacancy levels decreased in 2001 and rents still rose.
- Whilst take-up has been strong, so has new construction, focused on the Leopold and Decentralised districts. As result the vacancy rate has been consistently above 6% for several years, which has dampened rental growth. Since the bottom of the market in 1993-94, prime rents have risen very gradually, and are currently around 10% above the 1994 level.

Dusseldorf

- Dusseldorf is the administrative and financial centre of the Ruhrgebiet. The office market has a diverse occupational base – it is the headquarters of several major companies; it has a large advertising sector; it has the second largest financial sector after Frankfurt, and more recently, the city has seen strong growth in "new economy" sectors.
- The Dusseldorf office market appears to be recovering from the recession of the mid-1990s more slowly than most other German cities. Whilst demand has recently been strong (1999 was a record year), this has been matched by new completions, and vacancy rates have remained relatively high. Rents have remained steady since 1995, about 25% below the peak of 1991-92.
- The vacancy rate has been broadly stable over the past two years (at around 5-6%), down from the peak in 1998 of 8.2%. Considerable demand for high-quality, modern space in the Hafen/City-Sud area have resulted in rents in this sub-market now matching the traditional prime district (Bankenviertel).
- Dusseldorf was one of the only Western European markets to have recorded an increase in leasing activity in 2001. But in 2002 declining demand (400 000m²) which will meet growing completion volumes brings about risks, though these are limited by the variety of economic sectors.



Frankfurt

- Frankfurt is the principal urban centre for the Rhine-Main region (incorporating Wiesbaden and Mainz). The city is the leading financial centre of the Euro-zone, and the office market is dominated by banking and financial services, which in turn is stimulating growth in other support activities. The focus of demand is on the Bankenviertel (where the prime rent is achieved), although some major occupiers have re-located to other parts of the city centre as a result of a lack of available space in Bankenviertel.
- Historically, the Frankfurt office market has tended to be more cyclical than most other German markets.

- Prime rents last peaked in 1991, fell sharply between 1992-94, and subsequently stagnated between 1995-97, during which vacancy rates rose to over 9%.
- Since 1998 the market has started to recover, at first slowly, but over the past year the market has accelerated, and Frankfurt is now Germany's most buoyant market. The current strength of the Frankfurt market is underpinned by very strong demand from financial. The level of new completions has been low during recent years. The vacancy rate is now only 6%. Strong take-up and low supply pushed up prime rents, which have reached their peak in the middle of 2001. Total take-up volume in 2001 (610 000m²) was down by only 15% on 2000.

Dublin ▼



- Dublin is the focal point of the Irish property market. The Irish economy has experienced sustained, high levels of economic growth and attracted a high level of foreign direct investment by major international companies. This has had a positive impact on the Dublin office market, which has witnessed a significant structural shift in market characteristics during the 1990s. The total office stock in Dublin has more than doubled over the past decade, whilst the expansion of the IT sector has resulted in strong growth in edge-of-town development.
- Up until the mid-1990s, demand was subdued (with take-up averaging around 60,000 m² 1990-94), vacancy rates were persistently high (averaging 10%), and rents were static. After 1995 take-up levels more than doubled with strong demand from IT software and international financial groups. Annual average take-up of 144,000 m² was recorded during the period 1995-99, representing a significant 7.5% of stock pa. Vacancy rates have gradually fallen to just 2% in 2000, despite high levels of construction.
- Since the mid-1990s, prime rents have increased by over 150%, and over the past year alone have risen by nearly 60%. In a European context, prime rents in Dublin are now the third highest, behind only London and Paris.



- While the market was not as strong in 2001 as the previous year, take up of office space during 2001 was still a healthy 176,500 sq.m. Within the city center, most prime space was taken up, and there continues to be relatively little space available in the much sought-after city center. In early 2001, some 286,000 sq. m. of office space is under construction.

Paris

- Paris has the largest office market in Europe, with a stock of 42.5 million m² within the Ile-de-France Region. The prime market is located in the "Golden Triangle" area (focused on the 8th Arrondissement of the CBD). La Defense, to the west of Paris city centre, is the most important decentralised office location.
- The office occupier base is very diverse, reflecting the city's status as France's primary administrative, commercial and manufacturing centre, with a high concentration of corporate headquarters. Banking, insurance, legal and business services have a strong presence in the CBD, and more recently, 'new economy' companies (including computer and internet-related, telecommunications and IT) have grown in importance.
- The peak of the last rental cycle in Paris was in 1990. Rents subsequently fell sharply in the early 1990s, with an increase in new supply coinciding with a period of weak demand. By 1994 the regional vacancy rate had risen to a record 9.5%. The market remained subdued for much of the mid 1990s – during this period new construction was low, but demand slowly started to recover and over-supply was gradually absorbed.
- In 1998/99, market recovery started to accelerate, and by early 2000 Paris had entered a strong growth phase. Take-up was at record levels in 2000, underpinned by a strong French economy. The vacancy rate has fallen to 3.4%, which is the lowest for a decade. As a result, prime rents rose sharply; increasing at over 20% pa.



- In 2001, the Paris market suffered a sharp decline in take-up (-30% on the record levels of 2000). Available office space in the Paris region in 2001 increased in proportion to the fall in demand, showing a 28% rise from the previous year's total. Nevertheless, the vacancy rate remains low (4.7% mid 2002) and is not expected to rise disproportionately in the coming years.

Amsterdam



- Amsterdam is the Netherlands' largest office market. It has a broad occupational base, including finance, insurance, IT, telecommunications, new media and logistics. The stock is relatively decentralised, and (unlike most other major European cities) the prime office pitch is not located in the city centre, but in the decentralised Amsterdam South (Zuid) area, which has a favourable combination of good access and high quality office space.
- Historically Amsterdam has been characterised by high vacancy rates, moderate rental growth, with occupational costs well below the European average. The market has also been less cyclical than many other European markets.
- However since the mid-1990s, the market appears to have undergone a structural change that has coincided with an extended period of growth in the Dutch economy. Take-up has also run at record levels in 2000 (400 000 m²) despite supply constraints.
- Since mid 2001, take-up declined strongly due to uncertain economic conditions. Companies are reluctant in taking-up new office space. The economic downturn fail not to affect the internationally sensitive Amsterdam region. U.S. companies, in particular postponed their accommodation decision. The vacancy rate amounts to 6.5%. For the first time since 1992, the prime rent in Amsterdam has fallen in 2002 (-5%).
- Prime rents have not exhibited a cyclical growth trend typical of some other European cities. Rather, rents have grown steadily, and at present they are at an historic high, 20% above the 1990 level.

London

- London is the pre-eminent office location in the UK, reflecting its status as one of the world's most important supra-national commercial centres. The stock is predominantly concentrated in the CBD, which is divided into the West End, City and Docklands areas. A wide range of business services-based companies operate in London: corporates and business services, and more recently new media companies, favour the West End, while financial institutions tend to prefer the City area, although Docklands, an emerging, fringe location has attracted considerable interest from these companies. Top rents which are the highest in Europe.
- Historically, London has been a highly cyclical market, with rental peaks in 1974, 1982 and 1988/9, usually followed by market recession. For example, during the last cycle rental values virtually halved between 1989 and 1993. Since 1993, the market has slowly recovered, with rents increasing in a stepped fashion. At the same time, the vacancy rate has gradually fallen from over 15% (in 1992) to 5% currently. Part of the reason for this trend is the lack of new supply brought onto the market after the recession of the 1990s, especially in the core West End area. Average annual total completions between 1993-99 were only 234,000 m², compared to 563,000 m² between 1981-92 in Central London.
- In 2000, very strong demand in Central London has forced the pace of rental growth. The prime rent in the West End area has risen were back in 2000 at the levels of the last peak. In 2001 satisfied demand reached 1,54 million m², almost 30% below the record level of 2.1 million m² set in 2000. Despite this 2001's total remains well above the long term annual average. Availability in central London now stands at 8.5% of stock, a level last seen in 1996 and still well below the historic high of 18% in 1992. Rental levels are remaining relatively steady. The supply of prime new office accommodation will also fall off markedly through 2002. The relationship between supply and demand for prime new office space is expected to remain relatively healthy through 2002 with speculative development not enough to supply the totality of demand.



Scientific and Technological Capacities of the European Regions

Vincent Gollain

IAURIF¹

In an increasingly knowledge-based economy, scientific and technological capacities play a growing role in the competitiveness of companies, countries and regions. In order to better assess these capacities and their relative importance for the major European metropolises, a chapter of the Gemaca II study was dedicated to the global and individual performances of thirteen Functional Urban Regions (FURs) in Northwest Europe in this particular field. Despite the limitations implied by using only two indicators (the number of scientific articles published and the number of patents registered), the study successfully presents an overview of the fields of specialisation of a number of European regions. The study's principal conclusions are outlined in this paper².

(1) Director of Strategy and Analysis, Department, Regional Development Agency, Paris-Ile-de-France.

(2) The complete report is available from the IAURIF in both English and French (or at www.iaurif.org).

The Scientific Performances of the European regions

The comparative scientific position of the European regions has been evaluated on the basis of the number of scientific publications listed by the French Observatory of Science and Techniques (OST)³ using the Science Citation Index (See Methodological Appendix).

The Scientific Performances of the Major European Regions

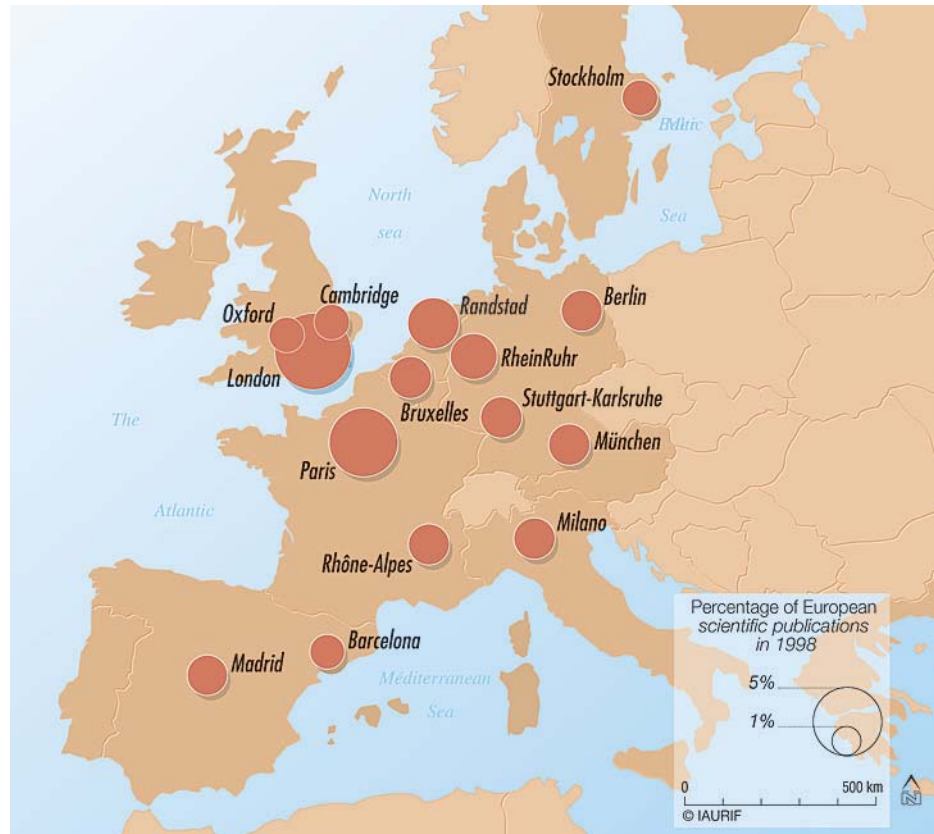
The principal element revealed on the opposite is that science in Europe is based on a few large, multi-disciplinary scientific regions and a network of small and mid-sized centres: over a third of Europe's scientific potential (36.8%) is concentrated in 15 regions⁴. At the same time, it is apparent that there are a fairly large number of small and mid-sized scientific centres, shown by the fact that at the lower end of scientific performance scale, the bottom third of the European Union's regions produce less than 0.5% of the continent's scientific publications. It should be noted that the existence of the small and mid-sized scientific centres is linked to the fact that universities and research centres are spread across the territories of all European countries.

The economic region of London, which produces 6.4% of Europe's scientific publications, ranks number one among Europe's 15 leading regions. The economic region of Paris, with 5.9% of the publications, ranks second, followed by Randstad-Holland (3.5 %), Rhine-Ruhr (2.6 %), the bipolar region of Stuttgart-Karlsruhe (2 %) and Munich (1.8 %).

(3) <http://www.obs-ost.fr>

(4) The 15 leading European regions were chosen on the basis of a classification of European regions developed via the NUTS 2 administrative division and on an examination of the regional classification based on the Gemaca division.

The Top 15 Scientific Regions



Source : ISI data (SCI, COMPUMATH) processed by OST and Iaurif, 2001

The table below shows that the scientific activities of Europe's major urban regions are multi-disciplinary. These regions do not seem to have concentrated only one particular scientific discipline, as it is the case in the field of technology. London, Paris, Randstad-Holland and Rhine-Ruhr, the leading European economic regions, are also very well ranked in most scientific

disciplines. Although London is ranked first for the number of publications in fundamental biology, applied biology and ecology, medical research and engineering, Paris is the leader in the other four disciplines. London's leading position in life sciences is all the more significant in that these disciplines are growing rapidly.

The Leading 5 Economic Regions in Europe by Discipline (1998)⁵

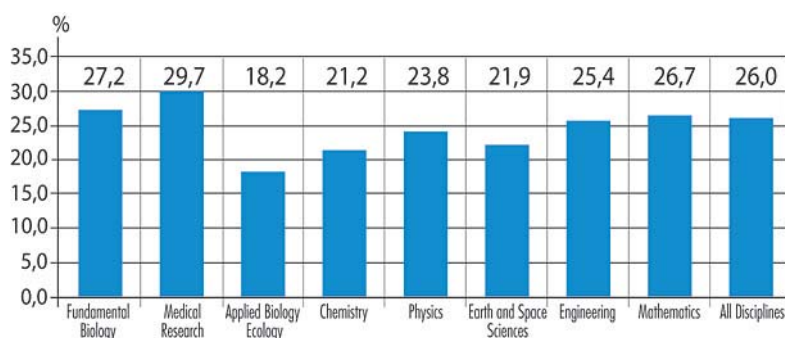
Rank	1	2	3	4	5
Discipline					
Fundamental Biology	London*	Paris*	Randstad*	Rhine-Ruhr*	Stuttgart
Medical Research				Milan	Rhine-Ruhr*
Applied Biology Ecology				Madrid	Munich
Engineering				Rhine-Ruhr*	Stuttgart
Chemistry	Paris*	Londres*	Rhine-Ruhr*	Stuttgart	Rhône-Alpes
Physics		RhineRuhr*	Stuttgart	Rhône-Alpes	London* / Berlin
Earth and Space Sciences		Randstad*	Londres*	Munich	Cambridge
Mathematics		Rhine-Ruhr*	Londres*	Randstad*	Rhône-Alpes
All disciplines	London*	Paris*	Randstad*	Rhine-Ruhr*	Stuttgart

* Economic regions as defined by Gemaca.

Source: INPI and OEB data, OST and IAU-RIF statistical analyses, 2001

(5) Classification based on the percentage of scientific publications produced within the region. Stuttgart, Munich and Milan represent, respectively the region of Stuttgart-Karlsruhe, Upper Bavaria and Lombardy (NUTS - 2 scale).

Share of European FURs in scientific publications in 1998



© ISI data (SCI, COMPUNATH) processed by OST and Iaurif, 2001

The Scientific Performances of the Functional Urban Regions in Northwest Europe

Northwest European Functional Urban Regions (FURs), with over one million inhabitants, account for 17.2% of the population, 17.6% of the jobs and 28.6% of the European Union's GDP.

These FURs also produce 26% of the European Union's scientific publications. This proportion becomes even higher in the fields of medical research (29.7%), fundamental biology (27.2%), and mathematics (26.7%). On the other hand, it is considerably lower in the fields of applied biology and ecology (18.2%), chemistry (21.2%) and Earth and Space Sciences (21.9%).

The scientific performance of the FURs can be partially explained by the presence amongst them of five of Europe's most productive economic regions: London, Paris, Randstad-Holland, Rhine-Ruhr and Brussels.

Between 1990 and 1998, a relative decline was observed in the performance of Northwest Europe's Functional Urban Regions (FURs). The percentage of articles published in the 13 regions fell from 31.4% in 1990 to 26% in 1998. The reason for this decline is not to be found in any reduction in the number of articles published in the FURs. It is rather due to a substantial increase in the number of articles produced in the rest of Europe, in countries like Spain and Italy, as well as in regions such as Bavaria, Saxony, Toulouse, Nice and northern Scotland.

The economic Region of Paris ranks second of scientific publications, after the economic Region of London.

V. Gollain/Iaurif



The Technological Performances of the European Regions

The technological performances of the European regions were evaluated on the basis of the number of European patents listed by the French Observatory of Science and Techniques (OST) using data from the European Patents Observatory (OEB).

The major Innovative Regions in Europe

An analysis of the level of innovation in the regions based on the number of patents registered confirms the geographical differences observed above: Europe's capacity for scientific innovation is highly centralised and 45% of European patents were produced in just 15 of the 211 regions defined by Eurostat (NUTS 2 scale). Eight of these 15 regions are German, two are French, and two are Dutch. Lastly, it should be noted that the 15 regions are all to be found north of a line running between northern Italy (Lombardy) and the French region of Rhône-Alpes.

In terms of gross results, the Paris FUR is the continent's leading technological region with 6.2% of European patents in 1998. It is very slightly ahead of Stuttgart-Karlsruhe and the Rhine-Ruhr region, each one accounting for 6.1% of Europe's patents in that year. The next two regions – Munich and Rhine-Main – are also German. Each produced around 4% of Europe's patents in 1998.

Of course, all the different European regions don't have the same technological profile. A more detailed analysis of the technological content of the preceding classification of Europe's regions shows that a number of specialist fields emerge, with the Rhine-Ruhr, Paris, Stuttgart and Munich regions showing each time a very good ranking.



The 15 Leading Technological Regions

Technological Performance of the Functional Urban Regions of Northwest Europe

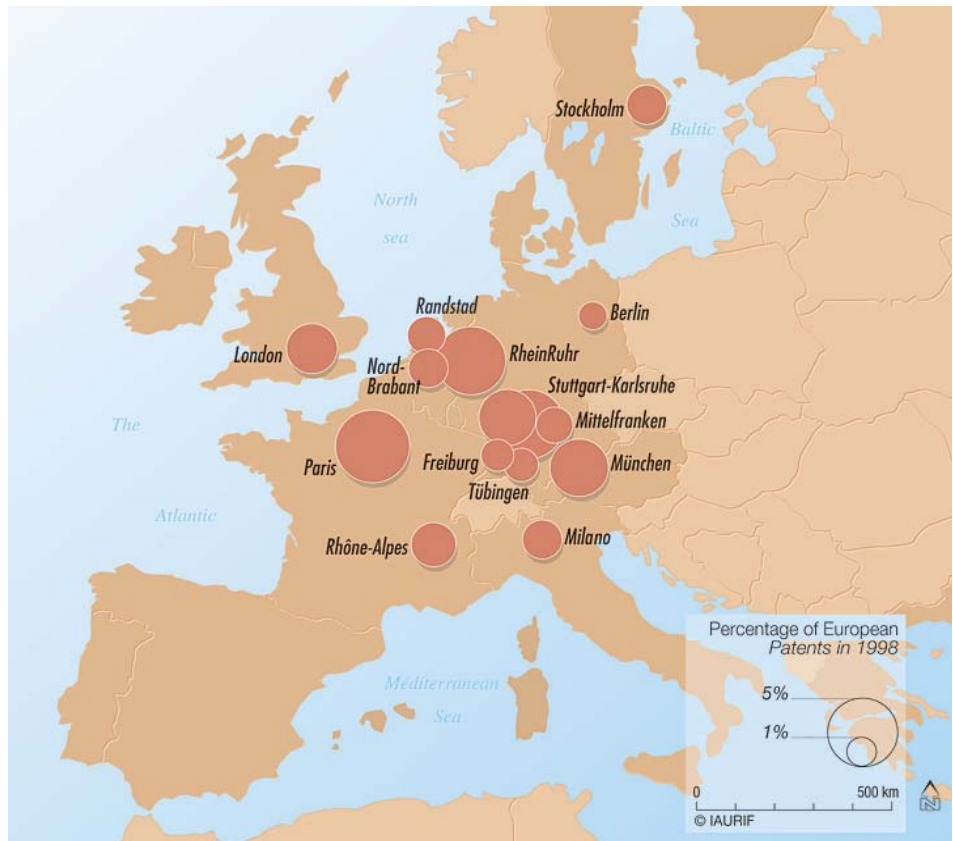
The Functional Urban Regions of Northwest Europe account for 23.4% of the total patents registered within the European Union. This percentage is even higher in the fields of fine chemistry-pharmaceuticals (34.4%) and “techniques-basic chemistry-metallurgy” (26.3%). On the other hand, it is markedly lower for electricity-electronics (19.2%), “household consumption-civil engineering” (19.7%), and “machinery-mechanics-transport” (21.9%).

Between 1990 and 1998, the relative influence of the Northwest Europe's 13 economic regions diminished. Indeed, the percentage of European patents registered in the FURs dropped from 24.8 % to 23.4 %, or, in other words, by 1.4 points. This evolution is explained by a lower growth rate for patents registered in the major urban centres of Northwest Europe than in the rest of the European Union. In fact, the technological performances of the Scandinavian countries and of the German regions of Stuttgart and Munich improved substantially.

Contrasting performance levels in the various regions

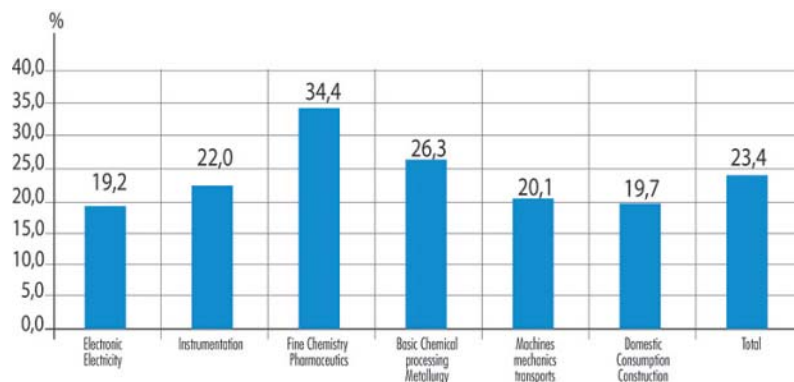
This study actually points out a phenomenon of polarisation of scientific and technological activities in Europe's main regions and in a number of specialised metropolises.

In this context the scientific and technological performances of the Functional Urban Regions studied are quite remarkable: the 13 regions represent, respectively, 26% and 23% of Europe's scientific and technological production, as opposed to only 17.6% of its jobs.



Source : ISI data (SCI, COMPUMATH) processed by OST and Iaurif, 2001

Share of the NW European FURs in European patents (1998)



Source: INPI and OEB data, OST and IAURIF statistical analyses, 2001

The 5 Leading European Regions by Technological Field (1998)⁶

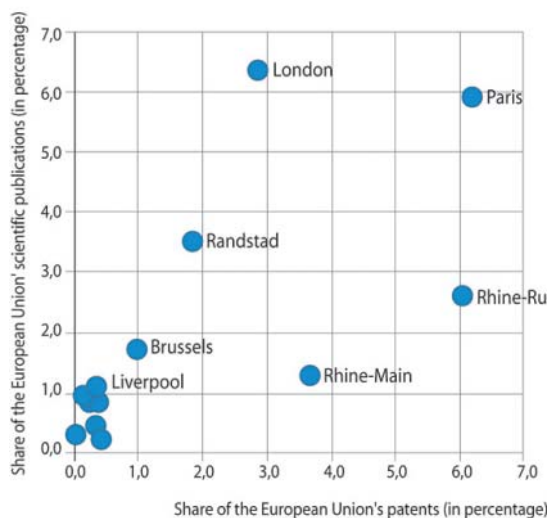
Rank	Chemistry Pharmaceuticals	Electronics Electricity	Instrumentation	Machines Mechanics	Household Civil Engin	Industrial Processes
1	Rhine-Ruhr*	Paris*		Stuttgart		Rhine-Ruhr*
2	Paris*	Munich	Stuttgart	Rhine-Ruhr*		Stuttgart
3	Rhine-Main*	Noord-Brabant	Munich	Paris*		Paris *
4	London*	Stuttgart	London*	Rhine-Main*	Rhône-Alpes	Rhine-Main*
5	Milan	Stockholm	Rhine-Ruhr*	Munich		Munich

Source: INPI and OEB data, OST and IAURIF statistical analyses, 2001

* Fonctionnal European Region defined according to Gemaca criteria ; «Stuttgart» refers to Stuttgart-Karlsruhe.

(6) Classification based on the percentage of European patents registered in the region.

The scientific and technological Performances of the NW European regions in 1998



Source: INPI and OEB data, OST and Iaurif statistical analyses, 2001

Nonetheless, the regions' individual performances varied considerably with five regions being particularly dominant. The economic region of Paris leads in both the scientific and technological categories. London and Rhine-Ruhr come next, with excellent scientific performances from the British capital and technological ones from the German region. They are followed by Randstad-Holland and Rhine-Main, with Randstad ahead of Rhine-Main in terms of scientific performance, but behind it in technological performance.

Between 1990 and 1998, the Functional Urban Regions of Northwest Europe underwent a fairly marked relative decline in terms of science and a more modest one in terms of technology. This phenomenon can be explained by the increasing dissemination of European science among a growing number of poles of excellence, and the improved performance of southern Europe, Finland, Ireland, and certain Länders of the former East Germany. In terms of technology, the Scandinavian countries have taken large strides forward to the detriment of the strongest regions with the exception of Stuttgart and more recently of Munich.

Methodological Appendix

While numerous indicators can be used to give a relatively accurate view of the technological and scientific capacities of Europe's states, the same cannot be said for its regions, in which the situation varies depending on the country considered.

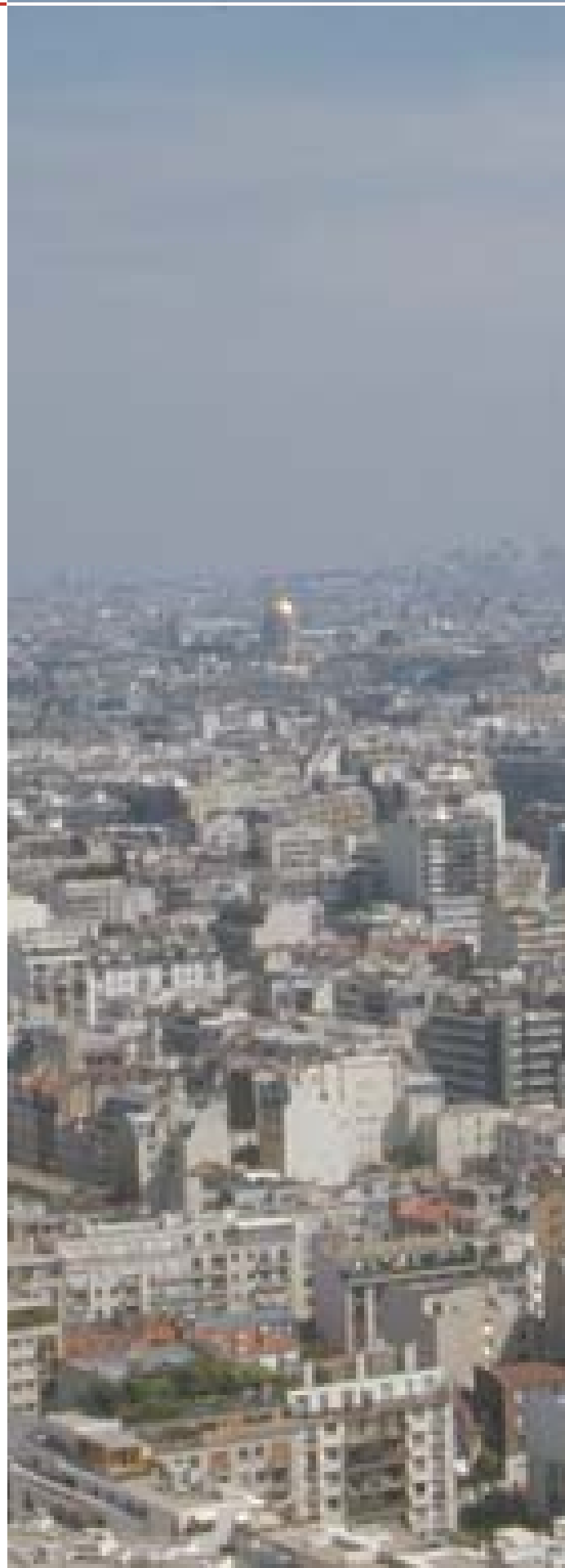
It was not possible to base our comparative approach on the means available to various research programs (internal research spending, personnel), as statistics relative to the FURs were not available.

The approach employed here is based on two result indicators:

- in order to measure scientific production, we used statistics concerning publications furnished by the French Observatory of Science and Techniques (OST). The OST publications analysis, based on two Institute of Scientific Information (USA) databases, covers all the scientific disciplines with the exception of the human and social sciences.
- the evaluation of technological dynamism was based on the number of European patents registered in Europe. Statistics concerning European patents based on INPI and OEB data and published by the OST were used.

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Regional Governance in Functional Urban Regions

Reintroduction of an old question

Wolfgang Knapp

ILS

Over the last 20 years, there has been a significant shift in public policy action "from government to governance"¹. Government is reminiscent of a period of certainty, when public policy action was generally led by a single centralising agent, usually the state or central government. Public policy action has changed considerably and the concept of governance is used to describe this change. The concept is used here in a dual sense: on the one hand, it expresses the emergence of local power, less centred on the state, increasingly pluralistic, and which includes other agents, notably economic; and, on the other hand, it refers to new forms of public policy action: contract-driven management, co-operation, negotiation, partnerships etc.

(1) The expression coined by P. Bailey (1993).

The question of the government of large urban areas has once again been placed on the agenda of European countries by the reintroduction, since the end of the 1980s, of numerous experiments in the constitution of metropolitan governments. It would seem, however, that the matter needs a different approach to that of the early 1970s, that other boom period for inter-municipal co-operation. The current re-structuration of the national and the European urban systems and especially the global and metropolitan regions' economic role and development present the importance of 'appropriate' institutional and policy-making frameworks for effective, 'joined up' government bringing together the interests of various city-regional stakeholders.

Moreover, economic and social differentiation during the last decades had also revealed severe deficits in central state performance and problem solving capacities. The question came up whether more decentralised policy-making by self-organised negotiation and bargaining produce 'better' results or should by-pass traditional hierarchical modes of steering. We can thus recognise as major features in this transition from a traditional approach to questions of territorial government towards the notion of governance:

- the broadening of the field of actors and organisational forms involved in the development and implementation of policies,
- the broadening of the field of relations between policy areas pertaining to territorial management, and
- the narrowing or changing role of governmental actors and the broadening of opportunities and areas for informal involvement.

Organising capacity' of urban-regions

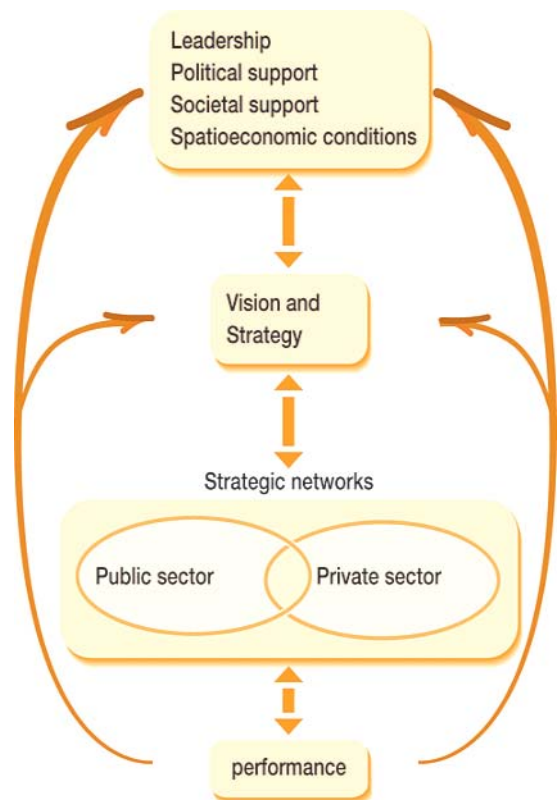
Concepts like the 'institutional capacity' (P. Healy) or the 'organising capacity' (L. van den Berg) are concerned with regional governance initiatives which aim to create new connections, reconfiguring the policy communities which cluster around sectoral programmes and/or recomposing the relations between state, local, the economic sphere and civil society. Following van den Berg, 'organising capacity' can be defined as the capacity to involve all relevant stakeholders in order to develop collectively new ideas and policies, which support a sustainable development in metropolitan regions.

Seven pillars, which together make up a region's organising capacity, are distinguished:

- 1 The structure of the formal institutional framework and the role of the various public actors within this framework.
- 2 Strategic networks among public actors, between public and private actors, or among private actors as a means to cope with the specific problems of functional urban regions.
- 3 Leadership from keypersons and/or organisations to utilise the potential of networks and to direct the efforts of the parties involved.
- 4 Spatio-economic conditions may 'bind' actors together and thus be an important incentive to collaborate (however, the opposite effect is also possible).
- 5 A vision of city-regional development, producing strategies and concrete objectives.

6 Political (and financial) support to bring about positive collaboration at the local level.

7 Societal support from those directly involved or interested, notably the regional population and specific market parties.

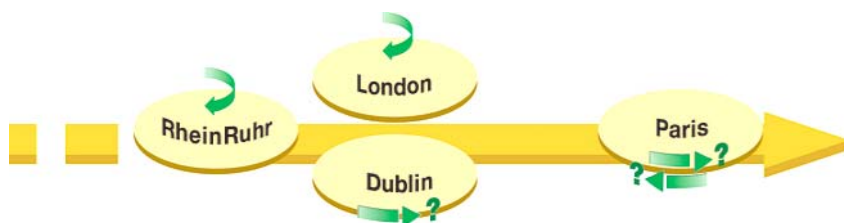


How all these pillars of organising capacity will develop remains to be seen, but it should be clear that no single approach is appropriate for all city-regions and situations. More city-regional co-operation and co-ordination is embedded in specific contexts, in particular in different political-administrative structures on the national scale (more centralized states like France, UK and Ireland versus federal-states like Germany with strong local self-government), in distinctive territorial structures (monocentric city-regions or polycentric regions with a dominant core city versus inter-urban polycentric configurations without a clear leading city such as RheinRuhr), and in specific actor and power constellations, structures of interest and potential for compromise under the given circumstances.

The 'Functional Urban Region' scale

Spatio-economic scale enlargement makes the functional urban-region a logical basis for present-day urban policy. Efficient guidance – and management structures strengthen the competitive metropolitan position in an international context. The scopes of intra-regional co-operation, internal co-ordination and efficiency of administration and a region's uniform outward presentation of itself become important locational advantages.

On the hard way to city-regional organising capacities



However, functional urban regions must be understood as a dynamic socio-economic interrelationship or as a hybrid system of economic and socio-cultural practices (which can be perceived in territorial terms), and as a context of activities based on institutional and spatial proximity. Such functional regions with unstable boundaries (that change with changing social practices), normally do not coincide with the existing territorial administrative – and steering structures (typically fragmented among a range of levels and agencies).

Endeavours to put the urban-regional action level in the foreground are thus faced with serious obstacles and resistance. The pivotal problem is that to develop political-administrative structures as it were territorial authorities and create efficient guidance-, management- and marketing structures also in cases of a discrepancy of the existing administrative and steering structures and the actual (and potential) functional urban-region scale.

On the hard way to city-regional organising capacities

Any reflection on contemporary efforts at building government and governance capacity at the city-regional scale suggests that the most do not achieve all the tasks which were pointed out in concepts like the 'organising capacity' or the 'institutional capacity'. No does capacity-building effort flow in a linear way from mobilisation, to institutional design and routinisation. That is so also in the studied FURs even though in different degrees and embedded in specific contexts. It is therefore not easy to characterise the current situation.

Regarding the (never finished) process of the development or improvement of city-regional government and governance, perhaps one can say that on this way RheinRuhr is only just a 'beginner', Paris is in an advanced position and London and Dublin are somewhere in between on the road.



Moreover, we can say that RheinRuhr and London (after the new regionalism of the late 1990s) not make any headway at present, Dublin is looking for new institutional arrangements and the current situation in Paris can be characterised as an unstable system with opposite possibilities for development.

European Metropolitan Region RheinRuhr: a 'designer region' with some regional associationalism – and a regional future as a complex combination of multiple local futures?

Similar to other urban-regions, the administrative and institutional landscape in RheinRuhr can be described as an overlapping and juxtaposition of several authorities, institutions and organisations. However, unlike to many other urban-regions, questions of regional government and governance aren't placed on the political agenda. The Land government only hope for more city networking in the region. Local co-operation is limited not to harm local autonomy and encroaching as little as possible upon local interests. Regional stakeholders like development agencies, (sub-)regional offices or district administrations are also only focussed on developing their 'own places' of responsibility.

On the other side, recent regionalisations of territorial policy making (especially Regional Development Conferences and the specific strategic planning process of the former International Building Exhibition (IBA Emscher Park)) in the Ruhr has been steps towards more (sub-)regional behaviour.



Studies carried out to monitor the processes of regionalizing structural policy and of the IBA emphasizes that one of the main effects of these policies lies in so-called process benefits. These include improvement of the co-operative atmosphere, strengthening the regional identification of stakeholders, intensifying contacts between parties active on the regional stage, establishing co-operative structures (working groups, regional conferences, etc.) developing co-operative procedures (consultations, discussion procedures, co-ordination procedures, etc.), building a higher degree of consensus, mobilizing policies at the regional level, etc. However, such a stimulation of co-operation and consensus-building can only be successful in the long term if co-operation is continued and positive and negative incentives (of a financial or other nature) can stimulate and rationalize more co-operativeness. An primary object for further research should therefore be with what incentives the necessary co-operativeness can be achieved.

The regionalization policies has been an opportunity to build up new (sub-)regional organizations such as the Emscher-Lippe Agency, the Development Agency Eastern Ruhrgebiet Ltd or the Regional Office Bergisches City-Triangle that extend beyond the immediate task at Land and represent a further (real) process benefit.

In European Metropolitan Region RhinRuhr, "soft" forms of co-operation must be complemented in the long term by innovations in the sector of legally binding commitments and by the establishment of regional (quasi) territorial authorities.

D.Riou/laurif

However, the idea of RheinRuhr as a 'multi-regionalized space' or as a territory set up by individual co-operation areas and network structures requires at the end some kind of co-ordinator and moderator and new practices of regional management. Unfortunately, the proposal of a new (voluntary and open to all territorial authorities) agency RheinRuhr (instead of the existing Ruhr District Association of Communities (KVR)) wasn't realized. It should be established not only to lobby for regional representation and to build strategic alliances in a more globalized world, but also to organize flexible and limited (in time) co-operation in different fields (interlocal co-ordination and regional moderation) within the city-region.

To this day, RheinRuhr is far away to be established in the spatial structure and social consciousness of society and as a 'territorial unit' hardly ready to be discursively and materially constituted for all manner of means such as place marketing or regional development policy. One important consequence of this condition is that there is a lack of regional organising capacity.

The up to now narrow endeavours of the Land government to create a 'designer European Metropolitan Region RheinRuhr' in order to establish an institutional and political practice and thus to produce a territorial social practice must therefore inclu-

de more than the upgrading of the region's infrastructural facilities or the improvement of inter-continental accessibility and intra-regional mobility and the hope of more intermunicipal co-operation and urban networking. Besides such measures and instead of the further adoption of a wait-and-see policy, the interrelation between the enhancing of complete and not economic one-sided regional discourses, the shaping power of organising capacities and regional (self-) governance and the formulation of strategic issues as points of departure for concrete measures and their implementation should be regarded as the central and fundamental framework of tasks in the future. The experiences of the IBA Emscher Park planning process and the idea of an agency RheinRuhr should be taken up. 'Soft' forms of co-operation must be complemented in the long term by innovations in the sector of legally binding commitments and by the establishment of regional (quasi) territorial authorities. All that must be first and foremost politically wanted and pushed.

As the three regions covering the wider London area, the Greater London includes a Regional Chamber and a Regional Development Agency (RDA) with, moreover, the Greater London Authority (GLA) with an elected Mayor.

Greater London Authority,
Government Office for London

**London Region:
no true regionalisation, but
a number of new regional
institutions increasing the
complexity of governance
with potential for
intra-regional competition
and a new regional
territoriality resulting in
new boundaries dissecting
the South-East region and
separating Greater London
from its hinterland**

Regarding the London region, the new regional territoriality resulted in new boundaries and now three sub-regions replacing the former South East dissecting the whole London Region and separating London (as one sub-region) from its partitioned hinterland. In state government accounts, economic failure in the 'regions' is seriously undermining the ability of the nation to compete in global markets. Regional Development Agencies (RDAs) – 'powerhouses for regional regeneration' – are about reversing this problem. This explanation, however, seems misleading if it implies a necessary relationship between economic dynamism and the regional scale without, first, examining the complex connections between socio-economic, political and cultural factors that come together to produce 'regions'. No attempt was made to define the geographical basis of regions, issues of regional identity etc. Policymakers are, in effect, treating regional spaces as given, and not unpacking the multifarious construction of territorially defined collective entities such as regions.



RDAs have been given an overarching strategic function: to develop a Regional Economic Strategy (RES) and to formulate an action plan for its implementation. Each RDA has produced a RES to sharpen competitiveness, show local awareness and discretion, and highlight the distinctive contributions they can make to economic development.

Central government continues to have an important stake in the governance of the London Region expressed through regional planning guidance to the new regions surrounding London, and to approval of the London Spatial Development Strategy for Greater London. Government institutions include a Minister for London and three regional government offices responsible for the tripartited South East Region. In addition, the traditional rivalry between central and local government in London is maintained. Political-institutional rivalry exists also across all three regions of the hinterland, with a number of sub-regional divisions, based on single-purpose bodies/agencies.

The fragmentation of responsibilities throws up co-operation and co-ordination problems. Institutional solutions such as the London - and the new RDAs in the hinterland and the Greater London Authority have been tried. In Greater London, the leadership role of the mayor may go some way towards establishing required co-ordination in addressing problems. But what has not been tried has been a true regionalisation recognising the FUR. Regarding informal responses, there seem to be few political or financial incentives to co-operate. While the reforms have improved the co-ordination position within the core, they have created co-operation and co-ordination problems for the wider region. They may effectively undermine existing non-formalised co-operation which were born out of the absence of formal mechanisms of strategic or regional government such as the

South East Region Planning Advisory Body (SERPLAN) which gave way to the (sub) Regional Planning Boards.

The new GLA has the same outer boundary as the 1965 GLC, but the new London Spatial Development Strategy (SDS) that will include all aspects of development, economic and social as well as physical, which have a spatial dimension, will need to acknowledge the major issues of interaction which exist between Greater London and its wider hinterland and also the direct spatial linkages, including for instance the Thames Gateway corridor or the 'Western Wedge' extending from West London and Heathrow Airport to rapidly-growing areas further west. Starting from a common understanding of London's wider hinterland and the relationships with it, therefore attention has been given to a new joint arrangement between the London Mayor and Assembly, and the Regional Chambers and RDAs for both the South-East and the East. A joint forum is being established, which will examine this range of interactions and thereby inform the SDS, and also future Government-issued regional planning Guidance prepared for this adjoining regions.

At present however, central government's focus on competitive bidding for inward investment and competitive marketing (as a major rationale for regionalisation in England) favours non co-operation. There is no concordat between regions to prevent the development of inter-regional competition. If RDAs take full advantage of this regulatory gap, there is a future potential for increased regional inequalities and a race to the bottom. RDAs are certainly being squeezed between the demands of the state and the expectations of localities. With three regions covering the wider London area, it is thus likely that London will be divided into corresponding spheres of interest, challenging central government to act as mediator and facilitator of regional co-operation.

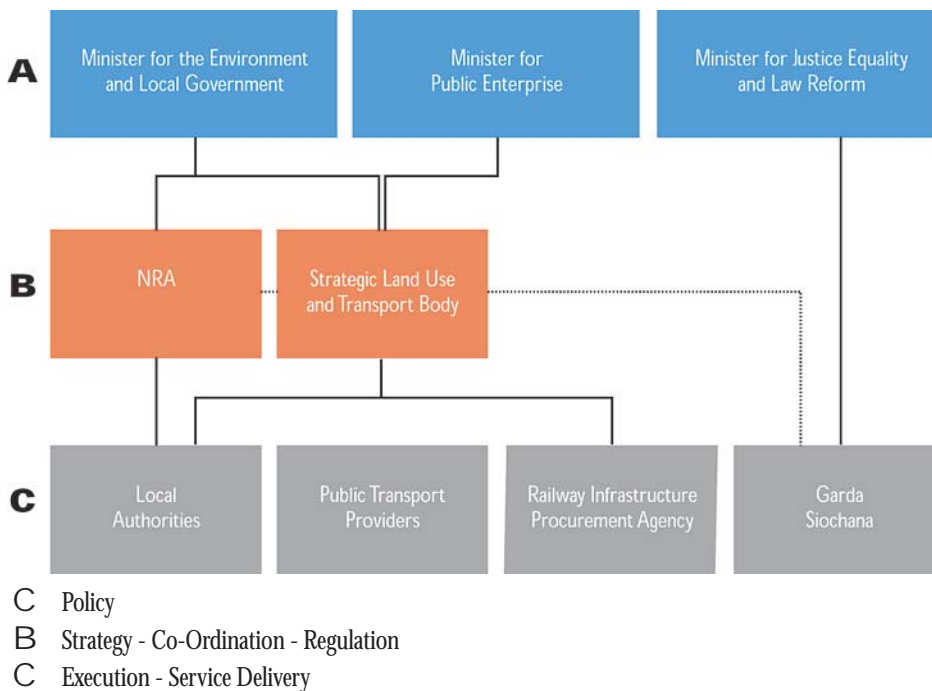
Dublin Region: a 'landscape' of strong centralised local government, two regional authorities, and a range of organisations and semi-autonomous agencies of the central government – looking for a new local basis and new region – wide institutional arrangements

The organisational framework of government and governance of the Dublin Region (for strategic planning purposes known as the Greater Dublin Area) can be characterised by a patchwork of 7 local authorities operating in isolation from one another and co-operative only for matters of strategic interest, including spatial planning, housing and transportation. Above the scale of the Dublin corporation and the other 6 County Councils, the Dublin Regional Authority and the Mid-East Regional Authority were established in 1994 with the purpose of co-ordinating the strategies and functions of the local authorities. However, these regional authorities do not possess statutory powers to regulate the local authorities and act only in an advisory and co-ordination role.

At present, a range of bodies have responsibilities in relation to land-use and transportation in the Greater Dublin Area and new specific policy areas such as the development of a framework for an integrated regional transport system or the implementation of the new Strategic Planning Guidelines for the Greater Dublin Region or the new Planning and Development Act 2000 require more and more co-operative-ness and region – wide co-ordination.



Proposed institutional arrangements for the Greater Dublin area



Source : Consultation Paper. Department of Public Enterprise, 2001

Since the beginning of the 1990s, there has been a broad political will to effect major reform measures in Irish local government. As a main result in 2000, the Local Government Bill provides for a set of new structures in local government and the establishment of Strategic Policy Committees.

C. Tarquis/aurif



Since the beginning of the 1990s, there has been a broad political will to effect major reform measures in Irish local government. As a main result in 2000 the Local Government Bill provides for a set of new structures in local government and the establishment of :

- Strategic Policy Committees that are composed of a coalition of public and private interests and focus on different aspects of local authority policy and;
- County/City Development Boards in each local authority to integrate the key players at local level to engage in a process of long-term planning for each local area.

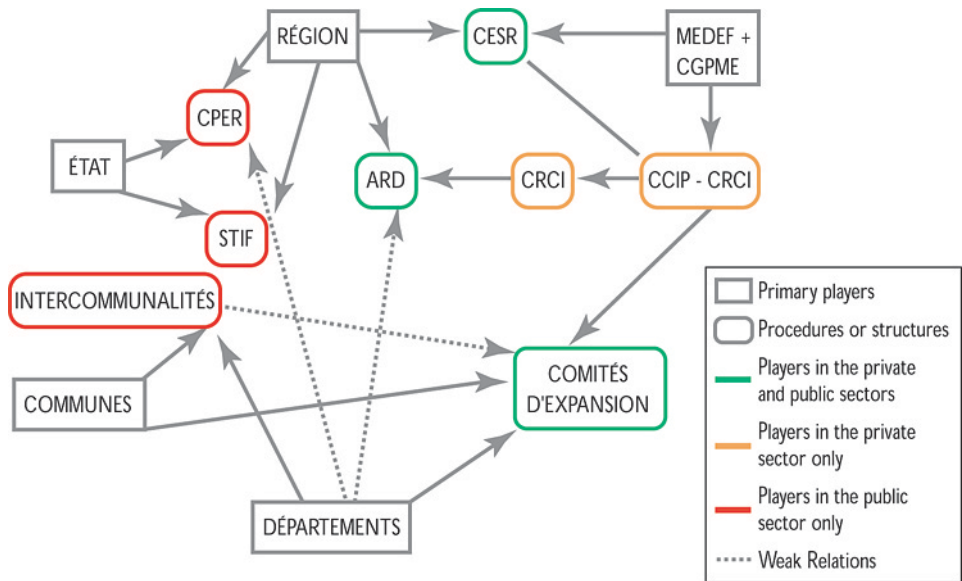
The criticism that has developed of the poor implementation record of planning and development processes has therefore resulted in a major investigation for new institutional arrangements especially for land-use planning and transport in the Greater Dublin Area. A consultation paper propose now a new three-tiered arrangement consisting of several ministries on the level of national government, an intermediate strategic level with co-ordination and regulation tasks (National Roads Authority, Strategic Land Use and Transport Body) and the executive level including local authorities, agencies, public transport providers etc.

Paris Region: a relatively advanced but unstable system of regional governance with an Ile-de-France Regional Council as a future intermediare body that tries to co-ordinate local networking or as a becoming regional leader?

The current period is a transition period to the governance of the Ile-de-France region (that as an administrative region corresponds to the FUR of Paris), insofar we are departing from one system of government / governance to take on another. In the former structure, it was the state who run the region through its policies, expertiz and financial resources and especially through centralisation. The state structured collective actions around itself, being the veritable pilot of the Ile-de-France.

For several years now, this system of government / governance has been changing in that way that certain elements of the former system still exist, and new trends observed are in no way ineluctable and a 'return back' to the previous system is still possible. The increasing power of the region, the structuring of political players around meso-territories (inter-municipalities) and an increasing fragmentation of economic players based on more intensive conflicts, all that have resulted today in an unstable system of governance – especially as the state no longer plays a pilot role. It still holds an essential place in particular with investment and direct intervention via the ministries and the Prefecture of the region. However, it has become a different kind of state, with a less centralised (less interventionist more co-operative) and less unitary conception of its territory (territorialisation of government policies').

Economic governance of the Ile-de-France region:
relations between players on a regional level.



Besides the growing inter-municipality in the region and the territorial restructuring of the Chambers of Commerce, most important is the increasing power of the regional authority. There has, in fact, been a politico-institutional development regarding regional functions, the region has entered into several bodies which were previously denied to it by law. We can also see (modest) development of its capacity to mobilise economic and social players on regional projects.

Regarding to the question of regional 'organising capacity', we can stress that in the Paris region the public actors who strongly support the regional co-operativeness are both 'Préfecture' (i. e. State government representation) and Ile-de-France Regional Council. The private actor who supports more regional co-operativeness is the enterprise representation MEDEF. However, even if 'openly' they do not admit it, the 'départements' and their economic development agencies

are, in fact, not in favour of more region-wide governance. The State-government representation, the Regional Council and the Regional Economic and Social Council work at the regional level.

Concerning a vision or guideline of urban-regional development, there is a regional master plan which is currently applied and should be evaluated in 2003. The new future master plan probably will include a quite detailed economic development strategy. The existing State-Region agreement and (following this global program) the agreements between Regional Council and each 'département' give political and financial support. At the local level, the regional government financially supports economic projects like cluster.

However, societal support is mainly derived from the national scale and plays for Paris as the capital city and its role of a global city. Regarding the inhabitants of the region, there isn't a real regional consciousness or identity.



The existing State-Region agreement and the agreements between Regional Council and each "département" give political and financial support. At the local level, the regional government financially supports economic projects like cluster.

V. Gollain/laurif

The current evolution of players and new interrelations between them resulted, as it was said, in an unstable system of governance insofar as there are no players who seem to be in a position (legitimately, in regard to adequate resources) to take on the governance of the Paris region. The current system is built on fragmented regional stakeholders and new roles and relations. The structuring elements of governance in Ile-de-France thus today aim at solving a two-sided problem. On the one hand, local players need stability. Since the order established by the state has disappeared, it is important to create a new system whereby the region and intermunicipal structures emerge as the new powers. On the other hand, this new order requires more than ever the involvement of economic players and representatives of the business community.

Regarding the future development of the regional governance of the Ile-de-France, the authors of the case study define possible scenarios depending on the attitude of the Ile-de-France Regional Council (CRIF) towards

the above mentioned processes. The urban-region may continue to fragment in view of current rationales (inter-communal structures, the rise of certain départements) and in the long term, the Ile-de-France will disappear as a frame of reference for public policies and collective action giving way to 'balkanisation' into meso-micro-territories. According to the two other scenarios, the regional policy is reactive, dependant on the policies of different actors but the CRIF tries to co-ordinate the various local networking initiatives or the CRIF tries to act on the initiatives and strategies of the other players by making itself the central player in the Ile-de-France and gain regional leadership. The networking of the regional territory is less politically risky than the regional leadership model because it preserves greater autonomy and balance between the existing authorities. On the other side, it gives the region only an intermediary and not an own strategic role. However, both scenarios may even be combined and offer the urban-region an improvement on the existing situation in any case.

Entreprise clustering: a contributory factor of the grouping of high value-added activities in European regions

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Sylvain Cognet

IAURIF

This article summarises studies, conducted under the GEMACA II project, on the grouping and development of high value-added activities in Dublin, London, Paris Ile-de-France and RhineRuhr². The studies show that certain enterprise clusters³ have developed in these West European metropolitan areas because of the significant competitive advantages such areas provide. This, in turn, highlights the strategic role of geographical/spatial location in the context of globalisation. Yet, paradoxically, the ongoing globalisation process is often reflected in the ability of enterprises to locate wherever they wish in the world. However, it is now recognised that enterprise clustering is an important factor in economic development and has not developed through spontaneous dynamics alone. Local players from the public, private and voluntary sectors have sometimes played a prominent role in fostering the birth and development of enterprise clustering.

(1) Director of «strategy and analysis» Department, Paris Regional Development Agency in Ile-de-France

(2) The complete study is available from the partners involved in the project and can be downloaded from the following address:

<http://www.iaurif.org/en/projects/networking/gemaca/>
(3) Defined as geographical groupings of companies in related lines of business.



The GEMACA study analysed the development of spatial sectors or enterprise clusters with high growth potential in the Functional Urban Regions (FURs) of Dublin, London, Paris Ile-de-France and RhineRuhr. In the context of increasing European and global economic integration, cost competitiveness plays an important role. Therefore, the purpose of the study was to identify the economic activities that have been developing rapidly in these four major metropolitan areas.

Enterprise clusters: factors of regional competitiveness

To identify the competitive advantages of companies in the regional environments of Dublin, London, Paris Ile-de-France and RhineRuhr, the GEMACA team had to decide which level of analysis to adopt: the company, the sector, the cluster or the type or line of business. After studying the existing literature on the subject, the team decided that the most relevant level for analysing the advantages and disadvantages of these regions was that of enterprise clusters. This was recognition of the renewed importance of the local, territorial dimension to the redistribution of industrial activity and the significance of innovation for the dynamics of regional development. Analysis at the enterprise cluster level helps to identify regional economic specialisation differently from the traditional sector approaches. The GEMACA team used a definition of enterprise cluster proposed by Michael Porter, a professor at Harvard Business School: an enterprise cluster is «a geographically proximate group of interconnected companies and

associated institutions (universities, standards agencies or trade associations, for example) in a particular field, linked by competition and co-operation.» The geographical size or scope of clusters varies according to the local context.

Enterprise clusters also vary according to their level of development. The study distinguished between three possible stages of development: embryonic (new), established (emerging) and mature (well-developed).

The clusters studied as part of the GEMACA project often extend over an entire FUR (Functional Urban Region), although there also exist intra-regional clusters, such

as the genetics cluster («génopôle») in Evry, Ile-de-France, and the media cluster in Soho, London.

As part of this project, 21 case studies were conducted in the four chosen regions⁴. The business sectors of the enterprise clusters studied are listed on the map below. Three business sectors were common to all four regions: information and communication technologies (ICT), creative industries and biotechnologies. In addition, each national team studied at least two other clusters chosen because of their local strategic importance. Most of the clusters that were studied featured high value-added industries.



Source : Interreg II C

(4) The results of the four case studies are presented in this IAURIF Cahier.



Three business sectors are common to all four chosen regions : information and communication technologies (ICT), creative industries and biotechnologies. Most of the clusters that were studied featured high value-added industries.

V.Gollain/aurif

To make it easier to carry out a comparative analysis, a common methodology/framework for analysis was agreed. Data about each cluster were collected to answer several sets of questions. What factors have contributed to the formation and development of clusters of high value-added industries in Europe's major areas of economic activity? What are the growth prospects for the clusters analysed? What location/relocation strategies did companies implement? How did the public authorities influence the birth and development of the clusters analysed?

In addition to analysing the dynamics of enterprise clustering, this research work allowed the teams to outline certain recommendations concerning the potentially suitable policies on enterprise clustering.

The proximity factor

What explains the emergence and development of enterprise clusters in the major European metropolitan areas? The geographical/spatial concentration of enterprises in clusters can be explained mainly by the external savings they benefit from by being located in metropolitan areas⁵. This explanation goes back quite a long way in history, that is, to the heyday of capitalist development. In 1890, the British economist Alfred Marshall had already identified the benefits of concentrating economic activities in what he called «industrial districts».

The difficulties of analysing clusters

Analysing enterprise clusters in major metropolitan areas is very useful, but in practice, there are a number of difficulties to overcome.

To begin with, it is not always easy to establish the geographical boundaries of clusters. In the case studies referred to above, they often coincided with those of functional urban regions. However, the problem is that cluster boundaries are not only geographical, but also economic. The concentration of firms in clusters ("location quotients") varies according to a range of dimensions: the breadth of horizontal integration; the depth of vertical integration; the scope of economic activity (the number and types of activities within a cluster); the degree of business development abroad; the penetration of foreign companies, etc. These various dimensions are difficult to assess.

The next difficulty is to collect statistical data on clusters, such as: the number of jobs created directly and indirectly by

the companies located in them; the level of qualification of the work force; the degree of business concentration within the cluster; the nature and intensity of inter-company linkages; and the rate of growth in turnover (total sales). The information collected is often quite inconsistent from one region or cluster to another because of the lack of cluster-based data or the difficulty of assessing internal linkages.

Finally, there is the problem of the relevance of the data sets collected. Data are often based on standard industrial and administrative classifications, which are not always relevant to clusters. Such classification standards do not allow links between companies to be taken into account, and often classify enterprises under different statistical categories, whereas they are linked with each other. Similarly, in certain regions, statistical data are produced based on geographical boundaries that make it difficult to rework them at EUR level.

(5) However, the study of the relative importance of cluster growth factors is very recent and therefore does not have much to show for it in terms of results.



Today, the economic environment is very different from that of the late 19th century. In particular, enterprises are now engaged in worldwide competition. In this context, companies that locate or relocate to clusters related to their lines of business can benefit from several decisive competitive advantages. These are based on generic location-related factors, such as the level of qualification of the working population, the quality of governance, territorial infrastructure and local or regional research & development (R&D). Companies can make the most of specific location-related benefits of enterprise clustering when such benefits are available at cluster level. These specific benefits include the following.

- Access to specialised skills. The existence of a pool of qualified people whose qualifications fit those required by companies, and the availability of specialised local sub-contractors are significant advantages. Companies also often benefit from the local presence of institutions (such as research centres, universities, start-up incubators, chambers of commerce, etc.), non-profit organisations (local employer groupings, economic development agencies, trade associations, etc.) and service companies (business law firms, consultants, financiers, etc.) that meet corporate needs.

- By encouraging local actors to capitalise on, develop and cultivate links between the enterprises, research centres, non-profit organisations, chambers of commerce, etc. that make up clusters, clustering is also a factor of regional differentiation.

- The existence of a cluster leads to the creation and development of specialised public and private sector facilities that benefit the community as a whole, such as, for example, technology resource centres, start-up incubators and vocational training units.

Quicker and better understanding of market demand is a specific benefit. To meet the needs of partner enterprises and buyers, companies are led to be more innovative.

Ph. Chambard/Iaurif



- Spatial proximity makes it easier to transfer information, tacit knowledge and expertise through formal and informal exchanges. It also enhances the possibility of face-to-face contacts, which favour technology spillovers that are critical for innovation.

- The sharing of cultural norms, standards and codes is also very beneficial. By joining the same trade bodies, using the same leisure facilities, attending the same church services, practising the same sports, etc. the people who are part of a cluster create and develop a system of local standards. This system enhances the quality of professional relationships and discourages opportunistic behaviour because people have to preserve their reputations. The financial community in the City of London is a particularly good example of this.

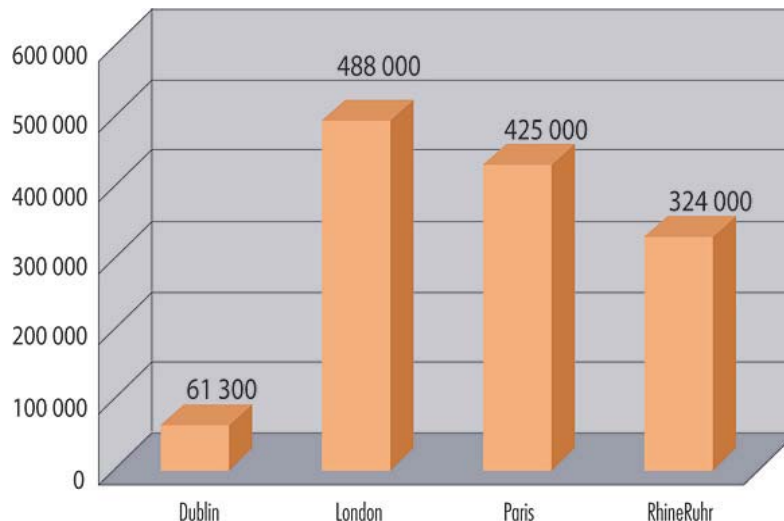
- Quicker and better understanding of market demand. To meet the needs of partner enterprises and buyers, companies are led to be more innovative. This is very much the case in the major areas of economic activity, particularly London and Paris Ile-de-France.

- Finally, the last two major factors of competitiveness relate to “co-opetition”, that is, the dialectical interaction between co-operation and competition that goes on within clusters. Enterprises interact with each other through a complex interplay of co-operation and competition. Depending on the market segments or their interests, they can form alliances or, on the contrary, compete strongly with each other. Such interplay between players in the same cluster stimulates their efforts to improve productivity and enhance their innovation capacity.

The combination of all these factors explains why enterprises cluster together in major metropolitan areas. If they took production costs alone into account, they would not do so, because locating or relocating to such areas generates higher costs, such as higher salaries and rent charges, for example.

However, the case studies have shown that the development of enterprise clusters also results from historical factors.

Employment in the «creative industries»



Source : Gemaca reports

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An illustration: the factors that explain the presence of ICT and finance clusters in North Western Europe

To show how proximity and historical factors explain the development of enterprise clusters, we can look at two examples: the financial and ICT growth sectors in the Dublin, London, Paris Ile-de-France and Rhine-Ruhr metropolitan areas.

The development of information and communication technologies (ICT)

In recent years, the ICT sector has been very much in the news with the rapid development of the “new economy”, followed by the bursting of the speculative bubble caused by this rapid development. Although this sector has been in serious difficulties recently, there is no doubt that it has played a strategic role in the development of modern economies, particularly because of the structural change it has brought about and the new possibilities it has opened up for regional development. Against this background, the location of ICT producers has become highly concentrated in several European metropolitan areas, including Dublin, London, Paris Ile-de-France and the RhineRuhr area.

The role of historical factors

As we have seen, the formation of enterprise clusters owes a lot to generic factors. However, their birth and development can also be explained by a number of special conditions that cannot be reproduced. In some cases, such conditions have been brought about by accident of history (the availability of specific local resources, the spontaneous development of a given field of activity, etc.); in other cases, the conditions are intrinsic to a given area, such as the presence of a company that is the driving-force of the local economy or the existence of major local facilities for research and innovation⁶.

The example of the «creative industries» is a good illustration of the role played by historical factors in cluster formation. Under the GEMACA II project, on the basis of a

study by the British government⁷, the following industries were shown to have formed a very diverse cluster made up of several lines of business: advertising, film production, television, the music industry, architecture, engineering, software, IT services and photography.

The presence of these industries in London and Paris can be explained by certain special historical conditions, such as the existence of creative artistic capabilities, strong cultural identities, the “national capital city” factor, etc. These conditions have been sustained by an ongoing capacity for innovation, which has allowed these two cities to capitalise on these special historical conditions, enabling them to establish their reputations as two of the main global centres for the creative industries, while at the same time allowing them to renew their industrial fabric.

(6) See the article on science and technology.

(7) This study is available from: www.culture.gov.uk/creative/mapping.html



ICT in Dublin, London, Paris and RhineRuhr ⁽¹⁾

The main factors that explain this concentration have been the following.

- The strength of local demand for IT services due to the size of the functional urban regions concerned. In these four regions, the penetration rate of the internet in companies and private homes has been higher than elsewhere.
- These regions are very accessible, especially London, Paris and the RhineRuhr area.
- The high quality of urban life in many large metropolitan areas, which is particularly attractive to the highly qualified employees in the ICT sector.
- Use of ICT is far more developed in large metropolitan areas than in the rest of the European Union.
- The presence of considerable scientific and technological resources.
- The development of local enterprise clusters, such as the one in the Sentier district of Paris⁸.
- The favourable impact of the financial sector on the deployment of high-speed (high bandwidth) telecommunication networks and related services.

As regards ICT, London and Paris significantly surpass the other two metropolitan areas. This has resulted, in particular, from the multiplier effects of the existence in these two cities of very active financial centres, which have stimulated the development of high-speed networks and related services. These financial centres also explain the presence in these two cities of a large working population of people with high qualifications in ICT. (See table 1). These favourable conditions stimulated the development of ICT enterprise clustering in Paris and London through both new local companies and the arrival of foreign companies. On a more modest scale, similar developments have taken place in Dublin and the RhineRuhr area.

	Dublin	London	Paris	Rhine-Ruhr
Number of companies	2 100	N.A	7 500	10 257
Employees	65 900	364 000 (2)	376 700	122 000
Take-off	1990s	Mid-1980s	Late 1980s	Late 1980s
Stage of development	Established	Established	Established	Established
Strengths	<ul style="list-style-type: none"> - Low corporation tax for ITC firms - Ireland is a global leader in software production 	<ul style="list-style-type: none"> - Strong demand for IT services - Proximity to clients (including a financial centre) - Leisure software - Financial software - Highly qualified workforce 	<ul style="list-style-type: none"> - National and international leading companies are part of the cluster - Proximity to clients (incl. financial centre) to design software - Availability of training - Well qualified workforce 	<ul style="list-style-type: none"> - National leading companies are part of the cluster - High income population
Weaknesses	<ul style="list-style-type: none"> - Strong competition from emerging low cost countries (India, Eastern Europe) - Emerging skills shortages and wage costs sharply up 	<ul style="list-style-type: none"> - Competition is increasing in Europe - High property values and major space constraints 	<ul style="list-style-type: none"> - High cost of access to Internet - US competitors - High wage costs 	<ul style="list-style-type: none"> - Corporate culture underdeveloped - Problems in integrating different functions
Spatial aspects	<ul style="list-style-type: none"> - Central Business District ; - Industrial area situated around the M50/Naas Road axis; - the Sandford business park ; and north of Dublin City 	Software industry is heavily concentrated in London and South East	Core of the cluster is in Paris, the inner suburbs of Paris (Hauts de Seine) and south-west of Paris (Vélizy, Sadey, etc.)	Major companies along the Cologne - Bonn - Düsseldorf - Essen axis
Prospects	Dublin is currently evolving from a production centre to more specialised activities, such as e-business	London has great capacity for development because it has the required critical mass and assets.	Ile-de-France could become the software and multimedia capital of Europe within five years.	Depends more and more on demand-side factors such as societal acceptance, changing values and integration capacity.

(1) OECD definition and data collected in each region

(2) Estimate

Source: GEMACA II reports, December 2001

Finance: a highly concentrated line of business

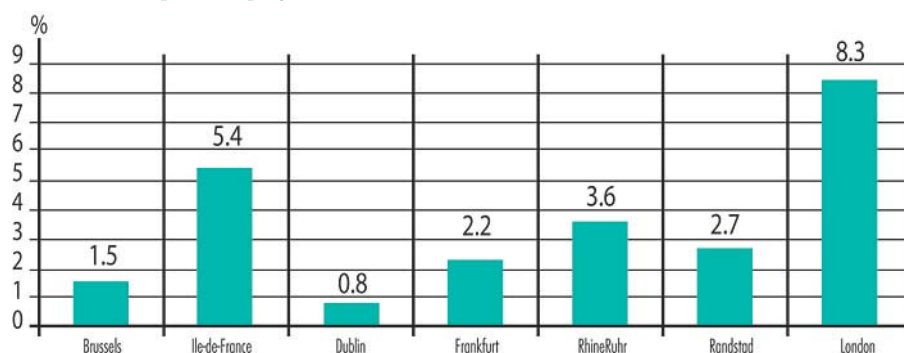
An effective financial system is essential for the smooth running of the economy. Financial services, acting as vital intermediaries between lenders and borrowers, savers and investors, also provide optimal risk management.

According to European labour force surveys, 5.2 million employees in the European Union were employed in the financial sector in 1999, i.e. approximately 3.4% of total employment in Europe. The London FUR accounts approximately for 8.3% of European financial employment.

(8) See the article on the ICT and multimedia industries in Ile-de-France.



The finance industry in European regions Share of European employment



The regions studied are those included in the GEMACA II project, except Ile-de-France (administrative region) and Frankfurt (Regierungsbezirke in Darmstadt).

Data comes from European and national Labour Force Surveys. Employment is calculated according to place of residence in 1999 (London 1998).

Source: IAURIF – GEMACA II, 2001



The number of jobs in the financial sector in the Ile-de-France region fell over 10% between 1989 and 1999. However, the involvement of the Paris Bourse in the Euronext joint venture is a real asset.

DR

The Ile-de-France region ranks second with 5.4% of European staff in this sector, but ahead of the RhineRuhr region (3.6%), the Randstad in the Netherlands (2.7%) and Frankfurt (2.2%). Other cities which have performed well are, notably, Brussels (1.5%) and Dublin (0.8%), proportionally employing more people in the finance industry than all other sectors on a European level.

In the major regions of Europe, the finance industry has developed for specific historical reasons mainly in the London and Paris metropolitan areas, which have held their own within the international financial community. London capitalised very significantly on the lifting of foreign exchange controls in 1979 and especially financial deregulation in 1986 to develop a financial cluster made up of numerous enterprises that operate in a great variety of business lines, backed up by very powerful local trade associations. A single regulator, the Financial Services Authority (FSA), which also deals with the main financial market players in the City, regulates all financial activities. Finance companies located in the City benefit from major location-related external savings due to the presence of numerous companies (scale effect), special-

ised sub-contractors (jurists, consultants, IT service companies, technical experts, etc.) and a very highly qualified labour force trained in the world's best management schools.

In Paris, deregulation also boosted the growth of the financial sector in the 1980s, a trend which has not been sustained since then for several reasons (sector consolidation, the spread of ICT, productivity drives, etc.), in spite of the efforts made by all financial market players in Paris to promote the French capital as a major financial centre. Thus, the number of jobs in the financial sector in the Paris Ile-de-France region fell by over 10% between 1989 and 1999, particularly due to the productivity drives carried out by the companies that are part of the cluster. However, the involvement of the Paris Bourse in the Euronext joint venture (with a total market capitalisation in 2000 amounting to 2,420 billion euros and 1,653 listed companies) is a real asset. Although the head office of the Euronext European holding company is located in Amsterdam, participation in this joint venture could increase the number of finance companies in Paris, thereby enhancing the competitive position of the French capital.

Finance in Dublin, London, Paris and the RhineRuhr region ⁽¹⁾

In Dublin, the ambitious policy of creating the International Financial Services Centre has helped foster strong growth in finance-related businesses. Out of the 41,000 people employed by the financial sector in the Dublin FUR, 15,000 are directly or indirectly employed by the IFSC, which has specialised in “back office” activities. In the RhineRuhr region, the development of finance-related businesses can be explained mainly by the region's economic and demographic strengths, given that the financial capital of Germany is located elsewhere, that is, in Frankfurt, Rhin Main.

Clusters and cluster development policies

Cluster-oriented policies represent a major shift from traditional industrial development programmes, which focused mainly on supporting the development of industrial sectors as a whole. Cluster-oriented policies are similar to action in favour of businesses: they try to foster the development of activities related to the lines of business that characterise clusters. They do so by sustaining the local/regional geographical spaces in which the activities of the business lines are concentrated and by deploying all the economic assistance available, both direct and indirect (new business start-ups, local urban planning, location/relocation assistance, research and innovation, local venture capital, etc.). These policies affect all the actors involved in a cluster.

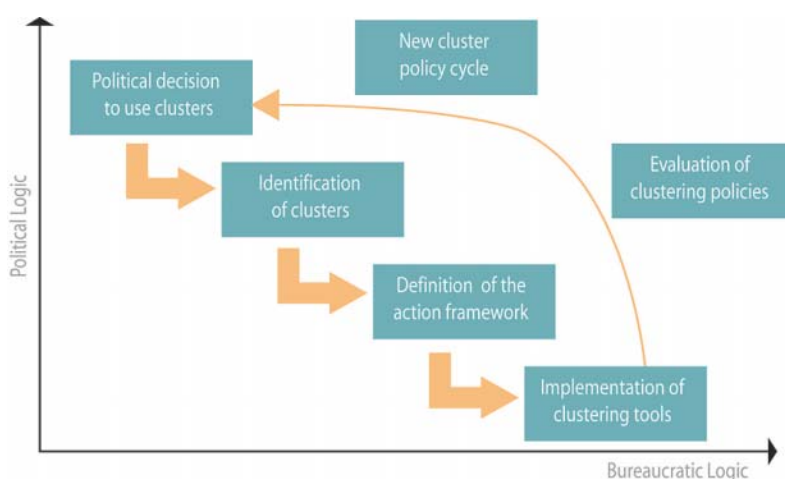
	Dublin	London	Paris	RhineRuhr (2)
Employees (2)	41 000	438 000	284 000	190 000
Take-off	1990s	End of the 19 th century "Big Bang" (1986)	End of the 19 th century Law of 1984	N.A.
Stage of development	Established	Established	Established	Established
Cluster development	Growing	Growing	Stabilising, with different trends in subsectors	N.A.
Strengths	<ul style="list-style-type: none"> - International Financial Services Centre (IFSC) : directly and indirectly employs 15,000 people at an integrated central location. - Special corporation tax regime - Investment fund administration 	<ul style="list-style-type: none"> - One of the top three global financial centres with New York and Tokyo - 479 foreign banks - Innovation - Presence of most European companies - Highly qualified staff 	<ul style="list-style-type: none"> - Euronext - Numerous international headquarters - One of the world's leading business services centres - Easy and cheap access to euro markets 	<ul style="list-style-type: none"> - The region's demographic and economic weight - High levels of personal income
Weaknesses	<ul style="list-style-type: none"> - Size: the cluster lacks critical mass - The shortage of specialised staff - Lack of public transport - Road congestion 	<ul style="list-style-type: none"> - European competition from Frankfurt and Euronext (Paris/Amsterdam) 	<ul style="list-style-type: none"> - High wages costs - An insufficient number of French financial intermediaries. - A relative lack of private investors - The tax regime is less favourable in Paris than in London 	<ul style="list-style-type: none"> - The absence of a financial centre - Competition from Frankfurt
Spatial aspects	<ul style="list-style-type: none"> - Finance services are concentrated in the Central Business District of Dublin - Concentration in the International Financial Services Centre in Dublin Docklands. A purpose built centre. 	<ul style="list-style-type: none"> - The City (the «Square Mile» with a surface area of 2.5 sq. km.) - Docklands - Outside London, most of the employment is in back office activities 	<ul style="list-style-type: none"> - Financial services are concentrated in the business districts of western Paris (near the bourse), in La Défense and in the eastern suburbs (back office activities) - A North-West axis is emerging 	N.A.
Prospects	<ul style="list-style-type: none"> - Need to move up the value chain in selected niche areas - Improve the quality of the general urban environment, giving priority to housing and transport. 	<ul style="list-style-type: none"> - London is likely to preserve its strengths - Growing demand for international financial services 	<ul style="list-style-type: none"> - Impact of ICT will cause restructuring; future movement of headquarters. - Development of workforce skills. - Enhancement of the competitiveness of the Euronext financial market 	N.A.

(1) Sector definition based on the nomenclature of economic activity. Eurostat data; labour force surveys.

(2) Information compiled by IAURIF from Eurostat data and local sources of statistics.

Source: GEMACA II reports, December 2001





Source: GEMACA II 2002, adapted from Hogwood and Charles (2001)

Cluster-oriented development strategies still tend to be exploratory, and have been implemented with varying degrees of sophistication in Dublin, London, Paris and the RhineRuhr region. The first metropolitan area to implement such a strategy was Dublin in the early 1990s, and this has been a factor of the dramatic development of the area. This strategy featured economic and urban development planning measures (Technology Foresight Ireland, and the National Development plan.), and measures to strengthen existing regional growth centres (such as the Digital Media Hub in Dublin). By contrast, it was not until the late 1990s that the RhineRuhr, Paris and London areas began to implement cluster-oriented policies: the “Local Productive Systems” (LPS) policy in Ile-de-France; the software enterprise cluster in Dortmund; and the biotechnology cluster in London. Based on 21 case studies and an analysis of all the existing literature on enterprise clustering, the GEMACA team drew up a methodology for formulating cluster-oriented policies in European regions. A review of the principal features of this cluster approach and the main policy recommendations for each of the four European metropolitan areas studied was undertaken.

Overall action framework

On the basis of the work by Charles and Hogwood on the Cluster Policy Cycle as well as its own studies, the GEMACA team drew up an overall action framework for formulating enterprise cluster policies. This approach comprises five major stages: taking the initial political decision; identifying clusters; defining the action framework; implementing the appropriate tools; and evaluating policies.

First stage: taking the political decision to use clusters

The first stage of the overall action framework is an awareness-enhancing process during which the political decision is taken to implement a cluster-oriented policy. It is important that this process should take place at the level of the Functional Urban Region (FUR), that is, on a geographical/spatial scale consistent with the clusters of economic activity concerned.

The decision to implement such development policies is usually taken by local or national government authorities. It is a difficult choice to make as such policies represent a major challenge, which has a better chance of success if it is part of a collective action programme. A commitment to a cluster-oriented policy amount to accepting innovation, and often needs to be preceded by public debate, during which the advantages and disadvantages are discussed in the light of specific regional characteristics. Such a debate must be as free and open as possible to involve all of the economic agents in the territory or community concerned.

Second stage: identifying clusters

Once the decision has been taken, the next step is to identify all the clusters that exist in each FUR. As mentioned above (see box 1), the statistical data for this task are inadequate. It is therefore necessary to adopt the same participatory approach as before, that is, to obtain the help of cluster participants in identifying the clusters. Once this stage has been completed, it becomes essential to characterise each cluster in terms of geographical spread, core activities, stage of development, functioning, internal and external links, strengths and weaknesses, threats and opportunities, etc.

Next, it is necessary to identify the benefits of each region in terms of location. In so doing, the process particularly emphasise location incentives, such as the availability of universities and vocational training institutes, sources of venture capital, science parks, infrastructural facilities and urban planning. In addition, any disincentives to cluster development should be noted.



The four regions studied have adopted this approach of systematically identifying enterprise clusters only quite recently. In the London area, this approach was used in full by the Department of Trade and Industry to produce a national report for the British government. In Dublin and the south of the RhineRuhr region, this systematic approach was implemented as recently as in 2001. And in the Paris Ile-de-France region, all such initiatives have been recent and the results of local initiatives, given that regional studies have been incomplete.

Third stage: defining the policy action framework

Defining the exact role of local government authorities in relation to enterprise clusters is one of the most complex and controversial issues discussed by economists. The content of a governing authority's strategy of support must be a function of the characteristics and dynamics specific to each local cluster.

Before a governing authority takes any political action in favour of clusters, it must first draw up a consistent development strategy based on clear, long-term objectives. Such a strategy must be formulated collectively by means of a participatory process to agree on a shared vision of each cluster in terms of objectives and the operational resources to implement this vision. The strategy must be formulated at FUR level, because it is at this geographical level that such a policy will be most effective.

At this point, it is important to note that clustering policy must not induce specialisation logic. In other words, it must not lead the governing authorities to favour certain clusters by designating them as specialists in a given line of business chosen from the regional portfolio of business lines. International research including work by Porter in the USA rejects such a

policy of specialisation, as it risks distorting competition. It can also have very negative repercussions in case of a sharp downturn in the economic cycle.

It is very important that local government authorities should play a supportive and catalysing role in favour of any existing initiatives, rather than a leading role. When a local government authority has played a major part in the start-up of a cluster, it should give way as soon as possible and hand leadership over to the private sector and local institutions. Conversely, local government authorities have a strategic role to play as providers of support for clusters over time and as providers that use the most appropriate tools (see the 4th stage of this overall action framework).

Finally, it is quite rare for the public authorities to create a cluster out of nothing, the only notable exception being Dublin, but it was in a very special economic context. Efforts to foster clustering are expensive and often vain, and very few cluster support policies have been successful in other developed countries. In other words, government authorities should concentrate their support efforts on clusters that are at some early stage of development, including embryonic clusters. This is of strategic importance, because it is at early stages of development that clusters most need help.

Fourth stage: implementing the policy tools

Cluster development policies are a recent phenomenon. The measures taken under such policies can be placed in three categories: direct support for cluster enterprises; improvements to the regional environment; and action in favour of co-ordination.

Direct support first consists of ensuring that cluster enterprises benefit from all existing forms of support, by mobilising and co-ordinating all the aids available.

BioTeam Paris-Région®, a brand common to the biotechnology growth sector in Ile-de-France

BioTeam Paris-Région®, a branded biotechnology network in Ile-de-France, aims to promote the regional biotechnology-related sector internationally and to secure its leadership in Europe.

The following are the founding partners of the BioTeam Paris-Région® network:

- the Paris Ile-de-France Regional Development Agency (ARD);
- the Essonne County Economic Development Agency (AEE);
- the Paris Development Agency (PDA).

These three founding partners have registered the BioTeam Paris-Région® brand as an official trademark. The network is open to all potential regional partners from the life sciences sector.

By coming together, the BioTeam Paris-Région® partners wished to pool their resources under a single brand name. This pooling of resources makes for the more effective promotion of the biotechnology sector internationally and the development of a joint strategic approach by the partners involved.

More specifically, the BioTeam Paris-Région® network has set itself short and medium term objectives:

- short-term objectives: to build up a consistent image of the biotechnology-related sector in Ile-de-France by advertising it under the single BioTeam Paris-Région® brand name. The presentation document is a good illustration of this policy. This consistent image will give France's leading biotechnology hub a higher international profile.
- medium-term objectives: to deploy and sustain the BioTeam Paris-Région® network; to implement a missionary selling plan; to attend all major biotechnology-related international events; to foster mergers, acquisitions, and joint ventures between biotech firms; and to support the growth of biotech firms in Ile-de-France.

Source : BioTeam Paris Region®, 2002

Such action also aims to facilitate the creation of start-ups and the location/relocation of enterprises in clusters through the development of specialised organisations (company incubator in Evry, Ile-de-France, London Bioscience Innovation Centre, the Media Park in Dortmund, etc.). It includes the attraction of international companies by the economic development agencies in the four regions. In some cases, the authorities even create a common brand for their region (see box 2). The arrival of start-ups or existing companies in a cluster fosters a spirit of competition, a key driver of innovation. Enterprises in a cluster can also benefit from certain services provided via an internet portal or the provision of customised information about economic or technological developments.

Improving the regional environment is achieved through a series of measures that have an indirect impact, such as enhancing the business climate, fostering innovation and technology transfers, urban planning, local infrastructure development (roads, telecom networks, etc.), encouraging training, improving security, easier access to capital and better local governance. The initiatives taken by local authorities in the four regions studied have included the implementation of local urban development plans favouring the growth of enterprise clusters. Thus, the Digital Media Hub project in Dublin has aimed to foster the development of information technology (IT) companies and other companies with high growth potential in a 2.8 hectare site situated in the historic city centre near the Guinness brewery and Christchurch cathedral. The Media Lab Europe joint venture between the government of Ireland and MIT in the United States will be located on this site, in which the Irish government will invest 130 million euros.

Action in favour of co-ordination is also a core element of enterprise clustering policies. The aim is to stimulate cluster development by a regional strategy of fostering links between cluster players. This is where development agencies have an important role to play. Such a strategy

may be implemented at local level by specialised bodies, such as the "Net Sentier" association in Paris for multimedia and Internet development, the financial centre in Dublin and the Media Park in Dortmund. The policy of fostering the development of links between cluster actors may lead to direct financial support for bodies that play a leadership role in local cluster development, as has been the practice in Ile-de-France and Dublin. There is also an international dimension to policies for fostering co-operation by the development of international links for enterprise clusters in each region. Thus, for example, the "Net Sentier" association in Paris visited the Lebanon early in 2002 with the support of the French DATAR regional development agency.

Fifth stage: evaluating policies

The last stage is essential as it consists of evaluating the results of the measures taken in order to correct and improve them. This evaluation must cover all the policy-making stages to understand what may have gone wrong. This is the only way to ensure the optimal effectiveness of any improvements. An evaluation based on results alone would not be sufficient due to the structural complexity of clusters and the mechanisms that affect their development.

The participatory evaluation method proposed by Diez and Esteban is particularly suitable for the process of evaluating clusters. All cluster participants contribute to the evaluation of the cluster-oriented policies, which makes for a constructive approach to their improvement. This also calls for the formation of an evaluation committee made up of representatives of private sector companies, public sector actors, the chambers of commerce, etc.

The evaluation of enterprise cluster policies can be based on several performance indicators:

- results;
- the dynamics of co-operation;
- entrepreneurship;
- trends in enterprise locations and relocations.



In addition to drawing up an overall action framework, the GEMACA team produced policy recommendations specific to each of the four European regions studied.

Policy recommendations for Dublin

In Dublin, cluster-oriented policies have been essential to the creation and development of IT and financial services companies, notably by attracting a very large number of international firms.

To enhance public policy in favour of clustering, the following are considered necessary.

- To strengthen academic research in order to make it 100% world-class.
- To facilitate the transfer of knowledge between research organisations and companies.
- To foster the existence of a better trained workforce with a broader range of skills.
- To develop a base of sub-contractors that can support and service the appropriate sectors in each cluster.
- To provide appropriate industrial infrastructure.
- To implement an economic policy that is more favourable to the targeted sector(s).
- To protect intellectual property rights.
- To offer access to equity and other sources of financing.

Finally, the GEMACA team would recommend increasing access to economic data specific to clusters and enhancing the tracking of clusters in order to have a more thorough understanding of their trends and dynamics.

Policy Recommendations for London

The GEMACA studies confirmed that London has numerous assets that are highly conducive to the formation and development of clusters. The recommended strategy for London would be to remove the barriers to clustering created by the government itself, notably by reducing the policy and budgetary uncertainties that adversely affect large economic and urban development projects. The state of chronic underinvestment and indecision in public transport is also a major drag on the development of enterprise clusters.

One of the fundamental requirements for a successful cluster policy in London is a better understanding of the competitive advantages they generate. It is also necessary to avoid favouring a particular cluster at the expense of the others. The best policy is to improve London's general busi-

Specific cluster policy recommendations

ness environment. The role of the local government authority should be to support local activity by providing efficient public institutions, infrastructure and urban services such as education, transport and security, and by reducing uncertainty in the decision-making process.

Policy recommendations for Paris

One of the distinctive features of the Paris Ile-de-France region has been the apparently "spontaneous" development of activities with a high growth potential. In fact, this development has been due to several factors that have favoured this region: its economic and demographic strength; its high concentration of public and private sector research centres; the large number of high-tech companies that make up its economic fabric; the presence of a well qualified workforce; and, last but not least, its inhabitants' taste for innovation and their openness to new practices.¹

Enterprise cluster-oriented policies are still not very well developed in the Paris Ile-de-France region, a situation which could have very negative repercussions if it continued. Hence the need to take more action.

Based on previous experiences of measures taken in Ile-de-France to promote local clusters (optics valley, the genetics hub or "génopôle" in Evry, the multimedia hub in Montreuil, the image hub in Seine-Saint-Denis, etc.), the following recommendations have been put forward:

- To build on ongoing experiences in the Ile-de-France region by comparing them with other initiatives taken in France or abroad.
- To pool the expertise, skills and know-how of companies with similar economic or technological interests to enhance their competitiveness.
- To create a "tool box" of good and bad practices for inclusion in cluster-oriented policies.
- To use this toolbox to increase the chances of success of the local clusters in progress in the Ile-de-France region.
- To sustain and capitalise on initiatives taken by local clusters at county (departmental) and regional level, in particular as part of action taken by the ARD Ile-de-France regional development agency.

In addition to such direct and individual support for each local cluster in the Ile-de-France region, it is necessary to think as soon as possible about clusters on a regional level. This means:

- identifying all sectors/clusters currently expanding rapidly in the Ile-de-France region;
- locating the players (companies and institutions that have established links between themselves) who are actively contributing to in the economic dynamics and momentum of each cluster;
- co-ordinating and developing the initiatives already taken.

This could lead to the formulation of a regional strategy in favour of enterprise clustering in the Paris Ile-de-France region.

Policy Recommendations for the RhineRuhr region

As part of a cluster-oriented policy, five priorities have been identified for the RhineRuhr region.

- First, there is a need to make all the actors concerned more aware of the advantages and disadvantages of cluster policies, because they are still little known or misunderstood in this region. It is therefore necessary to initiate and co-ordinate efforts to communicate more on the potential benefits of cluster-oriented policies.
- A cluster-oriented policy should develop new or existing local skills in at least five priority areas: location marketing of the Ruhr region; human resource management; innovation and technology management; internal and external networking and knowledge management.
- The launch of a common learning process strongly involving the participation of companies.
- These policies should be part of an overall strategy of enhancing the economic and business environment, which goes well beyond the focus on cluster management as such.
- Finally, cluster-oriented policies should use new evaluation methods.

(1) The faster growth of the internet in Ile-de-France compared with the rest of France can be explained by the fact that the inhabitants of this region have a greater ability to adopt the innovations generated by information technology.

Source: GEMACA II reports, December 2001

Conclusion

Located in core parts of the regions concerned, clusters are playing an increasingly important role with regard to identifying economic strengths and weaknesses as well as development strategies. However, implementing the clustering approach is a complex process in terms of cluster identification and cluster-oriented policies.

Thanks to the studies it has conducted, the GEMACA team has highlighted a number of key factors of success regarding the implementation of cluster-oriented policies.

- It is important to choose the right spatial boundaries for analysing and shaping clusters, the most suitable geographical scale being that of the functional urban region (FUR).
- The importance of designing and developing suitable analytical tools. An economic analysis of a given territory based on the enterprise cluster concept is an attractive approach, but it soon comes up against a series of difficulties. Hence, the need to create and use ad hoc tools, including statistical instruments, to analyse the reality of clusters. This approach has been adopted recently internationally including by some States in the USA, which have set up analytical structures that suited the scale of clusters. This initiative made for a more refined analysis of clustering and the inner workings of clusters, thereby allowing the State authorities to act more effectively.
- At the heart of a successful overall action framework is the need for a collective (community/cluster-based) process involving the active participation of all the actors concerned;
- Good integrated regional governance has an important role to play in mobilising existing skills and resources for the benefit of the economic development strategy that most favours business, employment and the economic welfare of the inhabitants of major urban areas.

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Information Technology, Communications and Multimedia Industries in Ile-de-France

Vincent Gollain
IAURIF¹

As the leading economic region in France and base of many high-tech companies and laboratories, the Ile-de-France region is also – and quite “naturally” – the leading region regards to information technology (IT) and multimedia companies. And with a reported 376,000 salaried employees, it concentrates over 45% of the country's workforce. What are the characteristics of this field? How do companies devise their location strategies? What is behind its development in Ile-de-France? What role have public authorities played? The conclusions drawn from this article shed a more comprehensible light on the development of this sector given the economic conditions in recent years.

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V. Mèrat/laurif



Information technology and communication companies in Ile-de-France

At the end of 1999, ICT² companies in Ile-de-France employed 376,000 salaried employees in 13,700 establishments, accounting for approximately 10% of salaried employees in the private sector, and now carrying as much weight as the “retail and automobile repair” sectors (378,000 salaried employees) and more than the construction sector (226,000 salaried employees). Among the ICT sector, service-providing companies employ the highest number of salaried employees, demonstrating thus a strong presence in Ile-de-France.

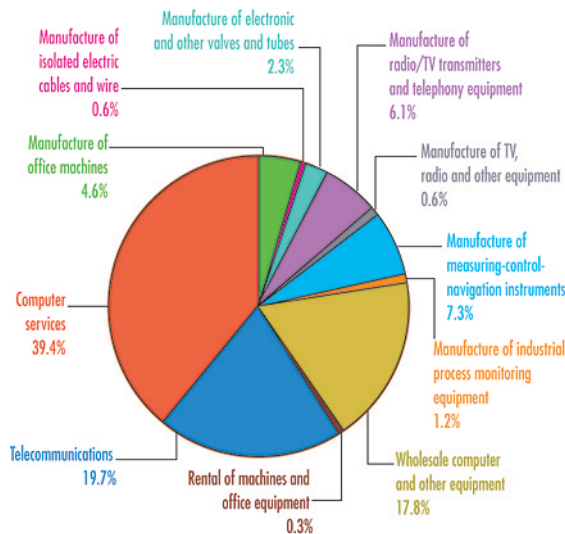
The principal employment sectors among IT companies are computer services (39.4% of salaried employees), telecommunications (19.7%), wholesale computer equipment (17.8%) and the manufacture of measuring – control – navigation instruments (7.3%).

This sector is rapidly developing in the region: it gained 88,000 jobs between 1995 and 1999, which represents an annual growth of 7%. But a closer look reveals that while employment in the service and wholesale industries climbed, industrial companies saw a slight reduction in the workforce despite a favourable economic period.

Multimedia in Ile-de-France

This information technology sector employs 53,000 salaried employees in 2,150 companies. A very diverse sector comprised of companies of various sizes, it grew rapidly between 1995 and 2000, followed by a period of consolidation.

Salaried jobs in ICT companies (workforce in Ile-de-France on 31 December 1999)



Source: IAURIF estimates based on data gathered by the GARP and the INSEE

Structure of Information Technology and Communication in Ile-de-France (31 December 1999)

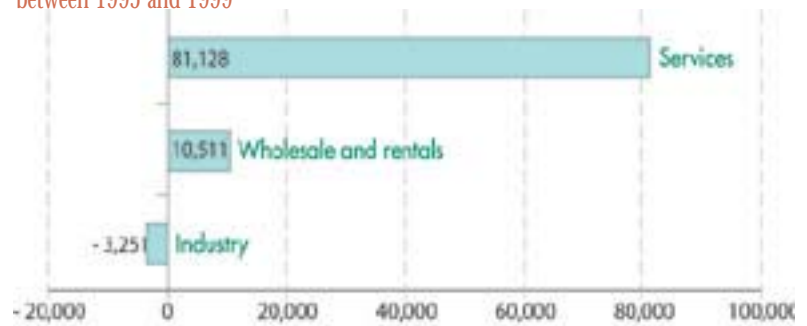
Main Activity	Salaried Employees	%	Establishments	%	Average Size
Industry	85,824	22.8%	1,702	12.4%	50.4
Wholesale and rental	68,221	18.1%	4,416	32.2%	15.4
Services	222,717	59.1%	7,604	55.4%	29.3
Total ICT industries	376,762	100.0%	13,722	100.0%	27.4

Source: IAURIF estimates based on data gathered by the GARP and the INSEE

(2) The field of ICT companies in Ile-de-France used in this study is based on the definition established by the OECD. Codes used from the Nomenclature d'Activités Française (Nomenclature of French Businesses): 300A, 300C, 313Z, 321A, 321B, 322A, 322B, 323Z, 332A, 332B, 333Z, 516G, 516J, 713E, 642A, 642B, 721Z, 722Z, 723Z, 724Z, 725Z, 726Z (see bibliography).

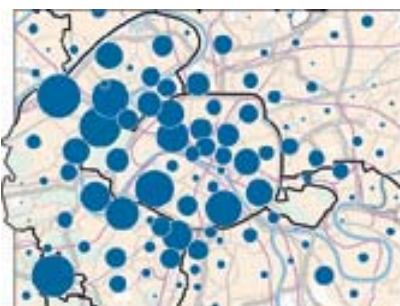
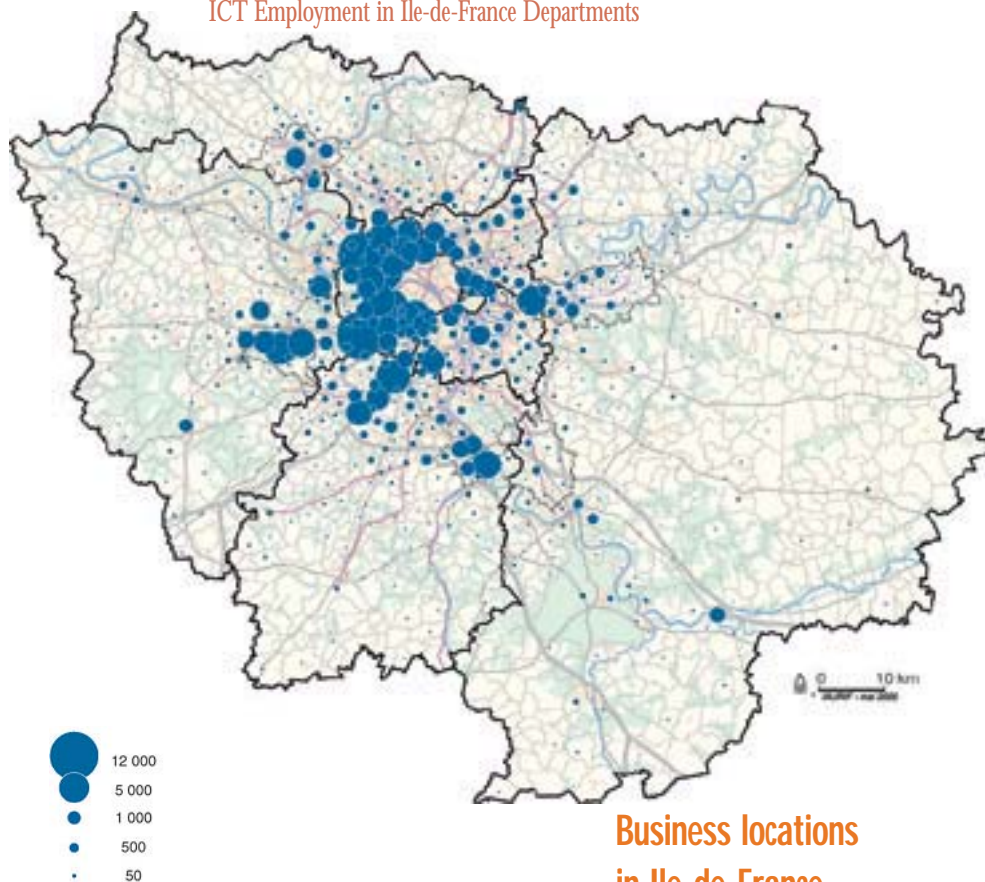
88,300 jobs gained in ICT companies in Ile-de-France
between 1995 and 1999

Considering its economic force, the Ile-de-France region enjoys a foremost position in France. It concentrates 47% of the salaried employees and 38.4% of the establishments in the sector. On a European scale, Ile-de-France is one of the leading regions with to London and ahead of Stockholm, Munich, Rhine-Ruhr and Munich.



Source: updated data gathered by the GARP, processed by the IAURIF, August 2001

ICT Employment in Ile-de-France Departments



Ile-de-France : 322 800 employment
Maximum Number : 11 870 employment

Source : INSEE-IAURIF 6 me ERE

Business locations
in Ile-de-France

At the beginning of 1998 the city of Paris concentrated 28% of IT and communication establishments, particularly due to the presence of many small companies in the capital. Paris was followed by the departments of Hauts-de-Seine (21% of establishments), the Yvelines and Essonne. The location of jobs differs slightly: in 1998 31% of salaried employees in ICT companies worked in Hauts-de-Seine, where many very large integrated companies have their headquarters. The next leading departments

were Paris (21.1%), the Yvelines (13.6%) and Essonne (11.2%). The four other Ile-de-France departments concentrated altogether less than a fourth of the workforce in the region. The map, which shows the regional location of jobs in ICT companies in 1998, points out the western and south-western concentrations in this sector. Thus, 27 districts group together half of the salaried employees in the ICT sector. The districts with the most jobs are: Nanterre (11,800 salaried employees, including EDS France, Oracle, Unisys, Sema Group), Vélizy-Villacoublay (11,500 salaried employees, including Alcatel CIT, Sextant avionics, Steria, Thomson), Puteaux (10,800 salaried employees, including Cap Gemini, Cegetel, Sita), Paris' XIIIth district (8,500 salaried employees, including France Telecom, SAT, CGI, Global One), Issy-les-Moulineaux (7,400 salaried employees, including France Telecom, Bouygues Telecom, AT&T Istel, Ausy) and Paris' VIIIth district (6,800 salaried employees, including Thomson CSE, France Telecom, SAP).

The location of ICT companies in Ile-de-France also differs according to the field of activity. Industrial companies are mainly located in the departments of Hauts-de-Seine, the Yvelines and in the north of Essonne. Service companies, however, are mostly concentrated in the city of Paris and Hauts-de-Seine (in the poles of La Défense and Val-de-Seine in the south of the department). Most commercial activities are located between Paris and the three departments in the inner suburbs.

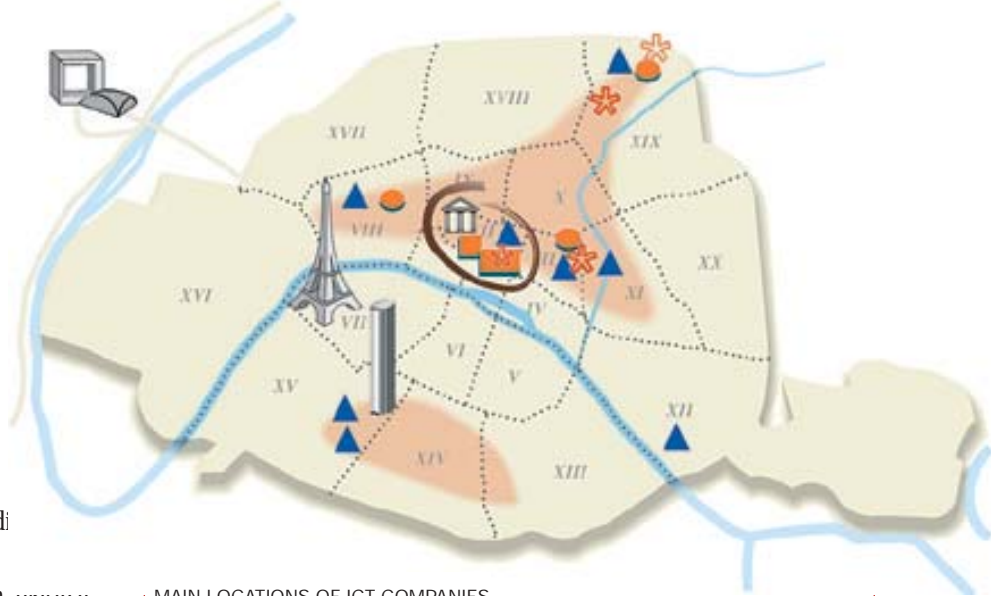
The Sentier is a highly sought-after Parisian quarter stimulated by Internet and multimedia companies

Globally favourable conditions for development

The development of the IT sector in Ile-de-France is mainly due to a combination of favourable conditions:

- First, exceptional conditions in research and development attributed both to the presence of numerous reputed public laboratories and considerable corporate spending in information technology³.
- Due to the financial position of Paris, the historical presence of France Telecom and, more recently, of new operators, the main 'business quarters' of Ile-de-France boasts excellent high-speed telecommunications networks. In the best-served districts, these networks and the associated services facilitate the development of IT companies in Ile-de-France.
- The strong development of the IT sector is also attributed to the corporate strategies of Ile-de-France companies that progressively joined the sector from more traditional fields of activity, such as Bouygues, Générale des Eaux (now Vivendi Universal) and related fields of activity (television, press, advertising, etc.)
- This dynamism of the economic fabric in Ile-de-France has also been significantly boosted by the creation of companies (3,300 IT companies were created in 2001) and the set-up of an increasing number of foreign companies such as Cisco, Nortel, Motorola, Amazon, etc.

(3) Nearly 30% re. estimations on research spending of companies located in the Ile-de-France region are allocated to information technology.



MAIN LOCATIONS OF ICT COMPANIES



As service providers, multimedia and Internet companies distinguish themselves in their choice of location. Indeed, nearly 65% are located within the city of Paris, particularly in certain poles such as the Sentier quarter and neighbouring areas towards the east (Xth and XIth districts) as well as traditional business districts in the west (VIIIth district).

Spontaneously created thanks to highly favourable real estate conditions, the dynamism of the Sentier quarter is supported by the "Local Productive System" (SPL) "Net Sentier", which was founded in July 2000 by over 40 entrepreneurs in the Sentier quarter and is financially supported by public authorities (Datar, the Ile-de-France Region, the Prefecture of the Ile-de-France region and the Deposit and Consignment Office).

The association aims at promoting the development of persons and companies belonging to the "new economy" in a given territory. Its representatives believe that the production and exchange of information between digital communities need to take shape in a particular area or district in order to gain both economic and political (democracy of proximity) value that can be shared by all.

NET is currently developing a "platform" to share expertise and resources. It strives to make the district a "learning" area in order to create activities and jobs through social interaction. The multimedia sector, for example, aims at establishing relationships through every means. It also promotes a "non-exclusionary" district.

The NET association has implemented several lines of action: awareness of the local economic fabric, creation of a worker's union, a university, development of a web site, the set-up of a marketing society, export operations as well as promotional and communication campaigns.

Macha ARFEL, Vice President, Net Sentier Association

- Finally, the use of the Internet developed more rapidly in Ile-de-France than in other French regions. Accordingly, Ile-de-France residents quickly got a hold of information technology tools, as illustrated by the rapid increase in home Internet access and e-commerce in the region. There is also more frequent use of the Internet in companies. According to a study conducted by Médiamétrie-Crocis, in March 2001, 57% of SMEs in Paris and the inner suburbs had Internet access, compared to 39% in France.

However, the development of this sector in Ile-de-France was slowed down by several factors: the image in industrialised countries that the French are behind in the use

of office tools and Internet; the absence of a regional strategy regards to information technology; Ile-de-France's poor international scope in this sector compared to other competing regions; and insufficient legibility of corporate support plans.

Economic policies that weren't very present at the beginning

Contrary to the incentive economic policies implemented in Stockholm and Montreal, the IT sector in Ile-de-France developed spontaneously; in other words, no strategic regional plan or specific aid programme were devised. With the exception of a few avant-garde programmes (Paris Ile-de-France teleport project), it wasn't until the late 1990s that specific initiatives were taken to boost the development of IT companies (I-Source business priming fund, creation and expansion of specific business incubators, etc.) and IT-related activities and uses.

The economic fabric in Ile-de-France has been boosted by the creation of companies and the set-up of an increasing number of foreign companies.

Gobry/Dreif



Perspectives

Compared to other French regions, information technology got off an early start in the Ile-de-France region, even though the level of development reached is still lower than that of the leading regions in this sector. The crisis the sector has encountered in recent months has led to a consolidation of the Ile-de-France's economic fabric and the implementation of public actions. Today, Ile-de-France benefits from assets that enable it to face European and global competition. However, the efforts put forth must be pursued and developed if the region wishes to rank with London, the European capital in the internet sector.

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Environmental Protection Industry in RheinRuhr¹

Wolfgang Knapp
ILS

The Environmental Protection Industry (EPI) for many years has been one of the most promising and cited example of an emerging new economic sector with great job potentials. Although the EPI meanwhile plays an important role in the economic structure of many regions it is difficult to describe it with statistical means. On the one hand the sector covers not only companies of the industrial sector but also to a large extend those of the service sector. On the other hand it is a typical cross sectoral plant whose member firms are spread widely across traditional economic sectors.

(1) The following is based on a study of 'Clusters and Cluster policies in the metropolitan region RheinRuhr' which was made out by J. Nordhause – Janz / F. Öz / D. Rehfeld (Institut Arbeit und Technik (IAT), Gelsenkirchen 2001) in the framework of GEMACA II.



Some theory ...

EPI is defined as: the production of goods and services to avoid, reduce, control and remove waste and emissions to the environment (soil, air, water). With this definition the core parts of EPI like waste management, water and sewage treatment, treatment of dangerous waste, noise prevention, prevention of air pollution, Energy and Environment, Measure, Analysing, Steering, Controlling are included. The definition covers the production of related industrial goods as well as services.

In theoretical terms the following report focus on sectors first of all. To combine sectors and clusters the concept of production chains is used. A production chain is defined as the sum of all production and service functions necessary for developing, producing and marketing a certain product (services included) or a group of related products. Beside the production elements of a production chain are those functions preceding and following production, and those necessary to carry out the manufacturing or service processes. The term 'sector' refers to production chain in this way. This approach provides a framework to combine the understanding of the sectoral dimension (production chain) and the regional dimension (production cluster) in a systematic way. Therefore, a production cluster is seen as the spatially concentrated parts of a production chain. In contrast to the pharmaceuticals – biotechnology sector or some segments of ICT and creative industries which are highly concentrated in spatial terms, the EPI (like logistics) in RheinRuhr is more dispersed in spatial terms but have distinctive nodes basing on the concentration of specific functions.



The performance of the EPI

Waste water and air pollution, contaminated soil and hazardous waste have been closely connected to the process of economic growth especially in the Ruhr area over a long period. Since the 1970s we can observe broad discussions about environmental problems and different political measures aiming at the reduction of pollution and contamination. This was the crucial point concerning the rise of the environmental protection industry in the Ruhr Area because these new measures were organized in a way, that we can call the transformation from problems to markets.

To understand the development of the environmental technology in North Rhine-Westphalia we have to keep in mind, that regional suppliers of the traditional production clusters (mining, steel) were able to master new tasks in the context of environmental protection. In this context the development of North Rhine-Westphalian environmental protection industry is of general interest in the discussion of regionally based diversification strategies. It can be explained not only by one dominating technical competence, but by numerous

Waste water and air pollution, contaminated soil and hazardous waste have been closely connected to the process of economic growth especially in the Ruhr area over a long period. Since the 1970s, we can observe broad discussions about environmental problems.

D. Riou/laurif

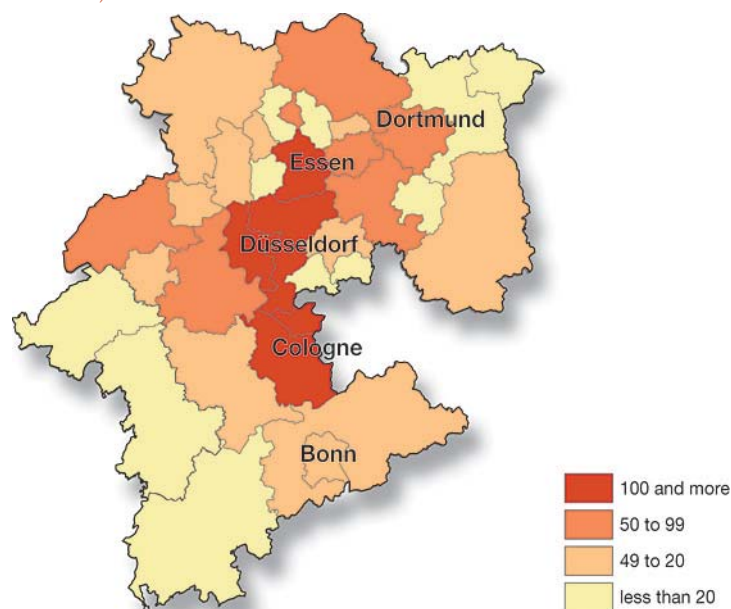
different avenues which helped to join the new markets in a successful way, for instance: a long tradition in waste management especially in scrap collecting for recycling purposes; experiences in the construction of ventilation systems for the mining companies; traditions in cooperation with local authorities, especially in energy supply or water purification; experiences in the transportation of hazardous waste or the availability of deposits and sites for incineration facilities.

The creation of new markets is only one important aspect of the rise of environmental technology in the Ruhr Area. Another decisive aspect concerns a strong spatial interrelation between problem-causing and problem-solving industrial activities. Nearly half of German industrial investment in environmental technologies occurred in

North Rhine-Westphalia, most of it in the Ruhr Area. Therefore, the great steel, energy, mining and chemical companies can be regarded as lead-users which force their suppliers, first of all in mechanical engineering, to develop new technologies for the reduction of pollution, contamination and waste. In this context, the development of own solution for environmental problems in the research departments of the steel-industry, the founding of new specialised companies by engineers from these departments, different modes of externalisation and outsourcing (what is the difference between the 2 words ?) have been important roots in the history of the rise of a environmental technology industry in North Rhine-Westphalia.

The annual entries in the environmental market rose from year to year and expanded since the early seventies. Estimations on the absolute number of companies speak of nearly 1600 firms in North Rhine-Westphalia. The most important EPI sectors are waste management, water and sewage treatment, prevention of air pollution and consulting and planning.

Number of environmental Protection Companies in FUR (adjusted to countries/Kreise)



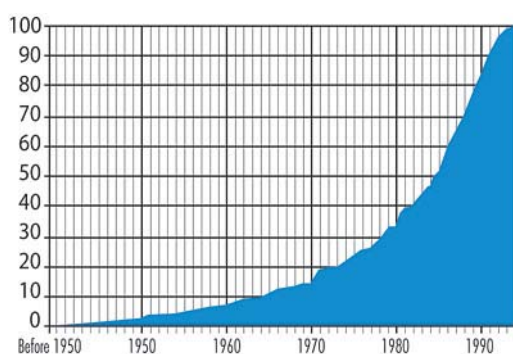
In RheinRuhr (FUR) about 70% of the North Rhine-Westphalian EPI is located. Duesseldorf, Essen, Cologne, Dortmund, Bochum and the counties Mettmann, Recklinghausen and Rhein-Sieg can be regarded as core location of EPI in the FUR. Within the remarkable north-south axis from Duesseldorf to the northern Ruhr area we find local specialisation. In Düsseldorf environmental technologies and consulting is dominating, water management is concentrated in Essen, Muelheim and Gelsenkirchen, waste management and recycling in the northern Ruhr area. But it is not only the rise in absolute numbers of new entries that is remarkable, it is a broad range of diversification, too. Especially since the late eighties, more and more consultance, planning and other service companies have been founded. As a result today there exists in North Rhine-Westphalia a broad range of different

activities and functions related to environmental problems. This also holds true especially in newer fields of EPI which can be counted to the so called production integrated environmental protection.

Today about 110.000 people work in private environmental companies in North Rhine-Westphalia. About 75% of these jobs are located in the FUR area.

The impression is, that in the late 1990ies the dynamic of the EPI has come to an end. There are no more new incentives by environmental law. In some fields like automobile recycling there is no security about the details of regulation and implementation. In other fields like contaminated soil or waste water systems there is a lack of public finances. The rate of new market entries has slumped down and concentration is rising on a global level. Overcapacities and a hard price competition are dominating the market.

New entries in the environmental market



Source: IAT Survey, 1993

Nevertheless, the situation has to do with consolidation, with business as usual, there is no short coming crisis. The level of employment is still high, innovation occurs step by step. And this has to do with both, with company's strategies and with the way of political regulation.

In the long run we can assume a shift from isolated solutions in environmental protection to integrated approaches of ecologically guided planning and producing. No doubt, this alternative solution also will create new markets. But these markets will differ from recent markets for environmental technologies. The integration of advertising, planning, and the construction of new materials and new products will become more important, organisational solutions will be more effective than technological solutions.

The expertise that is needed to develop such new solutions is available in North Rhine Westphalia. The problem is to recombine and reintegrate the given competence. The key problem is that the EPI in North Rhine-Westphalia, and this argument seems to be crucial for the German EPI in general, remains embedded in the overall German innovation system. A strong focus on technological solutions is one aspect. This focus is a characteristic one for German mechanical engineering companies, and most companies that provide environment technology have long standing roots in mechanical engineering. Until today they remain in this tradition and they feel more like mechanical engineering companies than like "green companies". The dominance of fragmented markets is a second aspect. There are ambitious innovations in detail, but these innovations ignore the interlinkages between the different environmental media. And this has to do with a strong price regime, too. As long as the price for depositing or burning waste remains low because of over-capacities, nobody really cares about saving material.

Nevertheless, there are examples for a new way to manage the environment task. So, on the regional level concepts to reduce waste, traffic and energy become more and more important. In this respect, environmental protection does not primary refer to compensating or reducing waste but to avoiding the production of waste. Therefore, the local task of the years to come will not only be the organisation of waste management, but to bring out new activities in order to reduce waste, traffic and energy use in the interest of increasing the level of quality of life.

The EPI cluster and cluster policies

The development of clusters can be differentiated roughly in three crucial phases: a first phase called 'roots' (referring to the question: Why had the FUR better potentials and starting points than other regions to develop a cluster?), a second phase called 'birth/renewing' (referring to the question of effects that initiate a specific dynamic to speed up cluster development) and a third phase called 'take off' (asking for the moment when cluster development brings out its own self-enforcing dynamic).

The EPI has strong roots in the old steel, mining and electricity industries of RheinRuhr in which a lot of competencies useful for air cleaning, integrated process management, recycling, management of material flows and so on have a long tradition.

There are examples for a new way to manage the environment task. On the regional level, concepts to reduce waste, traffic and energy become more and more important.

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Together with supporting demand factors relating to the high population density on the one hand and lead users on the other hand, the reorientation and renewing of those established competencies have been important in the EPI. Cluster development first of all depends (as all economic growth) on demand. In the case of the EPI a rise or change of demand was initiated through the rise of environmental policies, the decision of more and more companies (especially the high contracted in the Ruhr) to concentrate on the core-business and source out peripheral functions like waste management, and general changes in consumer demand due to value change towards more ecological thinking.

The take-off of the EPI-cluster took place in the 1980s. Environmental protection had faced a boom until the early 1990s, actually it is stagnating on a high level, further expansion is expected, but will be strongly shaped by the strength and modes of public regulation. At present, the EPI-cluster can be characterised as deep and established.

Discussing the strength and the weakness of the EPI cluster in RheinRuhr we can point out that this polycentric agglomeration seems to be a very good seedbed to bring out local specialisation, especially for the EPI (but also for the creative industry and logistics). Secondly, the company's competencies and culture has to be mentioned. A lot of long established companies have provided an excellent starting point for diversification and managing innovation. On the other side the weakness is that companies that shape new markets remain embedded in traditional cultures and run danger to manage its process in a way that is not optimal. Finally, the population density and the related great local markets are

a strength without any doubt, but again the coin has a second side. Some companies run danger to remain in the regional local market and therefore active globalisation strategies are neglected. This is the case in some parts of the EPI.

Cluster Policies in Germany are very young and still in an experimental situation and takes place in a specific conceptual context. Concerning this context, we have to keep in mind that cluster policies in Germany are strongly related to technology policy (innovation) and labour market policy (competence). Cluster policy in a conceptual strong meaning is still suspected to be interventionistic and has to be dammed, especially by the chambers of industry and commerce as one of the most important players in local and regional policy. No wonder therefore, that there is neither an example of a cluster in RheinRuhr that can be regarded as a result of cluster policies, nor there are established routines in cluster policies. So also the EPI-cluster is the result of self organising economic restructuring. Nevertheless, policies from the local to the European scale did influence or shape the way and speed of restructuring and in this term a lot of different policies are relevant also for cluster development. The most important level towards cluster policy is the North Rhine-Westphalian state government. Similar to other cluster we find state government initiatives in some parts of EPIs. Concerning the FUR-level, the key challenge is not to bring out new activities but to co-ordinate the fragmented activities in a lot of sub-regions and cities. However, just in fields like EPI (or logistics) regional projects have been initiated some years ago, so the coming activities can benefit from these experiences.



Media cluster in London

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In the competitive process between urban regions specific urban assets play an increasing role (Gordon, 2001). The sharp discrimination between urban regions in relation to the quality of these assets fosters regional and urban economic specialisation and attaches particular activities to particular places. Media is the exemplar of a growing sector, which mainly appears in the largest metropolitan areas and tends to be tightly concentrated in their central quarters. The latter can be seen as an indicator of differentiation of specific urban assets not only between urban regions but also within them.

Locations of the media industry

Historically media activities show persistent preference for the location in the largest metropolitan areas. Over the past century media has been successively transformed by the vertical integration of the 1920s and flexible specialisation in 1980s as well as technical changes that have not just revolutionised the existing industry but created whole new media sectors. Technical innovation and flexible specialisation are the chief forces that have reshaped the industry into its present distinctive cluster. The same processes at approximately the same time transformed media activities in the other largest urban areas such as New York, Los Angeles, Paris and Tokyo (London - New York study, 2000).

London plays an important role as a major European media centre: The graph below scores Europe's major cities in terms of the representation within them of major Technology, Media and Telecommunications

(TMT) corporates. Major capital cities attract the lion's share of TMT representation as pan-European organisations usually seek representation in capital cities before expanding further into foreign countries (Cohen, 2001). London is the main centre of media in the UK. In 1997 235 000 people worked within the media cluster in London. Among them 40 000 worked in advertising, 52 000 - in publishing, 46 000 - in telecommunications, 28 000 - in radio & television and 25 000 - in film (London - New York Study, 2000). Nearly a third of all the UK's media jobs are based in London and a far higher proportion of key sectors. For example 75% of all news-publishing jobs, 50% of jobs in radio and television, 40% of jobs in the reproduction of sound and video recordings and computer media and 80% of film industry employment in the UK is located within London and its surrounding region (London - New York Study, 2000).

The Table here after represents the districts where media industries are especially developed. Definitions of the media industry vary but our decision was to show the main media industries typically concentrated in

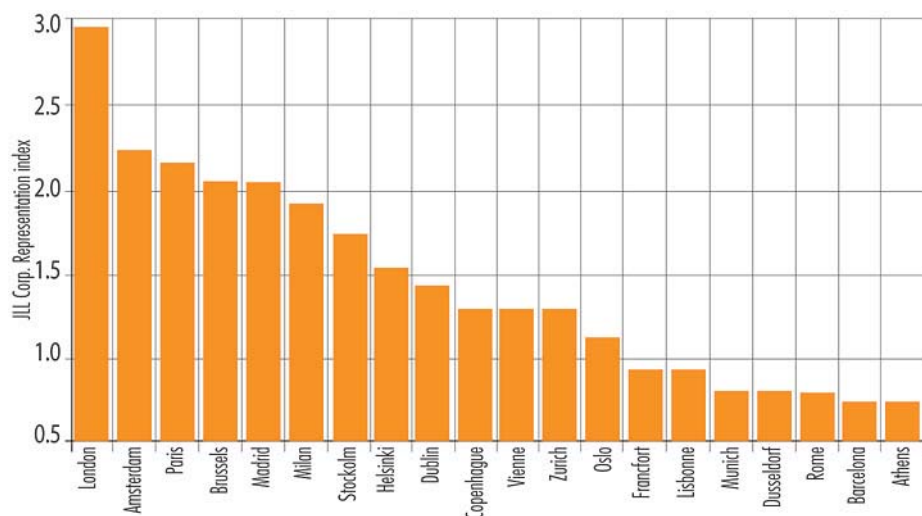
the largest cities¹. The localisation quotient (LQ)² has been chosen to show the importance of the industry in the district ($LQ \geq 4$ is shown in the table).

The degree of localisation of different industries varies: for example employment in Motion pictures and video production is 36 times more common in the district in which it is most strongly represented (South Buckinghamshire) than it is in the country as a whole. The very strong concentration of this industry in particular areas reveals its specialised and highly selective approach to location. Telecommunications is less locationally concentrated: in the district in which it is most over represented – Hertsmere – its representation is 'only' nearly 10 times more of its representation in the country as a whole. Not only LQ by itself is an important indicator of industry's level of localisation but also a number of media industries localised in the same district, which gives some primary indication of clustering. Proximity of districts of localisation to each other is important as well, as in the case of six Inner London districts which shows a geographical scope of the cluster's core.

(1) The following industries were selected, the Industrial Classification Code is shown in brackets: Motion picture & video production (9211); TV & radio activities (9220); Advertising (7440); Telecommunications (6420); Publishing of journals & periodicals (2213).

(2) The location quotient (LQ) is a standard measure of concentration. It measures the relative concentration of a given industry or sector in a region or area. It is defined as: $LQ = (E_{ij} / E_j) / (E_{in} / E_n)$ or $LQ = (E_{ij} / E_{in}) / (E_j / E_n)$, where E_{ij} is employment in industry i in region j , E_j is total employment in region j , E_{in} is national employment in industry i , and E_n is total national employment. The LQ measures a region's share of a given industry's national employment relative to the region's share of total national employment. It is a measure of relative concentration. An LQ greater than 1.0 indicates that there is an above average proportion of employment in a given industry in a given region. Conversely for an LQ of less than 1.0 (Business Clusters in the UK, 2001).

London's position in the localisation of media industries (Critical mass Index). Corporate representation: Technology, Media and Telecommunications (TMT).



Source: Jones Lang Lasalle Research, 2000

Location (LQ) of some media activities in selected English districts (LQ is more than 4 for each industry)

Region		Zone	Local Authority District	Motion picture and video production 9211	TV and radio activities 9220	Advertising 7440	Telecommunications 6420	Publishing of journals and periodicals 2213
1	GL	Inner London	Camden	7.58	4.87	4.29		6.40
2	GL	Inner London	Hammersmith and Fulham	4.76	41.57			7.86
3	GL	Inner London	Kensington and Chelsea	5.74				
4	GL	Inner London	Southwark		4.94			5.51
5	GL	Inner London	Tower Hamlets	5.15				
6	GL	Inner London	Westminster, City of	10.09	6.43	6.72		4.45
7	GL	Outer London	Hounslow		10.02			
8	GL	Outer London	Richmond-upon-Thames	4.78		4.18		7.19
9	GL	Outer London	Sutton					10.14
10	SE (FUR)	Berkshire	Slough				5.77	
11	SE (FUR)	Berkshire	Wokingham				5.93	
12	SE (FUR)	Kent	Sevenoaks					5.84
13	SE (FUR)	Kent	Tonbridge and Malling					5.05
14	SE (FUR)	Oxfordshire	South Oxfordshire			21.86		
15	SE (FUR)	Surrey	Elmbridge			10.11		
16	SE (FUR)	Surrey	Spelthorne	9.07				
17	E (FUR)	Buckinghamshire	South Buckinghamshire	35.66				
18	E (FUR)	Hertfordshire	Hertsmere				10.05	
19	E (FUR)	Hertfordshire	Three Rivers	5.30				
England				1	1	1	1	1

Employment (in thousands) of some media activities in selected English districts

Centre (core) of the FUR	9.5	35.7	41.4	68.2	28.0
Periphery of the FUR	2.2	2.3	10.0	35.0	6.3
Total FUR	11.7	38.0	51.4	103.2	34.3
Share of the centre, %	81.3	82.5	80.5	66.1	81.5
England	15.0	57.7	90.3	215.8	54.0
United Kingdom	15.8	68.3	94.8	235.5	59.8
Share of the FUR in England, %	78.2	65.9	57.0	47.9	63.5

Source: NOMIS: 2000: Annual Business Inquiry: Workplace Analysis

70% of firms engaged in activities associated with film and TV production, are in and around Soho, as London Post Society.

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The London FUR (as defined for the GEMA-CA II project) plays a significant but uneven role in hosting different media activities. It accounts for over three quarters of employment in film production, some two thirds of English employment in both TV & radio activities and Publishing of journals; nearly 60% of employment in Advertising and only just less than half of English employment in Telecommunications. In all these sectors employment is heavily concentrated in the core: indeed in four out of five more than 80% of the jobs are in the core.

Even within the FUR core media sectors are highly concentrated in some specific quarters, which provide better conditions for the development of the industry than others. Although pockets of the industry - particularly the larger consolidated units (such as the BBC) in film and TV production - are based in west London, the main body of the industry is clustered in central London, mainly in Soho (within the City of Westminster), Covent Garden and Fitzrovia. The film industry, for example, has grown up around west London, with the location of large-scale studios in Ealing and Shepperton, and immediately outside the London core, in Hertfordshire.

Location of some media activities in the core of the London FUR (First 10 in every industry, LQ for London FUR)

N	Name of a Ward	District	Motion picture and video production 9211	TV and Radio Activities 9220	Advertising 7440	Telecommunications 6420	Publishing of journals and periodicals 2213
1	Brunswick Park	Barnet				27.49	
2	West Hendon	Barnet			19.78		
3	Castlehaven	Camden	18.51				
4	Chalk Farm	Camden		16.76			
5	Hyde Park	City of Westminster			11.02		
6	Knightsbridge	City of Westminster			14.33		
7	West End	City of Westminster	12.05				
8	Molesey East	Elmbridge			60.61		
9	Grovelands	Enfield			15.08	15.61	
10	Ravenscourt	Hammersmith and Fulham		16.55			
11	Starch Green	Hammersmith and Fulham	13.35				
12	White City and Shepherds Bush	Hammersmith and Fulham		107.45			
13	Wormholt	Hammersmith and Fulham		104.30			49.98
14	Hillside	Hertsmere				17.46	
15	Chiswick Riverside	Hounslow		20.06			
16	Isleworth North	Hounslow		33.32			
17	Gillespie	Islington	23.62				
18	Hampton Hill	Richmond Upon Thames					21.68
19	Central	Slough				16.27	
20	Sutton South	Sutton					58.19
21	St.Mary's	Tower Hamlets	24.15				
	Total FUR		1	1	1	1	1

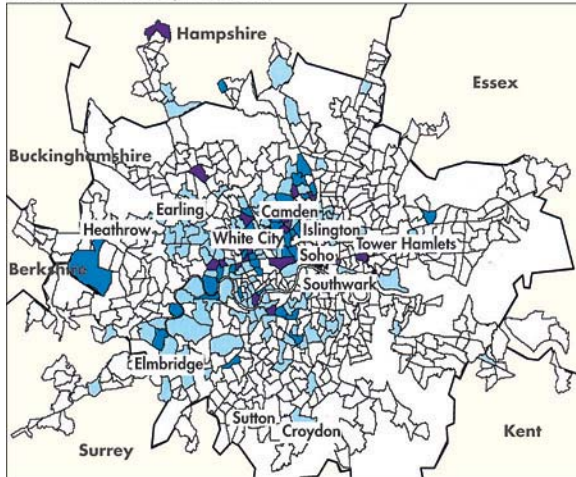
Source: NOMIS: 2000: Annual Business Inquiry: Workplace Analysis

However, related film activities - special effects, distribution, casting - have concentrated mainly in Soho. Many creative support services and suppliers have concentrated around this relatively small geographical area to meet the needs of the nearby advertising agencies, publishing houses and film and TV companies. (London - New York Study, 2000). 70% of firms engaged in activities associated with film and TV production, if they are in the London core, are in and around Soho (Nachum & Keeble, 1999). The entire chain of production - film production, postproduction, editing, film distribution and sales agents, design, photography, music and advertising - is available in this area. There is another, smaller concentration in adjoining Camden. Advertising is localised in Westminster, Camden, Kensington and Chelsea, Barnet and Kingston-upon-Thames. Publishing is heavily concentrated in Inner London with book publishing in Camden, Westminster and Islington; newspapers in Islington, Tower Hamlets (along with printing), Southwark, Kensington and Chelsea; periodicals and journals in the City, Camden, Hammersmith and Fulham, Islington, Westminster, Tower Hamlets and Sutton. There are also some other significant locations including areas close to Heathrow airport and Croydon.

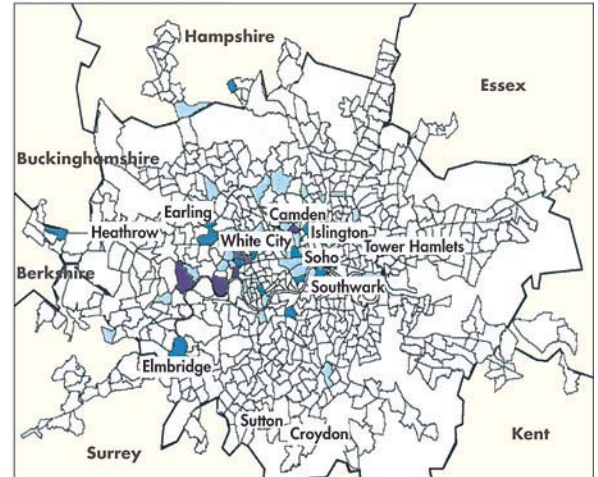


Location of the media industry in central London

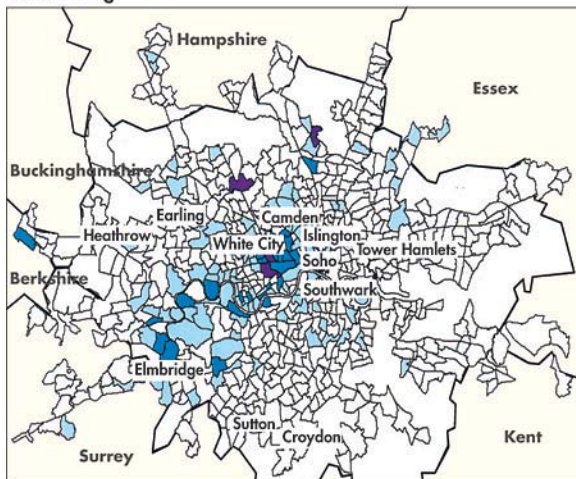
Picture and video production



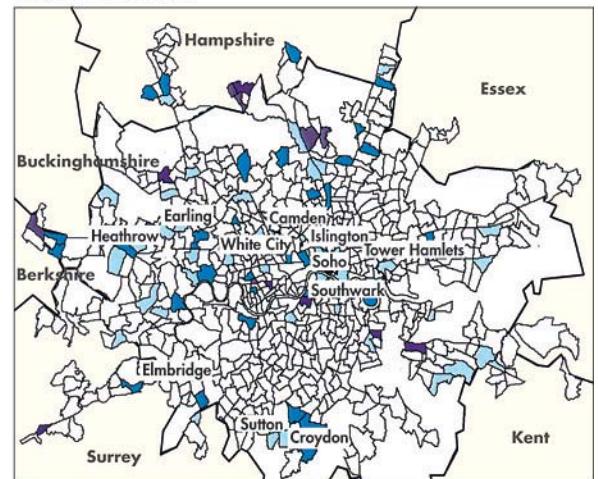
TV and radio activities



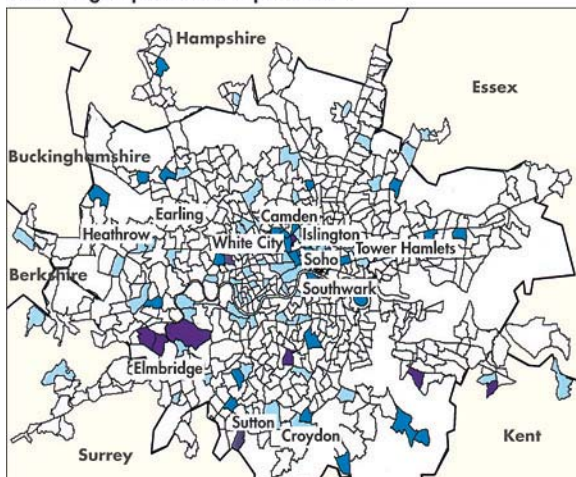
Advertising



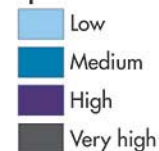
Telecommunications



Publishing of journals and periodicals



Specialisation level



Explanations: The nature of media production

The concentration of media activities in the largest city in the country provides both an excellent illustration of, and is explained by economies of agglomeration. Certain elements of the media industry – notably the HQs and sectors requiring a wide range of cultural inputs and/or access to key types of infrastructure – are tied to locations in the largest cities: usually national capitals or globally linked cities. Other firms, their suppliers or associated industries (even catering firms may be specialised in servicing media clients and the best known legal firm specialising in media related issues is located in Covent Garden – outside the conventional legal district) grow up around them. However the more interesting question is the geographical clustering inside the city, the competitive advantages generated by close – walking distance in many cases – proximity when the price that is paid for such proximity is congestion and high rents.

The general mechanisms by means of which firms interact externally benefit from geographic proximity and are implemented less effectively at a distance (Marshall, 1890, Porter, 1990, Scott 1998, Storper 1997) but the geographical concentration of such 'clusters' varies very considerably. Once established such clusters create a cumulative effect which reinforces their attractiveness. The presence of a concentration of firms in a sector characterised by such localisation economies itself provides a locational attraction for other firms in the sector. The main external linkages identified in this literature include: interaction with the labour market; links with external supply

of intermediate inputs; contracting and sub-contracting arrangements; interaction with customers; networking, collaboration and competition with firms and organisations other than customers and suppliers; collective learning and creativity.

It is easy to see that certain elements in the media cluster are fastened and highly immobile in terms of their location. They may be producers in their own right but they are also important customers – such as the BBC, Channel 4 or major film distributors. These are necessarily located in Central London. In the locational decision making of their supplying firms orientation to their clients or customers is important.

*'In the UK there are only few clients, only 5 terrestrial channels. 10 or more years ago clients came to the office. Nowadays as the industry has settled down, they don't come to see us, so we go to visit them. My office is on the Central line (the underground line connecting Soho and Shepherd's Bush), so it is easy to go to the BBC at White City, Channel 5 is a walk to Covent Garden and I can walk to Channel 4.'*³

Because of the nature of the final product, information and the dominance of tacit (or uncodified) knowledge in the industry and in its creative processes and the consequent need for face-to-face interaction (traded and untraded) between highly paid principals and very highly paid skilled labour (such as star actors or technicians) the production process has a substantial cost advantage from dense spatial clustering. Because of the high value added at critical stages of production – when the film or tape gets in the can, for example, and the consequent cost advantage of moving the product through its stages of processing as quickly as possible to generate revenue and minimise financing costs, there is also a substantial advantage for the ancillary establishments in the interacting sectors to densely cluster.

In 1996, over 60% of the labour force in the film industry were self-employed freelance workers.

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(3) Quotes here and elsewhere are from the interviews conducted as part of the GEMACA II Project during the autumn of 2001 with key decision makers in selected media firms in Central London.

Thus production houses need immediate proximity to post-production houses which – because of their dependence on high capacity access to the Internet (Sohonet) – have constrained, mainly centralised locations. In turn the providers of other services: graphics, photographers, agencies, specialised law firms, etc. also have to cluster. According to Nachum & Keeble (1999) the share of service purchases taking place in Soho in total external purchases is 90%.

'We are here because of Soho, which is only 15 minutes walk away. We edit most of what we have done there. We used to do cutting in house before but now editing machines cost £50 000. Now we hire equipment in Soho on a week-by-week basis.'

Given the low level of internal economies of scale in many of the constituent sub-sectors these various establishments may be quite small and operate with a constantly changing team of labour assembled for each project. In 1996 over 60% of the labour force in the film industry were self-employed freelance workers (Skillset, 1997). This labour is of high quality, highly specialised and highly paid, so access to a large labour market provides a substantial cost advantage. The availability of this large labour force is critical in determining the location of the industry: 90% of employees are recruited locally (Nachum & Keeble, 1999, 2000). Only very specific labour skills are recruited from outside London let alone globally (firm directors). In cities of a rank and with a spatial form such as London – and it is typically only in such large cities that such a specialised and skilled labour force is available, access to the labour market is optimised with a central location. This re-enforces the tight clustering of the media sector in central parts of the city. The JLL study referred to above (Cohen, 2000) found access to major public transport nodes was the most influential loca-

tional factor in all the European media centres it surveyed.

The fundamental feature of the media industries is the need for constant innovation and creativity. The innovative capabilities, which are the lifeblood of these activities, are derived from the creative capabilities of individual people.

'Personal abilities but not educational qualifications are important for employability in the industry.'

Media firms also value the informal linkages and social processes that accompany the selection of local resources. Personal contacts, referral by colleagues, word of mouth are the main mechanisms used to recruit employees or select service providers. Face-to-face contacts most often take place informally and particular Soho clubs and pubs provide these informal meeting places, acting rather as 'hiring fairs'.

The cultural potential of London is also extremely important for the media industry. The ready access to archives, museums and libraries, the concentration of other businesses and agencies involved in the industry, especially the theatre, the arts and universities is not only a resource but also helps to attract innovative people from the whole country and abroad. So, too, do the cosmopolitan and bohemian lifestyles.

Clustering and growth, however, produce dynamic forces which tend to decentralise those elements of the cluster which gain least from proximity. They produce rising relative rents and operating costs in the most central parts of the cluster which in turn generates re-location. Not only high rents but also other factors challenge the stability of media cluster in Soho/Noho. The serious downturn in the advertising industry reduced the funds available for programme making. Less important issues such as the high costs of shooting in London, in combination with

extremely expansive infrastructure in general may have slightly reduced the attractiveness of Central London locations.

[From the managing director of a firm which had just re-located]'. Now just moved into the district. At the end of 7 years rents had gone up. I needed to look at the effect on profits. Looking to go west and possibly east. It will not destroy our relationship with Soho. Electronic mail is an extraordinary thing.'

Although the area in and immediately around Soho continues to be the dominant centre for the media, there is some tendency for companies to decentralise, at least locally. This is partly driven by considerations relating to business premises. Although when the cluster first began to grow, Soho represented some of the cheapest space in central London, the very success of the cluster has substantially driven up rents. Businesses can get significantly more space for less outside the main central area. In addition there is simply a limited supply of suitable space and an increasing shortage of the right sort of space in Soho. These factors provide a force encouraging firms to decentralise but there are other changes tending to reduce the advantages of a Soho location. The move of Channel 4 to Victoria in 2000 took it beyond walking distance, so films and documents are now delivered by courier. Since a location in Soho or Fitzrovia no longer provides walking access to one of the most important clients some production houses are simply re-considering their locations. In addition the maturing of the cluster so that networking is more established, coupled with increasing use of email, means that companies have slightly less advantage from being in Soho. It is possible to be successful outside the immediate area. Decentralisation appears to be local however – to Notting Hill, Clerkenwell or Islington, for example.



Trends: Going Digital

Digitalisation of the media is likely to have a major effect on the media cluster, as it looks as if the BBC and commercial broadcasters will switch their entire networks to digital platforms over the next few years despite the recent problems with ITDigital. More generally the impact of digitalisation on firms involved in the cluster has already been and will be different in its influence on the balance of advantages of a central position compared to the disadvantages of high rents. Some firms, especially relying on new technologies and communication and transactions through the Internet and working internationally are less critically attached to the Soho location as a node for face-to-face contacts. But even for them the physical accessibility of customers (e.g. TV headquarters) and supporting businesses, agencies and archives is extremely important. The same technology-oriented firms enjoy the high capacity electronic pathways (Sohonet) which were created here aimed mainly at media production.

'It will be perfectly possible to work outside London and still do a good job. We filmed in 26 countries last year. It is extremely easy to keep in touch with mobile phones and email. For example, recently we did the rough edit in UK and went to Japan for postproduction. We did on line editing and the dubbing came back and we shipped it off to America. It has become that easy. I won't say it is cheaper.'

'Our researchers use the Internet a lot, the London Library, etc. I can call up footage in archive in Washington just as easily as in London. We necessarily draw on material from all over the world. We get it on the screen.'

Over recent years the growth of the new/digital media industry has led to the emergence of new geographical centres specialised in new activities. An important one is Clerkenwell, which is located on the 'City Fringe' between the West End and the City of London. Originally drawn by the availability of spacious, lower cost refurbished old light industrial premises, Clerkenwell has now become a hub for specialised media businesses (for example web page design) with a network of suppliers and support and social infrastructure.

Future problems and opportunities

There was a general opinion amongst firms interviewed that clusters cannot be created by government but they can be supported through the development of infrastructure, support for business networking or improvements in education. The following is a brief summary of some of the issues that emerged relating to governance:

- The Thatcher broadcasting act broke up old scale monopolistic companies causing outsourcing in search of lower cost. The specific form in which Channel 4 was created (as a programme publishing rather than production broadcaster) was very important in the development of the cluster.
- Financial support is not essential for media industries but there are some ways of supporting the industry (lottery money; grants from the Department of Trade e.g. for travelling, etc.).
- There is no contact with local government in any way at all.



*London is the main centre of media in the United Kingdom
75% of all news-publishing jobs.*

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- Most of the legal frameworks firms operate under are designed for other industries and media firms are not well provided for by government.
- Education only indirectly provides for the media industries.
- The new cluster organisation of the media industries based mainly on many small producers brings pluses and minuses: on the one hand the sector performs better and is very flexible (Business Clusters in the UK, 2001); on the other there is instability in employment and a noticeable decrease in the quality of production.

'Competition didn't lead to higher quality, quite the opposite... It led to the loss of several genres such as contemporary drama or creative documentary. Instead there is a constant supply of soap and quizzes. TV has withdrawn from contributing to the intellectual life.'

Soho is a good example of the continuing comparative advantage of the capital city of a culture with continuing world reach. There is a considerable historical inertia that benefits the media industries in London. Added to this is the sheer concentration of activities that forms a critical mass.

The revival of the film and television industries can be linked to structural and organisational changes in the UK regulatory system: most crucial has been the outsourcing of programme production. This has had an important impact upon the locality of Soho as a production centre, as well as on the industry nationally. Soho's facilities have been turned into a resource for the new production companies. Previously they were co-ordinated in-house. Now the fragmentation of the industry requires other forms of co-ordination. Many of these communications involve personal contact. The small independent producers are unstable. More generally the proliferation of freelance workers are also precarious. There is the day-to-day problem of work and unemployment and pay. Then there are the long-term effects on training. Added to this are the problems inherent in all SME businesses, regardless of sector: short time horizons, poor business development, lack of R&D, and poor management skills (Pratt, 1998, 2000).

In a technology driven industry the speedy adoption and use of technologies can determine market position. New technologies are becoming increasingly expensive. The problem is that some technologies are clearly of collective benefit and would be sensible to provide on a collective basis. However, the development of a trusting business culture that would facilitate this seems at odds with the current cut-throat business (Pratt, 1998, 2000).

In an industry as dynamic and flexible change is rapid. New firms are founded all the time and the centre of gravity of the industry – both geographically and in terms of what it is doing and the exact markets it is serving – are changing all the time. In such a climate even established centres such as Soho are vulnerable and must compete and innovate just to maintain their position. Yet there is still the advantage of critical mass and substantial inertia.

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The Financial Services sector in Dublin

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The International Financial Services Centre (IFSC) in Dublin is an exercise in integrated urban renewal and economic development. The successful development of this sector is regarded as a flagship project in the general urban renewal in the Dublin Region. With a total of c. 15,000 persons now employed in this economic cluster, its importance to the city in terms of both the levels of employment generated and increased tax revenues is critical.



The Financial Services sector is the dominant employer in the Dublin FUR, accounting for 155,273 persons in 2000. Financial Service companies tend to be very strongly central in spatial distribution and are concentrated at the Central Business District of Dublin. In particular, very pronounced clusters of Financial Service firms exist in the traditional office core of Dublin 2 but the International Financial Services Centre (IFSC) in Dublin Docklands displays a very prominent concentration of Financial Service operations. There is little Financial Service activity outside the Central Business District of Dublin, with the exceptions of the important towns of Naas, Navan and Drogheda in the FUR.

The Dublin IFSC experience, an induced development process

To gain an understanding of the Financial Services sector, structured interviews were carried out in the autumn of 2001 with representatives of the sector operating in the International Financial Services Centre in Dublin and selected policy makers. A structured series of formal questions on the sector and the companies' operations was followed by a broader discussion on the competitive strengths, weakness, opportunities and threats of Dublin as a location for their business operations. Company sizes in the IFSC range from small operations employing 10 people or less to major business employing 500 to 1,000 persons. The interviews were carried out with the larger operations located in the centre.

The Dublin IFSC experience is of particular interest as it represents an induced development process which is now maturing and shows signs of having attained a strong critical mass needed to sustain the long-term future of the sector/cluster. The future development of the IFSC remains a primary component of the Integrated Master Plan of the redevelopment of the Dublin Docklands.

Over one third of the jobs at the IFSC are involved in funds administration. Investment decisions continue to be primarily made in London and New York, with Dublin functioning as a back office and support centre. The financial services sector displays continued strength in spite of the recent international recession, with certain sectors, including IT and aviation, particularly exposed to the downturn.

The IFSC establishment

The International Financial Services Centre is located on the north quays of the River Liffey, immediately east of the central business district of Dublin and special planning arrangements and incentives apply to this area. In 1986 the Custom House Docks Development Authority was established and granted flexible planning and financial powers in order to secure the re-development of the area. The original defined site consisted of a large derelict port area formerly owned by Dublin Port and Docks Board and two further expansions have occurred to the IFSC since the commencement of its development.

The International Financial Services Centre is located on the north quays of the River Liffey.

C. Tarquis/iaurif



Following an international competition, a Master Plan for the comprehensive redevelopment of the area was drawn up with a consortium of private developers establishing the Custom House Docks Development Company to develop the site. A pivotal component of this development plan was the creation of the International Financial Services Centre (IFSC) along with office, residential, retail, hotel and museum facilities costing an originally planned total of £400 million (508 million euro). The major stimulant to the development of the IFSC has been the making available since 1987 of a special corporation tax regime for occupiers involved in international financial services conducted in non-Irish currencies. Instead of the normal corporation tax rate of 40% applying to the profits of such business, a 10% tax rate applies. Development at the IFSC by 1992 involved the completion of the IFSC and ancillary office space totalling 40,000m² at a cost of £120 million (152 million euro). Following a period of little new development, a second, more rapid and sustained phase of development took place at the IFSC after 1994 and by 2000 over 8,000 persons were directly employed in over 485 international financial companies and a further 8,500 employed in related firms, with mutual funds under management valued at \$345 billion (387 billion euro). The state has a role as a participant in the development process and resulting profits. Under the confidential master agreement, the development is funded by the developers who are guaranteed a specified minimum economic return. Surplus development profits are then shared between the developer and the state on a 60/40 basis in favour of the state with the developers also paying a lump-sum premium to the state.



The Custom House Docks Development Authority was established in 1986.

C. Tarquis/laurif

Interviews with participants in the development process indicate that re-negotiations had occurred on the above arrangements with subsequent alterations in favour of the development consortium. Details of such arrangements and premiums paid are not made officially available and are therefore difficult to quantify. The original direct costs to the state of the scheme can, however, be estimated. The site was purchased and the development authority established with £13 million (16.5 million euro) provided by the government. Essential infrastructural

development to the site, including local authority improvements and housing the telecommunications centre and power supplies are estimated to have cost the public bodies involved in excess of £20 million (25.4 million euro). The cost of the property development incentives at the site are high relative to other developments in Dublin due to the availability of the full rate of Capital Allowances of Custom House Docks. The provision of incentives, in particular the low rate of corporation tax on profits, has undoubtedly been a critical factor in the success of the IFSC.

Summary of Interview Results

In general the results of the interviews showed a largely positive view of the IFSC. Strengths included the low corporation Tax Rate, International business culture developed in Dublin, the quality of the educated workforce and the general environment of the city. By 2001 it is estimated that approximately 8,500 persons were working directly in the IFSC with a similar number in related services with over 500 international financial institutes operating including a representation of a majority of the world's leading banking and insurance groups. The nature of the custom-built facility and the support structures including a modern IT infrastructure and regulatory environment were regarded as critical. All interviews also identified the strong political support of successive administrations as important along with the existing strong domestic financial services support.

The competitive cost base of Dublin as a location is assisted by the regime of Taxation measures in place since the inception of the IFSC. A 10% corporation tax rate has been in existence since the 1980s until 2010 when the new corporation tax rate applying to entrants from 2003 of 12.5% will apply. In addition, urban renewal incentives including capital allowances for investors and rent and property occupation tax reliefs for occupiers were of major assistance in the physical development of the project. Respondents regarded such incentives as supportive but not critical.

The approval process for companies locating in the IFSC demonstrates the involvement of the various state agencies in this centres development. Licensing and tax approval involved IDA Ireland and certification involves the Irish Central Bank and Department of finance. The lead role in the development of policy and co-ordinating future development has involved specialised working groups with industry and policy inputs has been taken by The Department of the Taoiseach (Prime Minister).

Respondents indicated that while the inception of the IFSC had been a state agency induced process that the centre had now matured and was benefiting from the synergy effects of the cluster location. The international marketing of the centre was important in establishing Dublin as a financial services location internationally. Activities now developed include:

- Corporate Asset Financing and Leasing
- Corporate Treasury Management
- Fund Management and Investment Management
- Futures and Options Trading
- Securities Trading
- Insurance Assurance

The issue of local economic linkages featured in all respondents' replies as a high priority. For this sector face to face contact is deemed absolutely essential for customer/client and supplier relationships. Such relationships are viewed as essential for the availability of localised infrastructure and support services. The recruitment of labour is often based on contacts within the IFSC and key labour skills are recruited often from adjacent companies. This street level contact is of considerable importance as is the air access links of Dublin to other business centres globally. An additional feature of the cluster mentioned was that it creates the capacity to gain opportunistic or windfall business with clients visiting neighbouring businesses.

The future prospects for the IFSC are that it should build on its capacities as a strong administrative centre. The major decision making in financial service transactions were regarded by respondents as remaining over the longer terms in London and New York. The role of Dublin therefore in this sector is to supplement its existing role by stronger developments in key niche areas such as treasury management. While confident of future prospects with the IFSC as currently operating, concerns were expressed as to the competitive position of Dublin in terms of its general urban environmental quality including transportation and housing.



North Western Metropolitan Regions in figures



D.Lacombe/aurif

	London		Paris		RheinRuhr		Randstad		RheinMain		Bruxelles		Birmingham	
Area (km ²)	12 840		19 681		11 485		5 973		7 431		7 233		3 351	
	1991	1997	1990	1999	1992	1997	1990	1999	1992	1997	1990	1999	1991	1997
Population (thousands)	12 519	13 231	11 418	11 754	11 615	11 697	6 466	6 975	3 877	4 009	3 625	3 668	2 996	3 069
Share national population (%)	22,1	22,9	20,1	20,1	14,6	14,5	43,2	44,3	4,9	5,0	35,9	35,9	5,3	5,3
Density (inhab./km ²)	975	1 030	580	597	1 011	1 018	896	967	522	539	501	507	894	916
Source : Censuses														
Structure by age		1997	1990	1999	1991	1999	1991	1999	1991	1999	1992	1999		1999
Less than 25 (%)		32,1	34,0	32,9	27,5	25,6	32,6	29,7	27,3	25,9	31,1	29,9		33,9
25 to 64 (%)		54,5	54,5	55,0	57,2	57,4	54,0	57,1	57,3	58,8	53,4	53,8		51,3
65 and over (%)		13,5	11,5	12,1	15,3	17,0	13,4	13,2	14,9	15,3	15,5	16,3		14,8
Level of education (25 to 59)		2000	1993	1999	1992	1999	1991	1999	1992	1999	1992	1999		1999
Higher education graduates (%)		32,8	26,4	31,3	16,1	19,7	23,9	30,0	20,2	26,4	27,2	32,5		20,7
Medium (%)		50,5	38,3	34,9	54,9	57,5	36,5	38,7	49,2	54,4	31,1	31,5		51,6
Low (%)		16,7	35,3	33,8	18,3	22,8	39,6	31,3	15,9	19,2	41,2	36,0		27,6
Labour force (thousands)	1994 6 871	2000 6 692	1994 5 346	1999 5 471	1994 5 614	1999 5 542	1994 2 921	1999 3 210	1994 1 811	1999 1 814	1994 1 482	1999 1 542	1994 1 472	2000 1 430
Total employment (thousands)	6 164	6 349	4 737	4 890	5 079	5 105	2 673	3 086	1 696	1 700	1 315	1 399	1 299	1 324
employment rate (%)	67,0	71,3	63,0	64,4	60,5	61,3	58,1	65,5	67,5	67,0	55,9	59,5	64,9	66,6
Males (%)	73,9	78,7	68,5	69,4	72,4	71,4	70,6	76,5		75,2	65,8	66,9	71,4	72,9
Female (%)	60,0	63,9	57,6	59,5	48,6	51,2	45,4	54,3		58,8	46,0	52,1	58,2	60,1
Part time employment (%)	19,5	21,3	11,2	13,1	13,7	25,2	27,1	31,0	15,9	20,1	12,4	14,8	23,5	23,9
Hommes (%)		8,5	4,5	4,9	2,4	6,0	10,3	12,2	3,8	5,3	2,9	4,4		13,0
Femmes (%)		37,4	18,9	22,2	30,6	51,7	53,7	57,6	32,8	39,0	25,7	28,2		37,4
Activity sectors	1991	1998	1992	1999	1990	1999	1994	1999	1994	1999	1992	1999	1991	1998
Agriculture (%)	ns	ns	0,7	0,6	1,2	1,4	2,9	2,1	1,4	1,1	1,9	1,5	ns	ns
Industry (%)	14,5	11,6	18,9	15,1	33,4	25,9	13,3	11,4	28,5	23,1	18,5	14,6	29,6	26,7
Construction (%)	4,0	4,0	6,6	5,2	6,0	6,7	5,5	5,7	5,4	6,2	5,9	5,5	5,0	4,3
Services (%)	81,6	84,3	73,8	79,1	59,4	66,0	78,3	80,8	64,7	69,6	73,7	78,4	65,4	69,0
Unemployed (thousands)	1994 707	2000 343	1994 609	1999 580	1994 535	1999 435	1994 248	1999 124	1994 115	1999 127	1994 167	1999 156	1994 172	2000 106
Unemployment rate (%)	10,3	5,1	11,5	10,6	9,6	7,9	9,3	3,9	6,4	7,0	11,3	10,1	11,7	8,4
Unemployment rate among (%)	16,4	12,2	23,3	22,1	11,2	9,9	13,6	6,9	6,7	8,6	29,0	25,9	15,6	15,0
Proportion of long-term unemployed (%)		30,9	40,0	45,1	47,1	50,0	51,4	54,1	34,5	49,5	58,5	63,9		32,1
Source : Labour Force Surveys & EUROSTAT														
Production		1999		1999		1999		1999		1999		1999		1999
GDP (millions euros)		413 156		395 206		302 412		185 279		132 674		96 442		55 920
GDP / full time equivalent job (euros)		69 804		78 329		71 624		62 376		79 451		71 856		53 676
GDP / inhabitant at PPS(euros)		27 434		31 811		24 200		27 374		30 956		26 196		19 787
Contribution to national GDP (%)		30,2		29,3		15,3		49,6		6,7		40,9		4,1
Volume growth GDP 1995-1999 (%)		18,2%		9,4%		3,9%		18,0%		5,3%		13,2%		5,5%
Source : EUROSTAT														

	Manchester		Lille		Glasgow		Antwerpen		Liverpool		Dublin		Edinburgh	
Area (km ²)	2 087		2 662		3 177		2 286		828		3 017		2 598	
	1991	1997	1990	1999	1991	1997	1992	1999	1991	1997	1991	1996	1991	1997
Population (thousands)	2 601	2 678	1 916	1 941	1 754	1 772	1 500	1 543	1 362	1 373	1 235	1 304	769	826
Share of national population (%)	4,6	4,6	ns	ns	3,1	3,1	15,0	15,1	2,4	2,4	35,6	36,6	1,4	1,4
Densité (hab./km ²)	1 246	1 283	719	729	552	558	656	675	1 645	1 658	409	432	296	318
Source : Recensements														
Structure by age		1999	1992	1999			1992	1999		1999	1992	1999		
Less than 25 (%)		33,4	40,0	36,9			30,5	28,9		32,9	44,0	39,4		
25 to 64 (%)		52,9	48,7	49,5			54,0	54,1		51,4	46,5	51,1		
65 and over (%)		13,7	11,3	13,6			15,5	17,0		15,7	9,5	9,6		
Level of education (25 to 59)		1999	1993	1999			1992	1999		1999				
Higher education graduates (%)		24,7	14,8	23,2			19,0	29,0		21,8				
Medium (%)		54,0	33,1	35,7			28,7	32,0		51,1				
Low (%)		21,3	52,1	41,1			52,3	39,0		27,1				
Labour force (thousands)	1994 1 259	2000 1 287	1994 732	1999 742	1994 807	2000 810	1994 615	1999 650	1994 572	2000 576	1994 575	1999 706	1994 405	2000 426
Total employment (thousands)	1 129	1 222	630	642	703	735	569	608	494	531	491	673	369	403
Employment rate (%)	63,8	68,2	54,2	56,3	60,1	62,8	56,9	59,4	54,3	59,2	54,6	66,3	67,9	71,5
Males (%)	68,3	74,3	63,7	62,9	66,0	66,2	68,8	69,1	59,2	65,9	65,2	76,3	73,3	76,4
Females (%)	59,2	61,8	45,4	49,7	54,1	59,5	44,9	49,8	49,6	53,0	43,0	56,7	62,6	66,5
Part time employment (%)	22,6	18,6	12,7	18,1	20,1	22,6	13,4	17,5	25,8	27,8		16,6	24,1	26,1
Males (%)		8,5	4,1	6,5			2,0	2,5		12,1		6,8		nd
Females (%)		31,6	24,5	32,8			31,4	38,3		46,1		29,3		nd
Activity sectors	1991	1998	1992	1999	1991	1998	1994	1999	1991	1998	1994	1999	1991	1998
Agriculture (%)	0,1	0,5	2,3	1,2	0,2	0,1	2,4	2,8	0,1	0,7	3,2	2,6	0,2	1,6
Industry (%)	24,2	21,6	26,6	19,0	21,4	17,4	28,5	20,8	21,7	18,2	18,7	15,8	21,4	18,7
Construction (%)	5,1	4,8	6,5	5,0	5,8	6,0	6,6	5,9	5,0	4,3	7,3	7,8	5,8	5,5
Services (%)	70,6	73,1	64,6	74,1	72,6	76,5	62,5	70,5	73,2	76,8	70,8	73,8	72,6	74,2
Unemployed (thousands)	1994 131	2000 65	1994 102	1999 100	1994 104	2000 75	1994 45	1999 42	1994 77	2000 45	1994 84	1999 33	1994 35	2000 22
Unemployment rate (%)	10,4	6,4	13,9	13,4	12,9	9,3	7,3	6,5	13,5	9,9	14,6	4,6	8,6	5,2
Unemployment rate among 15 to 25 (%)	17,0	15,7	30,5	37,5	22,3	17,2	16,4	17,5	21,2	18,1	21,8	7,1	19,5	8,6
Proportion of long-term Unemployed (%)	nd	29,1	46,0	54,2	nd	nd	51,3	60,6	nd	42,5	63,1	40,4	nd	nd
Source : Labour Force Surveys § EUROSTAT														
Production		1999		1999		1999		1999		1999		1999		1999
GDP (millions euros)		52 290		nd		46 521		38 949		22 622		42 310		20 787
GDP / emploi équivalent temps plein (euros)		49 151				57 167		71 930		48 383		66 502		58 353
GDP / inhabitant at PPS (euros)		18 858				19 661		26 219		14 979		28 656		24 816
Contribution to national GDP (%)		3,8				3,4		16,5		1,7		47,5		1,5
Volume growth GDP 1995-1999 (%)		7,5%				4,9%		7,6%		6,6%		50,0%		3,7%
Source : EUROSTAT														

