

Why Brussels needs a City-Region for the City

Paul C. Cheshire (London School of Economics)

1. Introduction

Brussels is not unique but it is an outlier amongst European cities in that its jurisdictional centre is so small yet so politically significant relative to its functioning whole. Brussels is imprisoned in the barbed wire encampment erected by Belgium's linguistic differences. This is a particular handicap to its economic success. The almost federal structure of Belgium means that more public functions depend on local fiscal resources than is the case of more centralised countries such as Britain or France. Brussels, for example, has to pay for its own urban transport network yet more than half its workers live beyond its jurisdictional borders (IAURIF, 1996). But the jurisdictional fragmentation of the Brussels metro-region additionally impedes its economic success since there is quite strong evidence from the analysis of the factors favouring the economic growth of European cities that having a city government approximating to the economic reality of the metro-region is a significant advantage (Cheshire and Magrini, 2009). Such a government – as with Madrid – helps to align the interests of those who benefit from growth and those who contribute to the policy efforts that help to deliver growth. The purpose of this chapter is to examine the particular circumstances of Brussels in the more general context of how we can meaningfully and consistently define cities and why this apparently rather academic question has significant policy implications.

2. If cities compete, what are cities? What is Brussels?

Although they may dispute the detail an increasing majority of observers agree that 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. Cities, unlike firms, have no 'exit strategy' – well not in the short or medium term although historically it happens¹. So measuring how competitive they are or are not is not so straightforward as it is with firms. Various suggestions have been made – penetration of contested markets by a city's exports, growth in productivity and economic growth itself. These are all useful measures in principle but most are difficult to estimate in practice. A forceful and theoretically coherent argument has been made that in a competitive economy in which all factors are completely mobile and knowledge or technology are common to all cities 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 who built on the theoretical insights of Roback, 1982). People vote with their feet to reveal a city's relative attractions or competitiveness.

¹St Bertrand de Comminges in south west France, for example, has exited not once but twice in historical times. A substantial city of 60 to 100 000 – Lugdunum Convenarum - in the Roman urban system with more or less the same functions as Toulouse has had in the last millennium was finally destroyed by the Burgundians in 585 by which time it had been displaced by the more conveniently located Toulouse. But St Bertrand was reinvented as a pilgrimage destination in medieval times and flourished as such till the 17th Century: only to decline as that lost its market and it is now only a hill village albeit with an elaborate cathedral.

However people in Europe are still surprisingly immobile, especially when separated by national borders or cultural or linguistic barriers, and growth in real Gross Domestic Product (GDP) per capita seems the best single, practical measure (see Cheshire and Magrini 2009) here.

An important issue remains, however, and that is what is a 'city'? What are these territorial units 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 purpose of this chapter is to argue 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. Nor is this just a data or definitional issue. It is an issue of practical policy. Unless policy, at least for the appropriate functions, is formulated and implemented for the appropriate territory, not only can it not support a city's competitiveness, the evidence suggests it will damage it. This problem is as acute in the case of Brussels as it is in the case of almost any other major European city. Data has to be collected for consistently defined city-regions if we are to be able to make useful comparisons between them or productively analyse the forces that determine their success or failure; and many policies – especially those designed to influence a city's competitiveness and quality of life – have to be implemented for such city-regions. Fundamentally this is because neither people nor firms respect administrative boundaries. How they behave has to do with transport infrastructure and access to jobs or labour: not who the governing party is. What matters for an international firm or agency locating in Belgium is access to the European institutions or Zaventem National Airport: not whether they are in the Flemish-speaking or French-speaking regions or the bi-lingual zone of jurisdictional Brussels.

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 bi-lingual 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. It produces 40 percent of Belgian Gross Domestic Product. 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 (within France) 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.

If the French agglomération criteria are applied to Belgium – with its relaxed constraints on urbanisation - the whole country from Antwerpen to Liège turns out to be just 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. Far tighter ‘containment’ constraints on urbanisation in Britain mean that London has leapt across its Greenbelt, and now functionally covers most of southern England drawing daily commuters from as far as the New Forest in western Hampshire or Norwich in Norfolk. 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.

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. 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 city has had its encompassing regional government 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 had varying definitional criteria and names over time but have retained a common principal of identifying core cities (on the basis of population density and/or employment structure) and then all the more outlying areas linked to core-cities 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 reality of London 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 Brussels, where they are more 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 crucial 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 city's 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 during the 1990s.

Table 1 GDP per capita for different Londons 1995-98: relative to EU of 15

	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	94.9
South East	Level 1	116	110	91.5	86.8

Source: REGIO

3. Who likes N.U.T.S.?

The second column of Table 1 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. 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 I 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 (see IAURIF, 2002) was a study by JonesLangLaSalle of the property requirements of new Technology, Media and Telecom companies. 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 in the south of England.

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.

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

Table 2 illustrates this point. Some N.U.T.S. regions seem to correspond to cities, at least in name. 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 over which, therefore, they 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 are available (Kriese 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 (IURIF, 2002) 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.

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			Ratio of Unemployment Rates	
	1991		%Change 1981-91			%Change 1981-91			L	FUR
	F	L	F	L	F-L	F	L	F-L	1983	1991
Bremen	1272	682	2.3	-1.8	4.1	58.2	80.7	-22.5	1.23	1.39
Hamburg	2806	1645	3.4	0.4	3.0	64.2	84.7	-20.5	1.10	1.14
Ile de France/Paris	10624	10740	5.5	6.9	-1.4	102.1	87.1	15.0	1.27	1.29
Brussels	3399	960	0.6	-4.0	4.6	73.4	92.9	-19.5	1.14	1.22
Gt.London/London	8757	6871	-3.2	0.3	-3.5	114.0	95.2	18.8	1.14	1.14

Source: Eurostat and Urban Estimates on 1971 commuting boundaries; L = N.U.T.S. Region; F = FUR

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 hinterlands². Finally an additional criterion was that a municipality to be added to a FUR’s hinterland should have more commuters going to the core in question than to any other core. This rule was applied somewhat variably in that it was never entirely exhaustive (which would have necessitated in principle identifying all possible FUR cores). In practice this variability of application almost certainly made little difference to the results (it would only have been relevant for small numbers of the municipalities most distant from the cores in question) except perhaps in

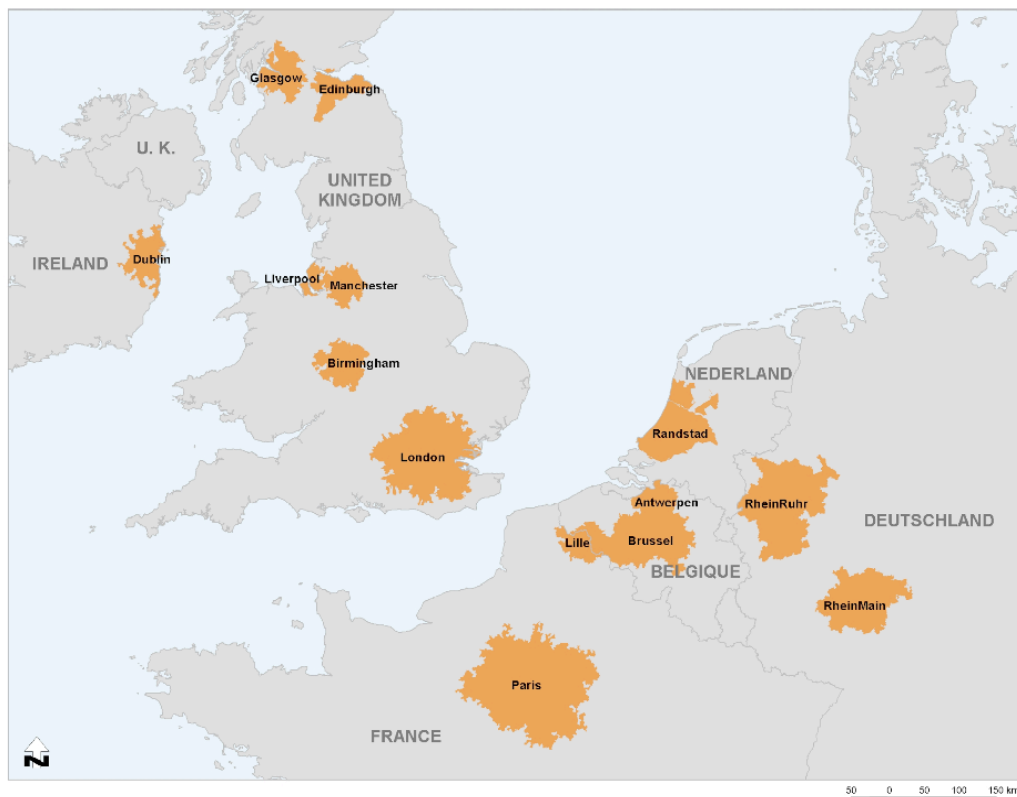
² By voids we mean single spatial units in which there were say less than 7 jobs per ha but which were separated by more or less empty space with additional units meeting the criterion beyond (as happens for example in the UK with the Green Belt). These voids represented ‘gaps’ between parts of an otherwise 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 (IAURIF, 2002)

the case of Lille where there might have been significant but not investigated commuting to potential cores such as Valenciennes or Mons from outlying parts of the hinterland.

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 combination represent a city and its sphere of influence. The whole set of FURs studied within the project are shown in Map 1.

We can see from Table 2 that data taken directly from Eurostat, even for N.U.T.S. regions which in name 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%.

Map 1: GEMACA II F



5. 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 Brussels, London and Paris in terms of their population. Table 3 shows their population development from 1951-2005 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 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 2005 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 as is the almost equally steady loss from the core of Brussels. 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 (see Table 5).

Table 3: Brussels, London and Paris – Population 1951-97, FUR71: '000s

		Constant 1971 boundaries					
Functional Urban Region		1951*	1961*	1971*	1981*	1991*	2005
BRUSSELS	Core	784.8	779.4	786.0	705.8	664.9	
	% growth		-0.7	0.8	-10.2	-5.8	
	Hinterland	2158.1	2350.0	2509.0	2672.4	2734.1	
	% growth		8.9	6.8	6.5	2.3	
	FUR	2942.9	3129.4	3295.0	3378.2	3399.0	3573.7
	% growth		6.3	5.3	2.5	0.6	5.1
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	9430.5
	% growth		1.8	-2.0	-7.5	-3.2	7.7
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	11334.0
	% growth		20.5	15.9	6.0	5.5	6.7

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 2005, the constant boundaries Paris FUR71 increased in size by some 66% while the London FUR71 lost about 4% 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 10 and 20%. The Brussel's performance was between the two: its total FUR population on constant boundaries reflecting behaviour in 1971 grew by 21%.

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 and Brussels, with their very different policies towards containing urban expansion, is not. The FUR91 of London – defined on the 1991 patterns of employment and commuting flows – in 1991 was 63% larger than its built-up area and 43% larger than when defined on constant 1971 commuting boundaries. Paris FUR91 was only 26% larger than its built-up area at the same date and only 7.5% larger than its FUR71. We also find, if we 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. Brussels FUR91 with the relaxed attitude to urbanisation and resulting low density of development in Belgium was no less that 185% larger than its built-up area.

Table 4: Brussels, London and Paris – Population of FUR71, FUR91 and Built-up Areas

		Population in 1991		FUR91 1999*			
		FUR71 ¹	FUR91 ²	Population		GDP	
				Total & Growth	% of Nation	Paris GDP pc = 100	Total as % of Nation
BRUSSELS	Built-up Area ³		1272				
	core	664.9	704.3				
	hinterland	2734.1	2920.8				
	FUR	3399.0	3625.1	3668	35.9	82.3	40.9
Growth 1981-91 or '91-99%		0.6	0.8	1.2			
LONDON	Built-up Area ³		7661.0				
	core	4639.2	6125.5				
	hinterland	4117.3	6393.8				
	FUR	8756.5	12519.3	13231	22.9	86.2	30.2
Growth 1981-91 or '91-99%		-3.2	1.9	5.7			
PARIS	Built-up Area ³		9097.3				
	core	8574.5	7898.0				
	hinterland	2049.3	3520.0				
	FUR	10623.8	11418.0	11754	20.1	100	29.3
Growth 1981-91 or '91-99%		5.5	6.3	2.9			

* 1997 in the case of London

¹ Hall and Hay (1980) and updated FUR data base.

² IAURIF (2002)

³ IAURIF (1996)

This is perhaps only a confirmation of the common view that Brussels and London are particularly subject to long distance commuting. This is a long term historical difference between these two cities and Paris. It probably in part reflects the retention of a concentration of upper socio-economic groups within the centre of Paris compared to the suburbanisation and subsequent ex-urbanisation of such groups from Brussels and London. Such a historic difference has almost certainly been re-inforced by the very different policies of land use planning followed in the three countries, however. As was noted above, in France, urban growth is in general allowed to take place by continuous additions at the existing urban boundary. Moreover there has been national

investment in the strictly urban transport network. 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. These differences are reflected in the proportion of national population and GDP associated with the principle city-region. People think of Britain and France being dominated by the national capitals. This is true relative to say Germany but Belgium is substantially more focused on Brussels – if defined as a FUR – than is the case for either Britain/London or France/Paris. The most extreme reflection of this is illustrated in the last column of Table 4: in 1999 more than 40% of Belgium's total GDP was produced in the Brussels FUR.

Table 5: Fastest & Slowest Growing London Boroughs: 1981-96

Borough	% Change	Borough	% Change
Tower Hamlets	21.6 (I)	Havering	-4.7 (O)
Kensington & Chelsea	13.5 (I)	Brent	-2.6 (O)
Richmond-upon-Thames	11.2 (O)	Greenwich	-1.6 (O)
Merton	8.7 (O)	Bromley	-1.0 (O)
Westminster	8.4 (I)	Enfield	0.6 (O)
Barnet	8.2 (O)	Redbridge	0.6 (O)

Source: Regional Trends, I/98 (I) = Inner London; (O) = Outer London

6. 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, Brussels and Bremen or even Hamburg 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 RhineMain/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 (IURIF, 2002) 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.

REFERENCES

- Cheshire, P.C. and I.R Gordon (1995) "Change and Spatial Specialisation within the South East's Economy", 65-97, in Cheshire, P.C. and I.R.Gordon (eds.) *Territorial Competition in an Integrating Europe: local impact and public policy*, Aldershot: Avebury.
- Cheshire, P.C. and S. Magrini (2009) "Urban Growth Drivers in a Europe of Sticky People and Implicit Boundaries", *Journal of Economic Geography*, 9, 1, 85-115.
- Glaeser, E.L., J.A.Scheinkman and A. Shleifer (1995) "Economic Growth in a Cross-Section of Cities", *Journal of Monetary Economics*, 36, 117-43.
- Hall, P.G. and D. G. Hay (1980) *Growth centres in the European urban system*, Heinemann Educational, London.
- IAURIF (1996) *North West European Metropolitan Regions*, Paris
- IAURIF (2002) *Cahiers Number 135*, 4th quarter
- Roback, J. (1982) "Wages, rents, and the quality of life", *Journal of Political Economy*, 90, 1257-1278.