METROPOLITAN ECONOMIC STRATEGY

THE WORLD'S URBAN SYSTEMS: A EUROPEAN PERSPECTIVE

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This article suggests that there are two alternative ways of looking at cities and world urban systems, both valid, which need to be combined. Then it looks at the performance of the European urban system in the last quarter century. From this, starting from the European Spatial Development Perspective (ESDP), it proposes some lines of policy, with particular reference to the recent enlargement of the European Union.

I. Alternative Views of Urban Systems

There are two alternative ways of looking at cities and urban systems.

1. The Urban Hierarchy

The first is in terms of a hierarchy of cities — a tradition that goes all the way back to Walter Christaller's classic work written in 1933, *Central Places in Southern Germany*. However, Christaller's typology was developed for a very different age, and it is no longer an adequate description of the European urban hierarchy: it is dominated by small towns, some of which have ceased to operate as service centers at all, and it totally omits higher-level centers.

The urban system has been profoundly affected by the increasing globalization of the world and the *informationalization* of the economy — the shift of advanced economies from primarily goods production to predominantly information handling. Manuel Castells in *The Information Age* has described this as the transition to the informational mode of production: a shift as momentous, in his view, as the shift from an agrarian to an industrial economy in the 18th and 19th centuries. In typical developed countries, already by 1991 between three-fifths and three-quarters of all employment was in services, while between one-third and one-half was in information handling; generally these proportions have doubled since the 1920s.

These processes have increased the importance of cities at the very top of the hierarchy, the so-called world cities or global cities. This is not a new phenomenon. Patrick Geddes recognized 'world cities' and defined them, as long ago as 1915, in *Cities in Evolution*. In 1966 I published a book entitled *The World Cities*, defining them as cities that performed multiple roles: as centers of political power, both national and international, and of the organizations related to government; as centers of national and international trade, acting as trading ports for their countries and sometimes for neighboring countries also; as centers of banking, insurance, and related financial services; as centers of advanced professional activity of all kinds, in medicine, in law, in higher education, and the application of scientific knowledge to technology; as centers of information-gathering and diffusion, through publishing and the mass media; as centers of conspicuous consumption, both of luxury goods for the minority and mass-produced goods for the multitude; and as centers of arts, culture, and entertainment, along with a wide range of ancillary activities.

In the 1980s John Friedmann deepened this analysis, by suggesting that processes of globalization were resulting in a new urban hierarchy, in which London, New York, and Tokyo were "global financial articulations", while Miami, Los Angeles, Frankfurt, Amsterdam, and Singapore were "multinational articulations", and Paris, Zurich, Madrid, Mexico City, Sao Paulo, Seoul, and Sydney were "important national articulations", all forming a "network". Saskia Sassen, in *The Global City*, developed the point that the locus of the production of advanced

business or producer services has become increasingly disarticulated from the production of tangible goods:

> The spatial dispersion of production, including its internationalization, has contributed to the growth of centralized service nodes for the management and regulation of the new space economy ... To a considerable extent, the weight of economic activity over the last fifteen years has shifted from production places such as Detroit and Manchester, to centers of finance and highly specialized services.

Thus there are contradictory trends: as production disperses worldwide, services increasingly concentrate into a relatively few trading cities, both the well-known "global cities" and a second rung of about 20 immediately below these, which we can distinguish as "sub-global". These cities are centers for financial services (banking, insurance) and headquarters of major production companies; most are also seats of the major world-power governments. A recent study of world cities distinguished four key groups of advanced service activity:

> 1. *Finance and Business Services*: including banking and insurance, commercial business services such as law, accounting, advertising, and public relations, and design services including architecture, civil engineering, industrial design, and fashion;

> 2. "*Power and Influence*" (or "*Command and Control*"): national government, supranational organizations like the UN and OECD, and headquarters of major organizations including transnational corporations;

> 3. *Creative and Cultural Industries*: including live performing arts (theatre, opera, ballet, concerts), museums, galleries, exhibitions, print and electronic media;

> 4. *Tourism*: both business and leisure tourism, including hotels, restaurants, bars, entertainment, and transportation services.

All these are service industries. The process differs somewhat from sector to sector, but it all involves generating, communicating, and consuming information, often with a high degree of immediacy. Whether one considers the investment analyst trading shares, or the lawyer offering advice, or the board of a major corporation in a meeting, or the television producer at work on a show, or the tour guide taking a group sightseeing, specialized information is being processed and transmitted by highly-qualified people in real time. Further, much of this activity involves face-to-face exchange of information, either as a central feature or as an essential ancillary activity (as when the stock analyst has lunch and picks up important market information).

These categories tend to be highly synergistic with each other, and many activities fit effectively into the interstices between them: thus hotels and conference centers and exhibition centers are simultaneously business services and part of tourism; museums and galleries are creative/cultural but also parts of tourism; and advertising is both creative and a business service. Therefore, an extremely strong force of agglomeration operates within and across these sectors.

Work by the GaWC (Global Analysis of World Cities) group at the University of Loughborough in the UK goes a long way to recognizing these trends and developing a new urban hierarchy: it identifies a "global hierarchy" of cities, based essentially on the relationships between different units engaged in delivering advanced services like law and accounting. In it, European cities are prominently represented and, of the top six cities, four are in the so-called North West Metropolitan Area of Europe, with London at the top. This is further supported by recent work on the global urban hierarchy based on airport connectivity.

Table 1

Cities are ordered in terms of world city-ness values ranging from 1- 12.
European cities are <u>underlined</u>

A. ALPHA WORLD CITIES

12: <u>London</u>, <u>Paris</u>, New York, Tokyo
10: Chicago, <u>Frankfurt</u>, Hong Kong, Los Angeles, <u>Milan</u>, Singapore

B. BETA WORLD CITIES

9: San Francisco, Sydney, Toronto, <u>Zurich</u>
8: <u>Brussels</u>, <u>Madrid</u>, Mexico City, Sao Paulo
7: <u>Moscow</u>, Seoul

C. GAMMA WORLD CITIES

6: <u>Amsterdam</u>, Boston, Caracas, Dallas, <u>Dusseldorf</u>, <u>Geneva</u>, Houston, Jakarta, Johannesburg, Melbourne, Osaka, <u>Prague</u>, Santiago, Taipei, Washington
5: Bangkok, Beijing, <u>Rome</u>, <u>Stockholm</u>, <u>Warsaw</u>
4: Atlanta, <u>Barcelona</u>, <u>Berlin</u>, Buenos Aires, <u>Budapest</u>, <u>Copenhagen</u>, <u>Hamburg</u>, Istanbul, Kuala Lumpur, Manila, Miami, Minneapolis, Montreal, <u>Munich</u>, Shanghai

D. EVIDENCE OF WORLD CITY FORMATION

Di Relatively strong evidence

3: Auckland, <u>Dublin</u>, <u>Helsinki</u>, <u>Luxembourg</u>, <u>Lyon</u>, Mumbai, New Delhi, Philadelphia, Rio de Janeiro, Tel Aviv, <u>Vienna</u>

Dii Some evidence

2: Abu Dhabi, Almaty, <u>Athens</u>, <u>Birmingham</u>, Bogota, <u>Bratislava</u>, Brisbane, <u>Bucharest</u>, Cairo, Cleveland, <u>Cologne</u>, Detroit, Dubai, Ho Chi Minh City, <u>Kiev</u>, Lima, <u>Lisbon</u>, <u>Manchester</u>, Montevideo, <u>Oslo</u>, <u>Rotterdam</u>, Riyadh, Seattle, <u>Stuttgart</u>, <u>The Hague</u>, Vancouver

Diii Minimal evidence

1: Adelaide, <u>Antwerp</u>, <u>Arhus</u>, <u>Athens</u>, Baltimore, Bangalore, <u>Bologna</u>, Brasilia, Calgary, Cape Town, Colombo, Columbus, <u>Dresden</u>, <u>Edinburgh</u>, <u>Genoa</u>, <u>Glasgow</u>, <u>Gothenburg</u>, Guangzhou, Hanoi, Kansas City, <u>Leeds</u>, <u>Lille</u>, <u>Marseille</u>, Richmond, <u>Saint Petersburg</u>, Tashkent, Tehran, Tijuana, <u>Turin</u>, <u>Utrecht</u>, Wellington

Source: J.V. Beaverstock, P. Taylor and R.G. Smith, "A Roster of World Cities," *Cities*, 16, 1999.

Table 2

WORLD CITY HIERARCHY BASED ON AIR CONNECTIONS, 1997

European cities are <u>underlined</u>

1 <u>London</u>	30 Sydney	58 Larnaca
2 <u>Frankfurt</u>	31 Toronto	59 Tehran
3 <u>Paris</u>	32 Beijing	60 <u>Bucharest</u>
4 New York	33 <u>Stockholm</u>	61 Havana
5 <u>Amsterdam</u>	34 Taipei	62 Quito
6 <u>Zurich</u>	35 Vancouver	63 Tunis
7 Miami	36 Washington, DC	64 Colombo
8 Los Angeles	37 Santiago	65 Jakarta
9 Hong Kong	38 Boston	66 Panama
10 Singapore	39 Lima	67 Johannesburg
11 Tokyo	40 <u>Lisbon</u>	68 La Paz
12 Seoul	41 Bogota	69 Montevideo
13 Bangkok	42 Rio de Janeiro	70 Guatemala City
14 <u>Madrid</u>	43 Caracas	71 Asuncion
15 <u>Vienna</u>	44 Dallas	72 <u>Malta</u>
16 San Francisco	45 Nagoya	73 Karachi
17 Chicago	46 <u>Helsinki</u>	74 Mauritius
18 Dubai	47 Houston	75 Nairobi
19 Osaka	48 Kuwait City	76 Kingston
20 <u>Brussels</u>	49 <u>Prague</u>	77 <u>Dublin</u>
21 <u>Milan</u>	50 Auckland	78 Maputo
22 <u>Copenhagen</u>	51 <u>Warsaw</u>	79 <u>Budapest</u>
23 Mexico City	52 Damascus	80 <u>Moscow</u>
24 Kuala Lumpur	53 <u>Oslo</u>	81 Dar es Salaam
25 <u>Athens</u>	54 Ho Chi Minh City	82 San Salvador
26 Istanbul	55 Seattle	83 Riyadh
27 Cairo	56 Pusan	84 Lagos
28 Manila	57 Montreal	85 Tel Aviv
29 Buenos Aires		

Source: D.A. Smith and M. Timberlake, "World City Networks and Hierarchies, 1977-1997: An Empirical Analysis of Global Air Travel," *American Behavioral Science*, 44, June 2001.

We can conclude that the Christaller hierarchy now needs to be supplemented by at least two and perhaps three additional levels, producing a hierarchy of perhaps six or seven levels:

> (1) *Global cities* ("Alpha" cities) typically with 5 million and more people within their administrative boundaries and up to 20 million within their surrounding regions, but effectively serving very large global territories: London, Paris, New York, Tokyo.
>
> (2) *Sub-global cities* ("Beta" and "Gamma" cities), typically with 1-5 million people and up to perhaps 10 million in their urbanized regions, performing global service functions for certain specialized services (banking, fashion, culture, media) and an almost complete range of similar functions for more restricted national or regional territories: all European capitals apart from the global cities, together with "commercial capitals" (Milan, Barcelona) and major provincial cities in large nation states (Glasgow, Manchester, Lyon, Marseille, Hamburg). This last category may overlap with Christaller's L-centers and may possibly be equivalent to it; but a special category must exist for the national capitals, which do not exist in his scheme.
>
> (3) *Regional* (Christaller's *Landstadt*) (population 250,000-1 million); some of these have characteristics which cause the GaWC to describe them as "Showing Evidence of World City Formation".
>
> (4) *Provincial* (Christaller's *Provinzstadt*) (population 100,000-250,000).

Below the provincial level, the five levels which Christaller distinguished have not physically disappeared. But the two lowest levels, his *Marktort* and *Amtsort*, have ceased to perform any significant role as central places; they have lost any service functions they may have had, such as a village store or post office, and have become purely residential villages. The next level up, the *Kreisstadt*, may have very limited village-store type services. The lowest significant level in contemporary Europe is probably his fourth level or *Bezirkstadt*, with a residential population of 10,000 and a service market population of 100,000. It is at about this level, for instance, that one typically finds the establishment of a supermarket and a limited range of national chain stores. All this demonstrates the dramatic increase in mobility and thus in what he termed "the range of a good" in the 72 years after he wrote his book, which has effectively replaced the small village store by the supermarket as the basic unit of convenience shopping for the average member of the population.

It is, however, at the next two levels upwards that some of the most significant changes have occurred, since over wide rural areas, depending on population density, one or other of these usually represents the largest available central place. They are the typical county market towns of rural Europe, found across much of southern England, southern Germany, and most of France. They have grown because they provide the local services for their populations, and also sometimes national services, such as universities. In the less-developed, depopulating regions of Europe they have acted as magnets, attracting population outflow from the surrounding rural areas; in the more prosperous regions, likewise, they have attracted much of the migration of people and businesses from the major cities at the higher levels of the hierarchy, especially within the transport-rich sectors, as well illustrated by the case of London's western sector. Since 1990 this has been countered by a re-urbanization trend, fuelled in the case of London by migration from abroad and a high rate of natural increase due to a young population. But the net migration trend continues strongly outward.

2. A Geographical-Functional Categorization: The European Spatial Development Perspective (ESDP)

However, the precise form and degree of urban development varies significantly from one part of Europe to another. First, it is concentrated around the global and sub-global cities, and then

predominantly in a few key sectors, representing the most important inter-regional (and sometimes international) transport corridors: around London, for instance, towards the north, west, and east.

Second, in a few cases this may result in discontinuous corridors or axes of urbanization, most notably in the so-called "Blue Banana" connecting Birmingham, London, Brussels, Amsterdam, Cologne, Frankfurt, Basel, Zurich, and Milan.

Third, it is not universal around every major metropolis: Paris, for instance, has mainly deconcentrated into the five giant suburban cites nouvelles (new towns) proposed in the 1965 Schema Directeur, so that — in sharp contrast to London — there has been only minimal dispersal beyond their limits.

Fourth, the precise urban form that results is influenced strongly by the strength of land-use planning powers. Compare the highly constrained urban growth typical of the United Kingdom and the Netherlands with the much freer pattern of suburbanization found in northern Italy. However, in general, because of differential patterns of accessibility set by motorway interchanges and inter-city train stations, market forces tend to generate a quite discontinuous pattern of development around existing central places that remain surrounded by wide green exurban spaces. Local resistance, in the form of NIMBY (Not in My Back Yard) movements, tends to limit the growth of smaller urban places and many villages.

Whereas the traditional Christaller central places were linked by radial public transport systems (trains, buses) connecting the towns with lower levels in the system and with villages, the higher levels are directly connected with each other by systems for business travel and information exchange (air corridors, inter-city and high-speed train routes, motorways, telecommunications links for voice and data) and by travel infrastructure in the form of hotels, restaurants, and entertainment. This suggests that a new central place system needs to be defined, based on indicators of business concentration (international bank transactions, stock exchange transactions, hotels) and flows of people and information. The logic here is that information is exchanged in two ways — by telecommunications and by personal/business travel — and that the information technology revolution almost certainly will *not* mean that the need and desire for face-to-face contact will diminish. On the contrary: the historical record shows very clearly that the growth of telecommunications traffic is paralleled by the growth of travel; and this will continue to be true in the future.

Far from telecommunications reducing the need and desire to travel, it is likely to multiply it: the growth in information exchange will bring with it a necessity for more and more face-to-face meetings. Therefore a key question is where this activity will happen. All the evidence, even from high priests of cyberspace like Microsoft's Bill Gates or William Mitchell of MIT, suggests that city centers will retain their unique role in providing the most efficient locations for much of this activity, simply because of the accumulated weight of interrelated functions that have historically accrued there, and because radially-oriented transport systems focus on them. Again, the empirical evidence suggests that the hierarchy of cities in Europe has not changed very much in the last half-century and will not change much in the future.

The main new influence is likely to be the development of the high-speed train system in Europe. We know from experience these trains will take about 80-90% of traffic up to about 500 kilometers and about 50% of passenger travel up to about 800 kilometers. This means that by 2010, when the system will connect all the principal cities of Europe from Bari right up to Glasgow and Umea, virtually all traffic between key city pairs will go by rail. The longer-distance traffic, even within Europe, will largely be based on air travel. Within what used to be called the European Central Capitals Region, business traffic will transfer overwhelmingly from air to rail in the next few years. A critical urban planning question will be the linkages at the airports with the rail systems. We can already see these at Paris-Charles de Gaulle Airport, and soon also at

Amsterdam and Frankfurt. The likelihood is that these places will become new urban centers. They will attract a vast amount of business in the form of conference centers, exhibition centers, and hotels; and they are also likely to become shopping centers, such as Heathrow Airport's Terminal Five, that will compete with traditional downtown areas as business hubs.

There is thus an emerging contrast between the European Central Capitals Region, with its dense cluster of cities closely networked through air, high-speed-train and telecommunications links (London, Paris, Frankfurt, Luxembourg, Brussels, Amsterdam), and the "gateway" or "regional capital" cities in the more peripheral European regions, each dominating a large but less-densely-populated territory (Dublin, Edinburgh, Copenhagen, Stockholm, Helsinki, Berlin, Vienna, Rome, Madrid, and Lisbon, plus the central and eastern European capitals of Ljubljana, Budapest, Prague, Warsaw, and Tallinn). These cities are connected by air into the central region, even though they are also becoming the cores of local high-speed-train systems. Here, we find an interesting degree of competition between a higher-order city that appears to control such a wide sector of European space, and next-order cities controlling parts of that space (as, for instance, Copenhagen versus Stockholm and Helsinki; Berlin versus Vienna; Madrid versus Lisbon). Additionally, in one or two instances, this critical Euro-regional role is divided between a "political" and a "commercial" capital (Rome and Milan; Madrid and Barcelona).

A system, derived in part from the analysis in ESDP but also from my own work, tries to capture these geographical relationships within the European urban hierarchy, provisionally developed as follows:

- *Central High-Level Service Cities*: major cities (national capitals) and major commercial cities in the so-called "Pentagon": London, Paris, Milan, Munich, Frankfurt, Hamburg, Amsterdam, Brussels, and Luxembourg. As the ESDP analysis shows, these cities have the highest multi-modal transport accessibility within the European Union. They are connected by dense air corridors now being supplemented by new high-speed train lines.
- *Gateway Cities (Sub-Continental Capitals)*: national capitals and major commercial cities outside the "Pentagon", acting as high-level service centers for major parts of Europe: Madrid-Barcelona, Rome, Athens, Vienna, Berlin, Copenhagen, Prague, Warsaw, and Budapest. They are normally major air hubs for flag carriers and increasingly the cores of regional high-speed train systems which are not yet connected to the "Pentagon" system, and they may be too distant in some cases for rail to compete effectively. These also include some larger commercial cities: Manchester, Lyon, Stuttgart, and Leipzig.
- *Smaller Capitals and Provincial Capitals*: these are smaller equivalents of the previous case, commanding less extensive space in terms of population and economic production; in many cases they are at the periphery of Europe: Dublin, Edinburgh, Lisbon, Helsinki, Stockholm, Bratislava, Ljubljana, and Sofia). This also includes smaller commercial centers controlling "provincial" territories: Bristol, Bordeaux, Grenoble, Strasbourg, Hannover, Bologna, Poznan, and Krakow.
- "*County towns*": this describes the typical rural administrative and service center for a surrounding area 40 to 60 kilometers in radius, of which hundreds exist in Europe. Some, in "accessible rural" areas, are growing very rapidly by dispersal from major cities, thus tending to form highly networked "mega-city regions" such as southeastern England, the Delta Metropolis around Amsterdam, and Lombardy in northern Italy. Other, less accessible, examples are experiencing more varied fortunes: some are growing through tourism and migration for retirement, others are stagnant or even declining. The last represents a particular problem of deindustrialization that is highly localized in certain parts of Europe, especially the coalfield belt from northern and midland England through Wallonia, Lorraine, the Ruhr valley, and upper Silesia.

II. Putting the Taxonomies Together: The Recent Record

What happens when we try to put the two different systems of classification together? At the macro-level of analysis, the dominant feature is the contrast between the European Central Capitals Region, with its dense cluster of high-level cities closely networked through air, high-speed-train and telecommunications links, and the "gateway" or "regional capital" cities in the more peripheral European regions, each dominating a large but less densely-populated territory. Here, we find an interesting degree of competition between a higher-order city that appears to control a wide area of Europe, and next-order cities controlling parts of that space. Additionally, in one or two instances, this critical Euro-regional role is divided between a "political" and a "commercial" capital.

These intermediate-size gateway cities have proved relatively dynamic in the 1970s and 1980s. They invariably act as regional airport hubs, with a range of long-distance destinations (Copenhagen) and as the hubs of regional high-speed-train systems (Rome); they have a wide variety of global service functions, especially where they play a special role of providing advanced services for linguistic regions, as Madrid does for Spanish-speaking Latin American countries. With expansion of the European Union eastwards, the eastern gateway cities (Berlin, Vienna) are playing larger roles in their respective areas. However, policy does not appear to have played much of a direct role in this development; it is a function of European geography and its relation to the wider global economy.

Smaller cities seem to have experienced some advantages when they are clustered, creating a wider economic area sharing labor markets and specialized services. The outstanding examples are the Greater South East region outside London and the fringes of Randstad in the Netherlands. But many other parts of Europe have developed regions of intense urbanization along major transport corridors, as in the Rhine Valley above Frankfurt, the Rhone Valley below Lyon, or the Emilia-Romagna region of Italy. In a few cases (as in southeastern England) urban and regional planning policy has played a role; elsewhere, it has been a more spontaneous evolution. There is now general agreement that such a form, combining small mixed-use urban developments concentrated along strong public transport corridors, represents the most sustainable form of urban development. Some national planning strategies are beginning to adopt it, particularly in the UK. In the future they will be joined by similar cities in central and eastern Europe, such as Wroclaw, Poznan, Pilsen, and Szeged.

Many more isolated medium-sized towns, outside of the major European-wide transport corridors but located on national transport corridors connecting larger cities, have shown remarkable dynamism. Examples include Nottingham and Bristol, Hannover and Munich, Grenoble and Toulouse, Naples and Ravenna, Zaragoza and Valencia. The key seems to be that they are in "sunbelt" rural regions that are themselves prosperous, either through efficient agricultural production, or more commonly because these cities have become centers of business, professional, and financial services. Public sector spending policies have also played a role, by concentrating such functions as higher education and hospitals in these places.

How does one try to summarize this mass of partial and sometimes contradictory data? To begin, some kinds of urban areas are unambiguously growing through in-migration:

> First, regions near major cities, mainly in northern and central Europe, that are benefiting from the exodus from these cities into wider "mega-city regions" — as around London, Copenhagen, and Randstad in the Netherlands; this trend has weakened somewhat since 1980 with a counter-trend toward reurbanization, though rapid growth has also continued in the fringe areas.

Second, medium-sized and smaller cities and metropolitan regions in less-urbanized "sunbelt" zones, particularly in the southern UK, southern France, Portugal, and central and northern Italy.

Third, a few selected larger urban centers and their surrounding regions in the less-developed, less densely-populated regions characterized by rural out-migration, particularly in Scandinavia, Mediterranean Europe, Ireland, and some central and eastern European countries. This reflects the magnetism of such cities at the stage of development these regions have reached, along with government policies. Also, there are relatively few large urban regions in these parts of Europe that can serve as magnets for in-migration.

These trends reflect underlying economic realities. Globalization and the shift to the information economy give special value to large cities as centers for efficient face-to-face information exchange. They are the locations of the major hub airports and the high-speed train stations; they also are hubs for commuter traffic. But they also experience some economic disadvantages: high rents, congestion, pollution, the costs of attracting middle- and junior-level staff. Certain activities, including back offices and research and development (R&D), are increasingly tending to migrate outwards: to corridors near airports, to suburban train stations, and to country towns in the surrounding ring. Meanwhile, medium-sized cities ("provincial capitals") in "sunbelt" rural regions (Bristol, Hannover, Bordeaux, Oporto, Seville, Bologna) are growing through strong concentrations of public sector employment in higher education and health services, along with retailing and tourism. Some of these also act as centers of high-technology manufacturing, and have attracted longer-distance office decentralization. Medium-sized cities in older industrial regions (Dortmund, Leeds) have seen a similar growth, though others have been less successful. Finally, there are numerous cases of growth at the next level of the European urban hierarchy: the "county town", or medium-sized administrative-service center of a rural region, of which hundreds of European examples exist. These centers have grown through in-migration and investment as local service centers; they often offer an attractive physical environment, like Freiburg.

Thus, the overall picture is not easy to summarize. On the one hand, significant concentrations of activity are occurring in the cores of the very largest cities; they generate wealth and, through multiplier effects, jobs, even though some of the production and incomes may be "exported" to suburban commuter towns in the surrounding ring. However, such growth does not generate sufficient employment to compensate for the loss of traditional manufacturing and goods-handling activities. The result is a paradox: high levels of income generation are accompanied by localized long-term structural unemployment. In terms of employment and population growth, medium-sized and smaller towns are showing more rapid growth than larger ones; and some are benefiting from spillover effects from larger cities into their suburban commuter rings. However, their performance varies significantly from region to region: it is strongest in the zones of deconcentration around the largest metropolitan areas of the European Central Capitals Region, strong also in sunbelt regions, and more variable in the peripheral regions of out-migration. In central and eastern Europe, cities at this level of the hierarchy tend to be weakly represented.

Another way of looking at the evidence, therefore, is to return to the macro-level of geographical analysis. The Eurocore or Central Capitals Region continues to exhibit strong growth, with a reversal of the counter-urbanization tendencies of the 1970s in at least some of the cities, but with continuing local out-migration extending the metropolitan region into a complex polycentric structure. The more peripheral political and commercial capitals also exhibit growth, sometimes accompanied by local decentralization to smaller cities; here, the pressures for deconcentration, in the form of congestion and other negative externalities, are fewer. The Euro-periphery exhibits general continued out-migration, but accompanied by local migration patterns which benefit a relatively few local service centers.

III. Towards a Spatially Integrated Approach: The ESDP

In this last section, lines of policy are proposed to encourage higher levels of growth in less-developed regions and cities, some of which will be older industrial cities in need of restructuring, but a much larger number of which will be cities in the less densely-populated, less-developed fringe regions of Europe.

Here, it is necessary to realize that the central word, *polycentric*, needs to be carefully defined: it has a different significance at different spatial scales and in different geographical contexts. At the global level, *polycentric* refers to the development of alternative global centers of power. Relatively few cities worldwide are universally regarded as global command-and-control centers, located in the most developed economies: London appears in all lists, Paris appears on many. Importantly, however, Europe has a number of "sub-global" cities, performing global functions in specialized fields: Rome (culture), Milan (fashion), Frankfurt and Zurich (banking), Brussels, Luxembourg, Paris, Rome, and Geneva (supranational government agencies).

Within a specifically European context, therefore, one meaning of a *polycentric* policy is to divert some activities away from "global" cities like London and Paris to "sub-global" centers like Brussels, Frankfurt, or Milan. But there is also a very important spatial dimension: while some of these cities are found in the Central Capitals Region (Brussels, Amsterdam, Frankfurt, Luxembourg), a much larger number are "gateway" national political or commercial capitals outside the Central Capitals Region: these include Helsinki, Stockholm, Copenhagen, Berlin, Vienna, Rome, Milan, Madrid, Barcelona, Lisbon, and Dublin. They serve broad but sometimes thinly-populated territories such as the Iberian Peninsula, Scandinavia, and east central Europe. Because they are national capitals serving distinct linguistic groups, they invariably have a level of service functions larger than would be expected based on size alone; they tend to be national airport and rail hubs, and the main centers for national cultural institutions and national media.

A major issue is whether it will be necessary or desirable to concentrate decentralized activity into a limited number of "regional capitals", each commanding a significant sector of the European territory — Copenhagen, Berlin, Rome, Madrid — or whether it would be preferable to diffuse down to the level of the national capital cities, including the smaller national capitals. Essentially, should Madrid be regarded as the dominant gateway for southwestern Europe, or should it share this role with Barcelona, Lisbon, Bilbao, and Seville? Similarly, should Copenhagen share its role in Scandinavia with Stockholm, Oslo, and Helsinki? This issue could become particularly important in central and eastern Europe, where Berlin and Vienna may develop very important roles, but where there is also a need to reassert the service roles of the various national capitals, and even selected provincial capitals (such as Gdansk, Krakow, Pilsen, and Szeged).

At a finer geographical scale, polycentricity can refer to the outward diffusion from large cities to smaller cities within broadly defined geographic regions. We have already noticed that such a process has occurred on a wide scale around London, which is now the heart of a system of some 30-40 smaller urban centers within a 150-kilometer radius, while Paris and Berlin, in contrast, have less developed urbanized regional systems. At the next level of the European urban hierarchy, cities like Stockholm, Copenhagen, and Milan also show widespread outward diffusion. On the other hand, central and eastern European cities have had relatively little decentralization effects on their surrounding regions, though this may change in the future.

In general, at this scale a policy of "deconcentrated concentration" would suggest adopting the principle of polycentricity fairly widely, adapting it to the specific development stages and problems of each city and region. Specifically, the general principle should be to guide decentralized growth, wherever possible, on to a few selected development corridors along strong public transport links, including high-speed "regional metros" such as those under construction around Stockholm and Copenhagen, and planned for London, or even along longer

distance regional high-speed train lines such as London-Ashford, Amsterdam-Antwerp, or Berlin-Magdeburg. These would not be corridors of continuous urbanization, but denser concentrations of urban development located around train stations and key motorway interchanges that offer exceptionally good accessibility. Some of these sites could be at considerable distances of up to 150 kilometers from the central metropolitan city.

In the more remote rural regions, much farther in distance from the global and sub-global urban centers, the pursuit of polycentricity must have yet another dimension: to build up the potential of both "regional capitals" in the 200,000-500,000 population range (Bristol, Bordeaux, Hannover, Ravenna, Zaragoza, Gdansk, Lublin, Brno), including some smaller national capitals (Vilnius, Ljubljana) and smaller "county towns" in the 50,000-200,000 range. The main agents will be enhanced accessibility both by road and high-speed train, coupled with investments in key higher-level service infrastructure such as health and education; the systematic enhancement of environmental quality, re-making many of these cities into model sustainable cities; and finally the competitive marketing of such cities as places for capital investment and in-migration. Again, but on a smaller scale, the growth of such urban centers could be accompanied by a limited degree of deconcentration to even smaller rural towns within close proximity.

However, there is potential contradiction in meeting the European Union's spatial development policy objectives: dispersal from large cities into "mega-city-regions", which may be occurring around several different kinds of city — Central Cities (London-South East England, Amsterdam-Delta Metropolis, Rhine-Ruhr, Rhine-Main), Gateway Cities (Copenhagen-Orestad, Barcelona-Catalonia) and Provincial Capitals (Stockholm-Malardalen, Seville-Andalucia) — may produce a more polycentric system at the local level but a less polycentric system and more heavily concentrated urban hierarchy at a higher, European-wide level.

This impinges particularly on the 10 countries that entered the European Union in May 2004, and on their urban systems. Most are small nations, some very small, and they are very strongly monocentric in their urban hierarchy: their capital cities are highly dominant both demographically and economically. European Union membership is likely to accentuate and exaggerate this quality, as the most dynamic economic sectors grow in the "gateway" capital cities and as long-delayed economic adjustments take place, leading to rural-urban migration on the pattern characteristic of western European countries. Perhaps only in Poland, by far the largest of the new EU countries, is this likely to be balanced by growth of larger regional cities such as Gdansk and Krakow. But in none of these countries, as yet, does there appear to be a phenomenon of local polycentricity (the formation of "mega city regions") which is characteristic of the most densely populated northwestern European heartland. The nearest candidates for the future may be the Central Bohemia region around Prague, the Katowice-Krakow corridor, and the international Vienna-Bratislava-Gyor region.

So far, these tendencies are latent and incipient. Given the emerging importance of mega-city-regions in terms of the competitive advantages of economic agglomeration, it will be vitally important throughout Europe to measure and evaluate polycentricity, and its accompanying transport systems, on more than one spatial scale. It is a complex strategy, and its further elaboration will be an important central part of the new program for the European Spatial Planning Observation Network (ESPON), as well as the related Interreg IIIB and IIIC initiatives which will play a vital complementary role in analyzing the future of urban development in the European Union.

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