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# THE ECONOMIC MAP OF URBAN EUROPE

**A COMPARATIVE STUDY OF 45 EUROPEAN METROPOLISES**



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Seppo Laakso & Eeva Kostiainen

# **THE ECONOMIC MAP OF URBAN EUROPE**

**A COMPARATIVE STUDY OF 45 EUROPEAN METROPOLISES**

**HELSINKI 2007**

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A crowd on the steps of Helsinki's Grand Cathedral watching  
the Eurovision Song Contest on 12 May 2007

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# Preface

European metropolises, as well as being large centres of population, are also major centres of economic activity. Indeed, they are the motors of Europe's economic growth, providing benefits of agglomeration for business and attracting the most dynamic companies and fastest growing industries. GDP figures are higher than in the EU as a whole and higher than their national average. Europe's urban economies are becoming service economies and the service branches are the most important sources of employment in European cities.

The present study is based on empirical research in 29 countries (all 27 EU countries, Norway and Switzerland) carried out by Cambridge Econometrics Ltd in collaboration with a wide network of European research institutes. The Finnish partner in the network is Kaupunkitutkimus TA Oy (Urban Research TA Ltd). The set of metropolises comprises 45 urban areas.

The Gross Value Added (GVA) per capita is a rough indicator both of the productivity and the income level of an area. In most European countries, typically 30–40 % of the national GVA is produced in the capital region and other major metropolises. According to GVA figures based on regional national accounting in each country, the highest GVA per capita in western and central Europe in 2006 was found in Geneva, where it is almost three and a half times as high as the average of the 27 EU countries with current exchange rates. The next metropolises in the ranking are Munich, Zurich and Dublin followed by Stockholm, Hamburg, Frankfurt, Brussels, Amsterdam, Helsinki and Copenhagen. In Helsinki, the GVA per capita ratio is slightly over two times as high as the mean for the 27 EU countries.

Projections for the period 2006-2011 are made for production (GVA), employment and a few other economic variables using an econometric model developed and applied by Cambridge Economics. The forecasts are based on detailed analyses of the development of economic sectors at European, national and regional level. The analyses are made by Cambridge Econometrics in close co-operation with specialists in each country.

The mean predicted employment growth of the cities is 1,1 % p.a. in the period 2006-2011, which compares with 0.7 % p.a. in 2001-2005. According to the projections, employment growth will be fastest in Warsaw, Dublin, Madrid, Barcelona, Helsinki and Amsterdam. The mean predicted GVA growth of the cities is 2.5 % p.a., which is higher than in the period 2001-2005 (1.8 % p.a.). According to the forecast Warsaw, Prague, Dresden, Dublin, Helsinki and Budapest will form the fastest growing group of metropolises. They are followed by Stockholm, Oslo and Athens.

Economies of scale and the benefits of agglomeration are important factors that explain the faster growth rates of big cities. However, within the group of metropolises, the size of the population does not provide a clear explanation for short or middle-term differences in growth. Unlike size, the structure of the economy has a crucial influence on the economic performance of a city.

This study is a joint project conducted by City of Helsinki Urban Facts and the Office of Economic Development of the City of Helsinki Economic and Planning Centre.

Helsinki, November 2007

Asta Manninen  
Director  
City of Helsinki Urban Facts

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# 1 INTRODUCTION

The western and central regions of Europe are among the most urbanised areas in the world. Approximately 80 % of the population of these regions live in urban areas. However, the cities and towns differ considerably with respect to size, urban structure and economic base, ranging from small agricultural towns to huge mega-metropolises. This wide distribution of size of urban areas is an essential feature of the urban network in Europe.

The largest urban areas are generally called metropolises – even though there is no universally accepted definition of a metropolis. In this study, any large and economically significant urban area is viewed as a metropolis. In most cases, the geographic area of a metropolis does not coincide with that of an administrative municipality, but rather consists typically of a central city – usually one, but in some metropolises two or more – and a variable number of suburban municipalities around it. In other words, by a metropolis we mean a functional urban area.

European metropolises, as well as being large centres of population, are also major centres of economic activity.

Indeed, they are the motors of Europe's economic growth, providing benefits of agglomeration for businesses, and attracting the most dynamic companies and fastest growing industries. Hence, the higher productivity and greater degree of innovation within them compared with other areas.

The Helsinki Region (hereinafter Helsinki) is the only urban area in Finland where the population is more than one million. Moreover, because of its size and economic significance, it is also the only area in the country that can be termed a metropolis. Its population exceeds that of the six next biggest Finnish urban areas put together. On a European scale, by contrast, it is only a medium-sized or even small metropolis.

This study provides a comparative overview of the economy of European metropolises. The emphasis is on the comparison of Helsinki with other European metropolises with respect to size, economic structure and economic performance.

Of particular interest is the role of the metropolises, including Helsinki, in generating economic growth in their respective home countries, and their impact on Europe as a whole.



# 2 METROPOLISES IN EUROPE

This study is based on empirical research carried out and published by Cambridge Econometrics Ltd in collaboration with a wide network of European research institutes. The Finnish partner in the network is Kaupunkitutkimus TA Oy (Urban Research TA Ltd).

The study covers 29 countries in western and central Europe. All 27 EU countries are included and, in addition, Norway and Switzerland. The set of metropolises comprises 45 urban areas. In most countries in this survey, the capital is included, except in the case of Switzerland, where Zurich and Geneva have been selected. However, in each of the Nordic countries, the capital is the only metropolis in the study: Helsinki in Finland, Stockholm in Sweden, Copenhagen in Denmark, and Oslo in Norway. This is also the case in most other small countries of the EU, whereas in the big EU countries the study embraces several major metropolises along with the capitals. The new EU countries are represented by Prague in the Czech Republic, Budapest in Hungary and Warsaw in Poland. The Baltic states Estonia, Lithuania and Latvia are included in the group of EU countries but their capitals are absent from the set of metropolises. The cities of the study are presented on the map below.

Most of the metropolises have more than one million inhabitants. In addition, there are some smaller urban areas which are included because of their major economic or administrative significance. On the other hand, some urban areas with more than one million inhabitants are excluded.

The area of each metropolis is defined using the statistical regional

divisions (NUTS) of the EU or the equivalent division in the case of non-EU countries. Thus, depending on the country and urban area, a metropolis is defined at one of the following levels: NUTS 1, NUTS 2, NUTS 3 or NUTS 4. Most of the metropolises in the study fall into the NUTS 3 category. Helsinki is the only region defined at NUTS 4 level (Helsinki Sub-Region, Helsingin seutukunta).

One consequence of the above is that the borders of the metropolises are not defined by homogeneous criteria. In some cases the area of the metropolis is significantly larger than the functional urban area whereas in others the area is clearly smaller. This affects the findings of this study in some cases, especially when considering the size of the area. That said, as far as Helsinki is concerned, the NUTS 4 area corresponds reasonably well to the actual functional urban region, in spite of the fact that it is not exactly the same as the standard definition of the Helsinki Region.

The data that underlie economic, labour and population statistics in this study are in general derived from the official statistics of each country. Nevertheless, there are problems in some cases with the comparability of data. However, the study gives a reasonably reliable picture of the inter-metropolis variation and the differences between Helsinki and other metropolises.

The forecasts in this study for economic developments are based on the assessments of both the national experts of each country and those of Cambridge Econometrics, the co-ordinator of the project.

**Table 2.1: Key indicators of the Helsinki Region**

	Population 2006	Employed population 2005	Jobs 2005
City of Helsinki	564 500	276 000	373 000
Helsinki Metropolitan Area	997 700	414 100	581 800
The core of the Helsinki Region			
NUTS4 Helsinki Region (Helsingin seutukunta)	1 248 900	613 100	662 300
Functional Helsinki region (14 municipalities)	1 288 800	632 100	673 700

Map 2.1: Metropolises in Europe



# 3 SIZE OF THE METROPOLISES

Various criteria are used to measure the size of a metropolis, and the ranking and relative differences in size give an interesting picture of the network of European metropolises. The size of an urban area is essential not only for its own sake but also because it is bound up with the economic structure and economic growth potential, as will be shown in the following sections.

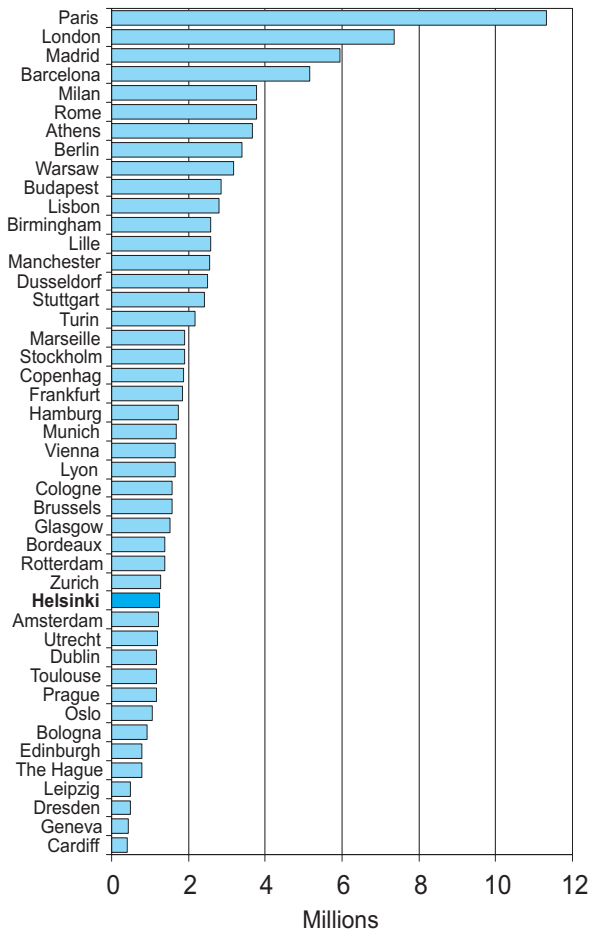
The size of a metropolis is crucially dependent on how its area is defined. As mentioned in the previous section, the metropolises in this study are not defined by homogeneous criteria. Rather it is the particular local definition used and the NUTS level selected that dictate the statistics of each metropolis.

## Population

Population is the most common measure of the size of urban areas. Rank order by population of European metropolises is presented in Figure 3.1. Based on the definition of area in this study, Paris, with 11.3 million inhabitants, is the biggest metropolis in Europe, and London, with a population of 7.4 million, is second. It should be noted that in this study London covers only the areas of Inner London and Outer London, whereas in some other statistical sources the functional urban area of London is significantly larger. The next six metropolises in rank order, after the two mega-metropolises above, are Madrid with 5.9 and Barcelona with 5.2 million inhabitants, followed, in descending order, by Milan, Rome, Athens and Berlin, with populations ranging from 3.8 to 3.4 million, respectively.

Helsinki with 1.2 million inhabitants ranks 32nd among the metropolises of this study. Helsinki's population is approximately one ninth that of Paris. Stockholm's and Copenhagen's population of 1.9 million each put them in 19th and 20th position, while Oslo stands at number 38 (1.0 million).

Figure 3.1: The population of the 45 metropolises (2006)



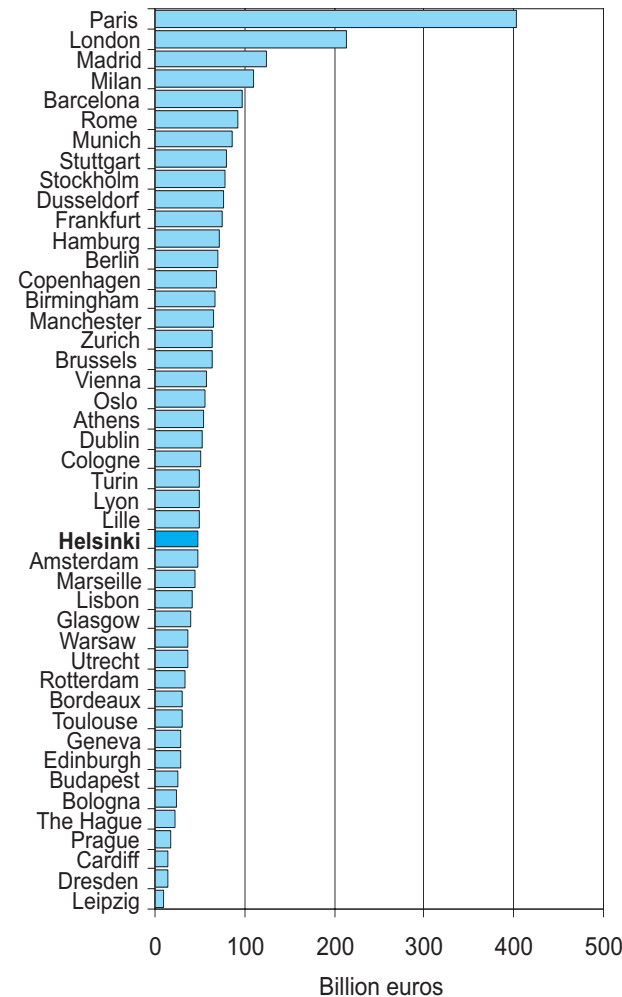
From the point of view of the European urban network the size distribution of major cities is interesting. There are the two mega-metropolises (Paris and London), but below them there are several steps down in the size distribution, with numerous cities being of very similar size at each level. This indicates that Europe still consists of either several national or sub-national urban networks.

# Volume of production

Another criterion by which to compare the size of urban areas is the volume of production. The size ranking of the European metropolises as measured by total gross value added (GVA) is presented in Figure 3.2, and it reveals a different picture from that measured by population.

Paris is overwhelmingly the leading metropolis in terms of production, and the size difference between Paris and most other metropolises is even greater in this respect than when comparing population size. Thus, in addition to being number one in terms of population, Paris is also the most productive city in Europe. Helsinki stands at 27 on the GVA scale, whereas it is 32nd in terms of population. The volume of production in Helsinki is approximately one eighth that of Paris and about the same as in Marseille, Amsterdam, Lille and Lyon. The rankings of the eastern European metropolises of Warsaw and Budapest are significantly lower when measured by production than by population.

**Figure 3.2: The Gross Value Added of the 45 metropolises (2006)**



# 4 ECONOMIC STRUCTURE

## Importance of the service sector

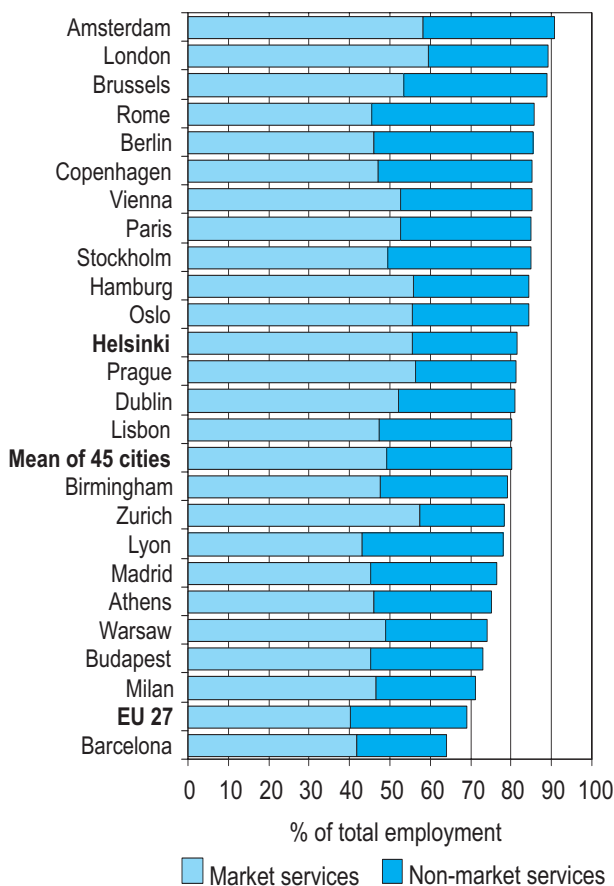
Common to almost all the big cities is the great importance of the service sector. In the metropolises in this study, the service sector share of total employment is 80 % on average, whereas in the 27 EU countries taken as a whole, the service sector employs on average 69 % of the workforce.

However, if we look at the share of employment and the specialisation of the service sector in each of the cities, we see significant differences. The predominance of the service sector is greatest in Amsterdam, London, Brussels, Rome, Berlin, Copenhagen and Vienna. In all of these cities, the service sector share of employment is 85–91 %. Helsinki is also a service sector oriented metropolis, in spite of the fact that the percentage is slightly lower than in other Nordic capitals: the service sector in Helsinki employs 82 % of the workforce.

Within the service sector, there is the non-market sector, which is dominated by public administration and public services. In Rome, Berlin and Copenhagen, the non-market sector employs over 38 % of the workforce. Altogether, 29 % of the workforce in the EU countries and 31 % in metropolises are employed in the non-market service sector. It must be noted that there is some variation in the definition of market sector and non-market sector between countries and cities, which limits the comparability of the data.

As might be expected, capital cities of big countries have more people employed in the public sector because of the concentration of central government functions and associated activities. This clearly affects the economic structure of such cities as Rome and Berlin.

**Figure 4.1: The share of employment in the service sector (market services and non-market services) in selected metropolises (capital cities plus the next largest city of each big country) (2006)**



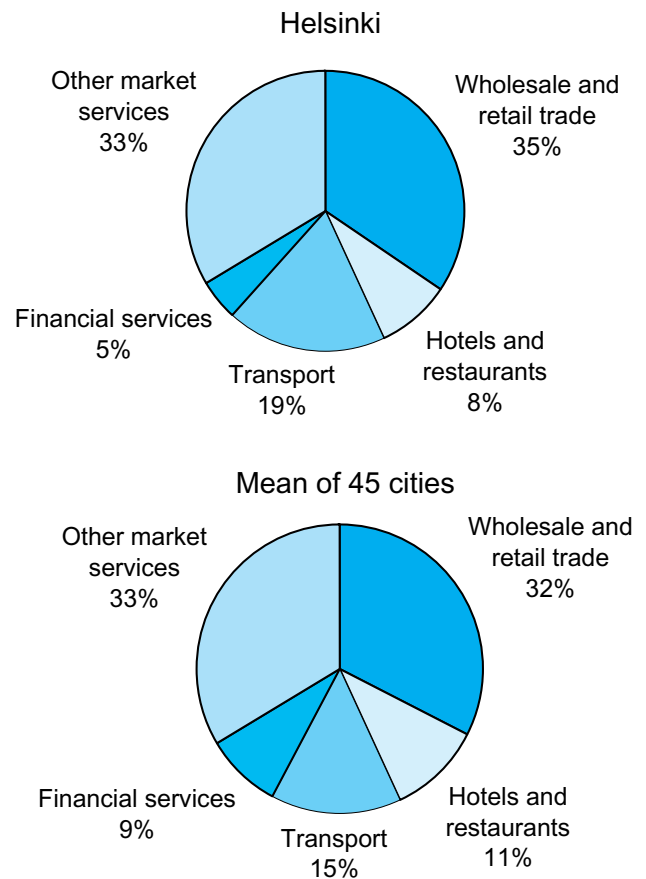
The situation is different in Helsinki and the other Nordic capitals. In these cities, the municipalities play a significant role in providing education, social and health care services, and in turn they have sizeable concentrations of public sector workers at municipal level - relative to their national public administration. In Helsinki, public administration and public services employ approximately 26 % of the workforce.

A large private service sector is a common feature of all metropolises. On average, 49 % of the workforce in the European metropolises is employed by private services, while the corresponding figure for the 27 EU countries is 40 %. The highest concentrations of private service sector jobs in Europe are found in London, Zurich and Amsterdam, where nearly 60 % of the workforce are employed in this sector. The figure for Helsinki is 56 %.

In most capital cities in southern and eastern Europe, the private service sector is still smaller than the mean of the metropolises.

Figure 4.2. shows that in the private market services sector of the metropolises approximately 32 % of the jobs are in the wholesale and retail trades, while a slightly larger share is found in “other market services” - consultancy, marketing, property management, renting services etc. The remainder of the private service jobs are in hotels and restaurants, transport and communications, and financial services. Whereas Helsinki differs remarkably from the rest of Finland with respect to its industrial structure, its service structure is fairly similar to that of other metropolises in Europe. However, the share of jobs in transport and communications among all jobs is significantly larger in Helsinki than in the metropolises on average, indicating that Helsinki specialises greatly in those industries associated with logistics, and beyond that, it acts as a transport and communications hub for the whole of Finland. With regard to Helsinki’s role as logistics centre, the share of wholesale and retail jobs also exceeds the average of the 45 metropolises because of Helsinki’s significance as a national wholesale centre. By contrast, the respective shares held by hotels and restaurants and financial services are lower than in metropolises overall.

**Figure 4.2: The breakdown of jobs in private services: Helsinki compared with the average of European metropolises (2006)**

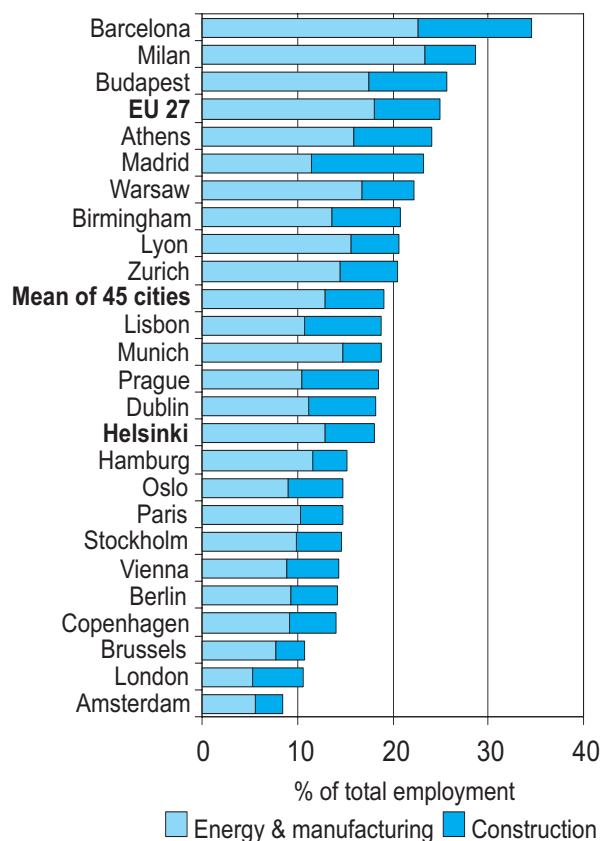


## The role of manufacturing

Nineteenth and twentieth century industrialisation generated massive economic development in almost all of the cities which today are the metropolises of Europe. More recently, the service sector has grown and expanded at the expense of manufacturing industries in nearly all large European cities. In most metropolises, manufacturing employs a smaller percentage of the workforce and its share of value-added production is clearly below that of the average of the 27 EU countries in this study. The manufacturing and construction sectors together employ 19 % of the workforce in the metropolises on average, while the equivalent figure for the European Union as a whole is 25 %. In Helsinki, the figure of 18 % is slightly lower than the average of all the metropolises.

That said, the manufacturing industry still plays a substantial role in the economy of many European metropolitan areas. It employs over 30 % of the workforce in Barcelona, almost 30 % in Milan and about one-fourth of the workforce in Budapest and Athens. One or several clusters of predominating industries are to be found in each of the following: Milan and Barcelona have textiles and machinery industries, and in Stuttgart and Turin there is a cluster of automotive manufacturing and associated industries. In fast-growing metropolises in eastern and southern Europe, for instance Barcelona, Madrid, Athens, Lisbon and Prague, the construction industry forms a strong cluster. It is worth noting that most of the industrialised metropolises in Europe are hardly cities in decline. On the contrary, some of the manufacturing oriented cities are among the most dynamic and economically robust metropolises to be found anywhere in Europe.

**Figure 4.3: The share of employment in energy & manufacturing, and construction in selected metropolises (2006)**



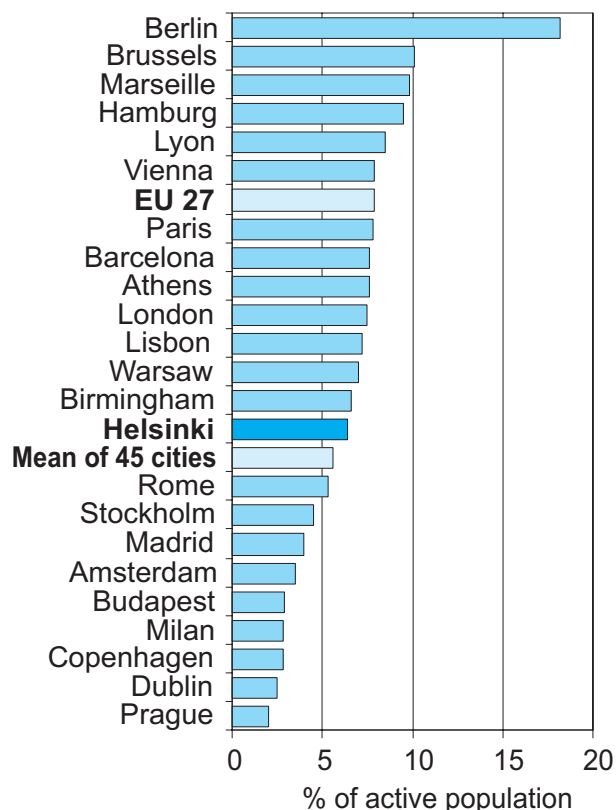
# 5 LABOUR FORCE

The labour force is the most important resource for production in all metropolises, especially when most big cities specialise highly in the labour intensive service sectors. Unfortunately, the data available for this study does not allow an in-depth analysis of the quantitative and qualitative properties of the labour force in each metropolis.

The economic activity rate of the population – the number of people employed per 100 inhabitants – is substantially higher in metropolises (52 %) than in the EU countries as a whole (44 %). There are several reasons for this. The age structure itself explains part of the difference, because the percentage of the population that is of working age is higher in metropolises than in the EU countries as a whole. However, the main reason is that more jobs are generated and labour markets function better in metropolises than in other regions. In Helsinki, the activity rate is slightly higher than the average of the metropolises. This is also the case in the other Nordic capitals – Stockholm, Oslo and Copenhagen.

The average unemployment rate of metropolises was 5.6 % in 2006, i.e. over 2 percentage points lower than the average of the 27 EU countries. This reinforces the theory that urban labour markets operate reasonably well, and in turn generate jobs more effectively than is the case in other areas of a country. Unemployment levels vary considerably between European metropolises: rates range from 2 % to 18 %. This is partly due to differences in statistical sources and national differences in behaviour in the labour market and regarding registration for unemployment. However, the figures also represent the balance between labour demand and supply. In Helsinki, the rate of unemployment – 6.4 % in 2006 – is higher than the mean of metropolises and higher than in Nordic capitals Copenhagen and Stockholm, where the unemployment rate is significantly below the average of the metropolises.

**Figure 5.1: The unemployment rate in selected metropolises (2006)**





# 6 PRODUCTION AND PRODUCTIVITY

The Gross Value Added (GVA) per capita is a rough indicator both of the productivity and the income level of an area. In this study, the GVA figures are based on regional national accounting in each country.

It must be noted that the GVA figures for non-euro countries are converted to euros using exchange rates but not purchasing power parity (PPP). PPP would give higher GVA values, especially for cities in eastern European countries.

Figure 6.1 shows that the average GVA per capita of the metropolises is 50 % higher than the average of the 27 EU countries, indicating that metropolises are more productive and richer zones than the 27 countries as a whole.

There are many reasons which explain the high productivity of the metropolises. For a start, the capital intensive enterprises of manufacturing and specialist services are typically concentrated in large city regions because of optimal operating conditions. The opportunities for harnessing economies of scale, together with the competition and the availability of skilled labour, coupled with efficient transport and communication networks are the strengths of metropolises. In addition, primary production – essentially a sector of low productivity – is typically absent from the metropolises.

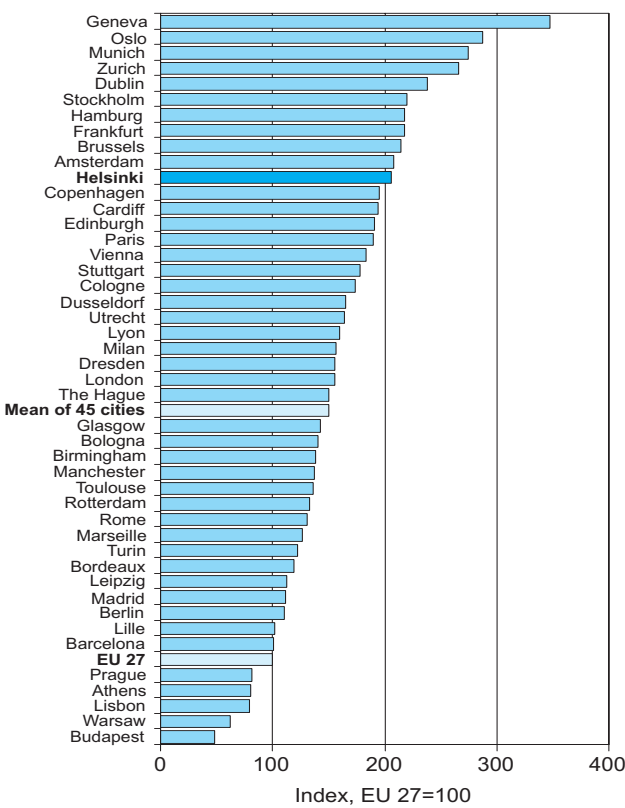
Approximately one third of the total GVA in the 27 EU countries is generated in the metropolitan regions, even though their share of the population is slightly over one fifth. The two economically most significant metropolises, namely Paris and London, produce together approximately 7 % of the total combined GVA of the EU.

The highest GVA per capita in western and central Europe in 2006 is found in Geneva, where it is almost three and half times as high as in the 27 EU countries, using current exchange rates. The next metropolises in the ranking are Oslo, Munich, Zurich and Dublin, followed by Stockholm, Hamburg, Frankfurt, Brussels, Amsterdam, Helsinki and Copenhagen. In Helsinki, the GVA per capita ratio is slightly over twice that of the mean for the 27 EU countries.

One of the main factors explaining the GVA per capita differences between metropolises is the national GVA per

capita. In general, a strong correlation exists between city GVA and national GVA per capita. This is natural because typically the economic structure and performance of a country and those of its major metropolises are closely interwoven. In most European countries, typically 30–40 % of the national GVA is produced in the capital region and other major metropolises.

**Figure 6.1: The GVA (euros) per capita in metropolises (2006) (Index, EU 27=100)**



At the same time, almost all of the metropolitan regions are considerably more productive than their respective countries. In other words, the per capita value-added goods and services produced in those regions are higher than the respective ratio for the country overall. Only in the metropolises located in eastern Germany, and in a few manufacturing cities in Italy, Germany, the UK and France is GVA per capita lower than in the country as a whole.

# 7 ECONOMIC GROWTH OF THE METROPOLISES 2001-2005

The economic growth of the metropolises during the years 2001-2005 is examined using three variables: population, employment and production (GVA).

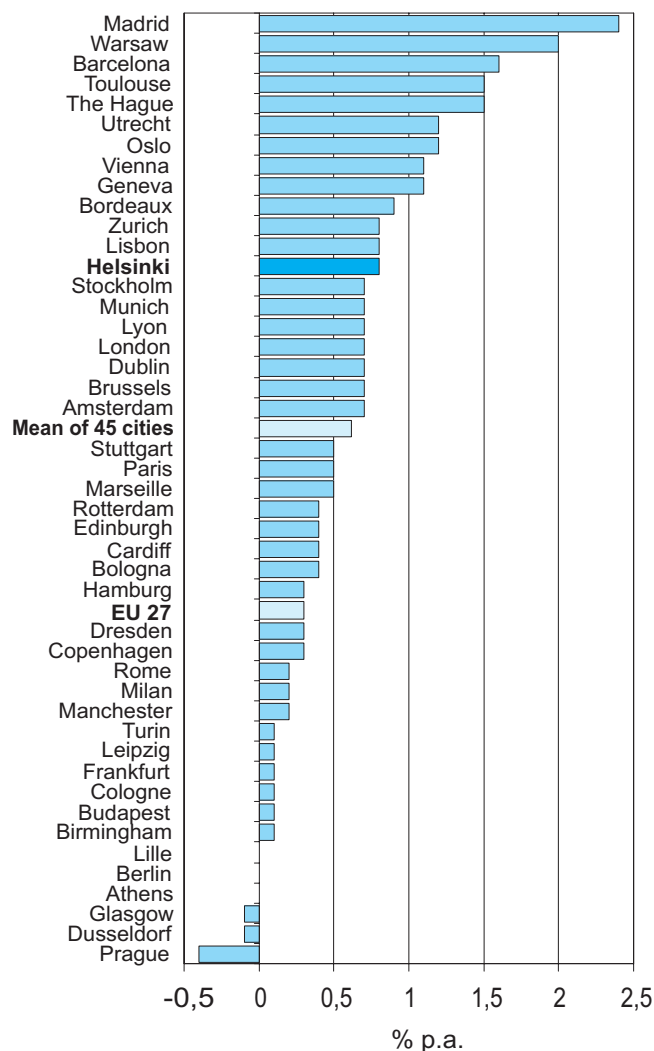
## Population growth

Population change in a given area over a given period of time is based on a combination of net migration and natural population change, i.e. the difference between births and deaths. According to several studies, net migration is related to local supply of labour coupled with demand for labour, along with many other regional and individual personal factors (see Laakso and Loikkanen 2004). Natural population changes are caused by shifts in the age structure of the population together with age- and sex-dependent mortality rates and age-dependent fertility rates.

Figure 7.1 shows that the population grew faster in metropolises – approximately 0.6 % annually – than in the 27 EU countries on average (0.3 % p.a.) during the period 2001–2005. Population growth was fastest in Madrid, 2.4 % p.a., and Warsaw, 2.0 % p.a., followed by Barcelona (1.6 % p.a.), Toulouse and The Hague (1.5 % p.a. each). Helsinki's population growth of 0.8 % p.a. exceeded the average of the metropolises and that of the 27 EU countries. Of the other Nordic capitals, Oslo's population grew faster and Stockholm's slightly slower than that of Helsinki; in Copenhagen the growth rate was below the average level of the 45 cities. Population declined considerably in Prague, and slightly in Dusseldorf and Glasgow.

In Helsinki, the rate of population growth between 2001 and 2005 slowed noticeably compared with the trend in the previous decade, when population increased by 1-1.5 % annually. In Helsinki, the slowdown was closely related to a declining demand for labour. However, population growth in Helsinki speeded up again in 2005 and in 2006.

**Figure 7.1: Population growth (% p.a.) of the 45 metropolises (2001-2005)**



## Employment growth

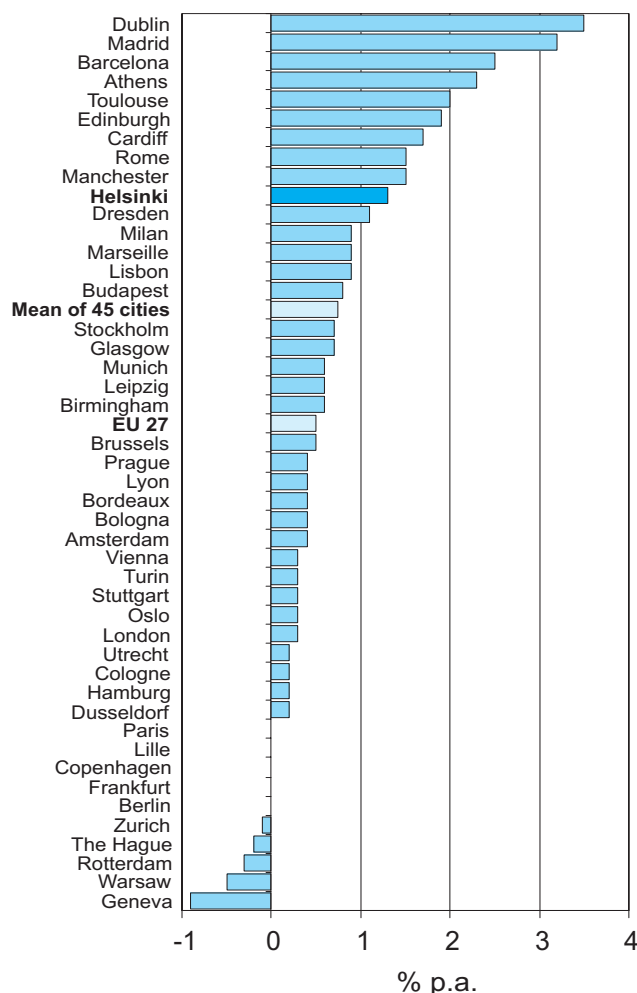
Along with the rising metropolitan populations, employment rates also grew faster in metropolises when set against national figures. The average rate of employment growth in the metropolises was 0.7 % p.a., while the average growth in the 27 EU countries was 0.5 % p.a.

Employment growth was particularly rapid in Dublin, 3.5 % p.a., and in Madrid, 3.2 % p.a. from 2001 to 2005. The next fastest growth rates occurred in Barcelona (2.5 % p.a.), Athens (2.3 % p.a.) and Toulouse (2 % p.a.). In Helsinki, the employment growth rate was 1.3 % annually; by contrast, in the other Nordic capitals employment growth was lower than the mean of the cities, and in Copenhagen and Oslo even lower than in 27 EU countries. Employment declined in Geneva, Warsaw, Rotterdam, The Hague and Zurich.

In Helsinki, employment growth slowed between 2001 and 2005 compared with the second half of 1990s - during which period employment increased by 4 % annually, which at that time put Helsinki among the three fastest growing metropolises in Europe. However, employment growth recovered in Helsinki in 2004.

There is a clear correlation between employment and population growth. However, in some cities, population may increase without employment growth – at least in the short run – whereas in other cities the opposite may occur. This indicates that in many metropolises there is considerable flexibility in the local labour markets and consequently employment growth does not automatically lead to major inward migration. On the other hand, there is significant migration to metropolises that is not directly linked to local labour markets, for instance the arrival of refugees. In addition, natural population growth significantly affects population growth, whereas it is only loosely related to labour markets, at least in the short run.

**Figure 7.2: Employment growth (% p.a.) of the 45 metropolises (2001-2005)**



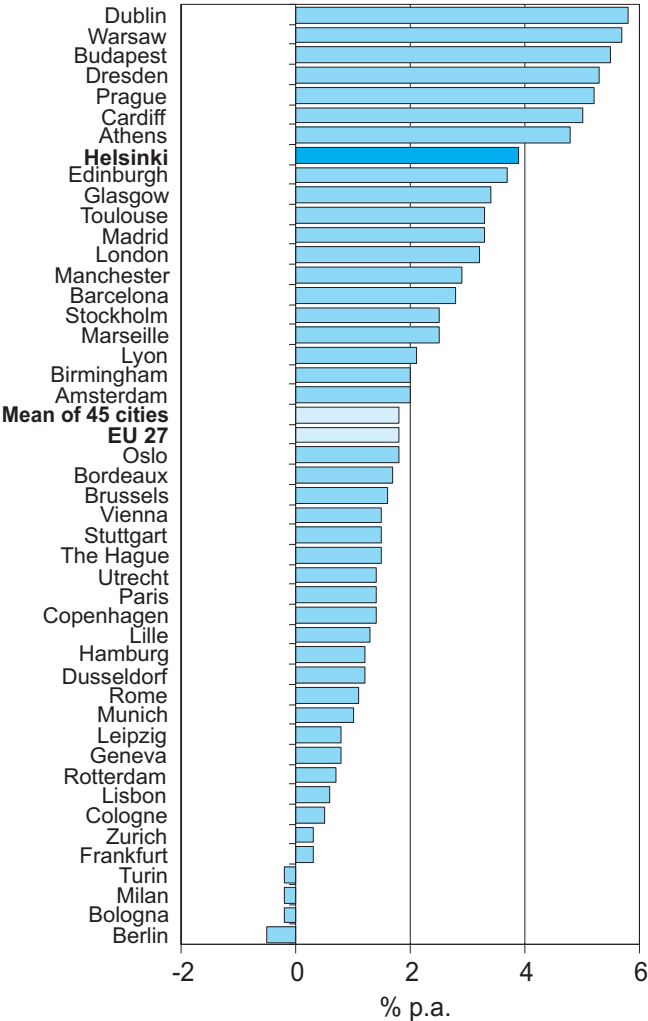
# Production growth

Production growth was on average as fast in the metropolises as in the 27 EU-countries as a whole, viz. 1.8 % p.a., during the period 2001-2005. The equal growth rate is exceptional because in earlier periods metropolises have grown systematically faster than the area as a whole with respect to production.

The GVA growth rate was fastest in Dublin, 5.8 % p.a., closely followed by Warsaw, 5.7 % p.a. Next in order were Budapest, Dresden, Prague, Cardiff and Athens. In Helsinki GVA grew at 3.9 % p.a. In Stockholm, the figure was 2.5 % p.a., whereas in Oslo and Copenhagen the growth rates were below the mean of the metropolises. GVA declined in Berlin, Bologna, Milan and Turin.

Like employment and population, GVA growth was rather modest in Helsinki from 2001 to 2005 compared with the period from 1995 to 2000, when the growth rate was about 8 % annually. Major problems experienced in the important Information and Communications Technology (ICT) sector were the main cause of the slowdown. The associated decline in output and fall in employment in this sector were distributed widely across the economy of Helsinki, with the temporary slackening in GVA strongly affecting broader employment and population trends in the metropolis, as well. However, the growth of GVA accelerated in Helsinki again from 2004 onwards.

**Figure 7.3: GVA growth (% p.a.) of metropolises (2001-2005)**



# 8 FUTURE ECONOMIC GROWTH IN METROPOLISES

An essential part of the research carried out by the research network led by Cambridge Econometrics is the medium term forecasting of metropolitan economic growth. Predictions for the period 2006-2011 are made for production (GVA), employment and a few other economic variables, using an econometric model developed and applied by Cambridge Econometrics. The forecasts are based on detailed analyses of the development of economic sectors at European, national and regional level. The analyses are made by Cambridge Econometrics in close co-operation with specialists in each country.

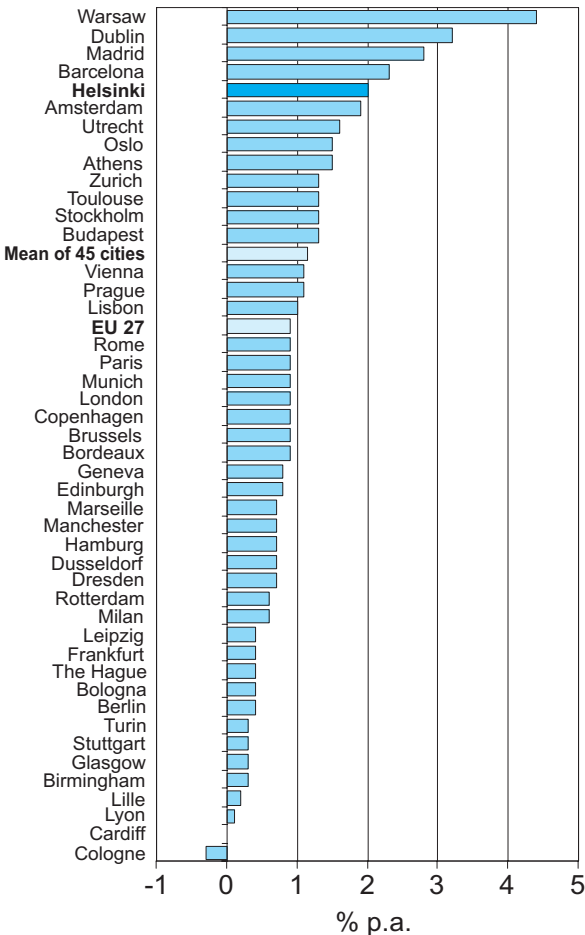
## Employment forecasts

Rates of employment growth of big cities are expected to accelerate compared with those of the period 2001-2005. Thus, mean employment growth of the cities is forecast to be 1.1 % p.a. in the period 2006-2011, which compares with 0.7 % p.a. in 2001-2005. The mean employment rate of the 27 EU countries is predicted to be 0.9 % p.a. (0.5 % in 2001-2005), keeping the gap between the EU average and the metropolises the same as in the previous period.

According to the forecasts, employment growth will be fastest in Warsaw, Dublin, Madrid, Barcelona and Helsinki. Employment growth in Oslo and Stockholm is predicted to be above the mean of the cities, too, while in Copenhagen the growth is expected to be lower than the average of the 27 EU countries. Employment is predicted to decline in Cologne.

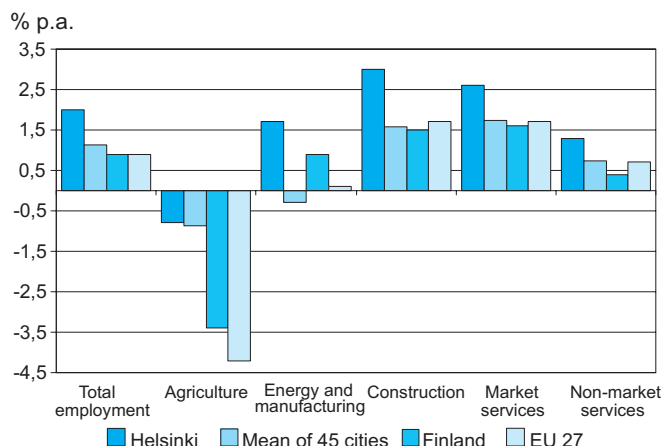
The economic structure of cities, the general prospects for different sectors and various city-specific factors, such as competitiveness, explain the differences between the forecasts for the 45 metropolises. Figure 8.2 shows that market services and construction are predicted to be the main growth sectors with respect to employment both in Helsinki and in Finland nationally; the same is predicted for the 45 metropolises and the EU area as a whole. By contrast, manufacturing and non-market services are anticipated to experience slower growth; agricultural employment, however, is expected to

**Figure 8.1: The forecast for employment growth (% p.a.) in metropolises (2006-2011)**



decline further. Consequently, in those regions which have concentrations of market services or where construction activity is strong, employment is expected to increase relatively fast. That said, regional differences occur. In Helsinki, employment is expected to grow faster than in other areas of the country in all sectors; agriculture is the exception: this sector is likely to decline slowly. Even employment in manufacturing is expected to increase in Helsinki, unlike that which is forecast for the 45 cities or the EU area overall.

**Figure 8.2: The forecast for employment growth (% p.a.) by sector (2006-2011)**



## Production forecasts

Growth of GVA in metropolises is also expected to speed up in the period 2006-2011 compared with the previous five years. Thus, a 2.5 % p.a. GVA growth rate is predicted for the cities, which is higher than in the period 2001-2005 (1.8 % p.a.). The forecast for the 27 EU countries is 2.4 % p.a. (1.8 % in 2001-2005). This means that the average gap in the growth rate between the cities and the EU area as a whole is expected to widen slightly but still remain very small compared with what occurred in the 1990s.

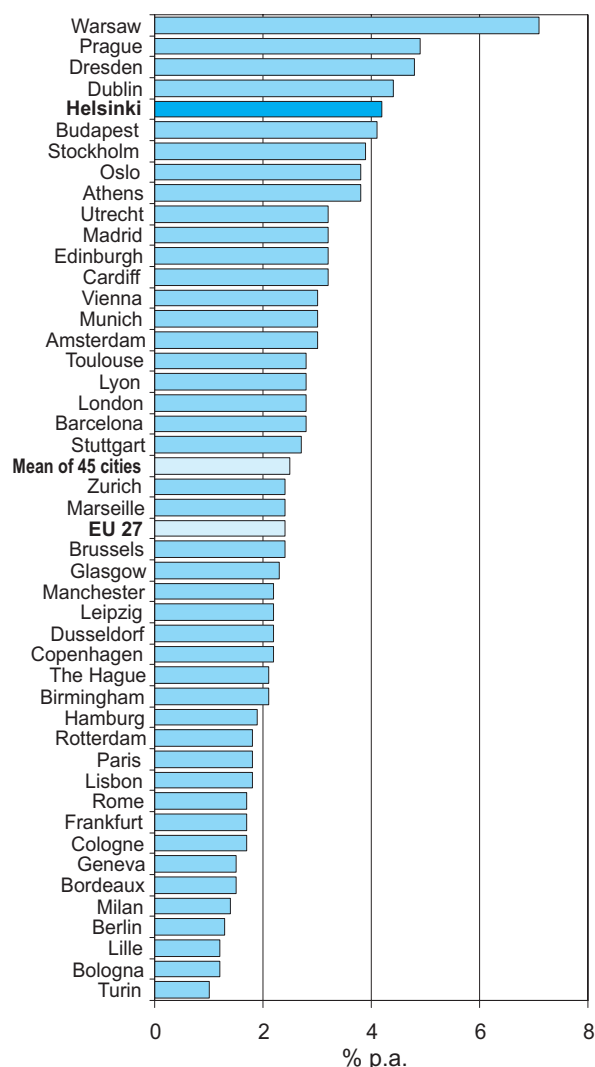
According to the forecast, Warsaw with the growth rate of 7.1 % p.a. will lead the GVA growth of metropolises, followed by Prague and Dresden. The next cities in order are Dublin, the leading city in the preceding periods, Helsinki, Budapest, Stockholm, Oslo and Athens. The GVA growth rate in Helsinki is predicted to be 4.2 % p.a., slightly higher than in the previous period. Of the Nordic capitals, only Copenhagen is predicted to fall behind the 27 EU countries.

In general, cities which grew fast in the previous period are expected to grow fast in the coming period. Likewise, those that grew slowly will continue to do so. In new EU member countries, the economy is expected to grow reasonably rapidly, reflecting the prospects of their metropolises. The recovery of the worldwide ICT markets and the positive impact of growing market areas such as Russia and China are

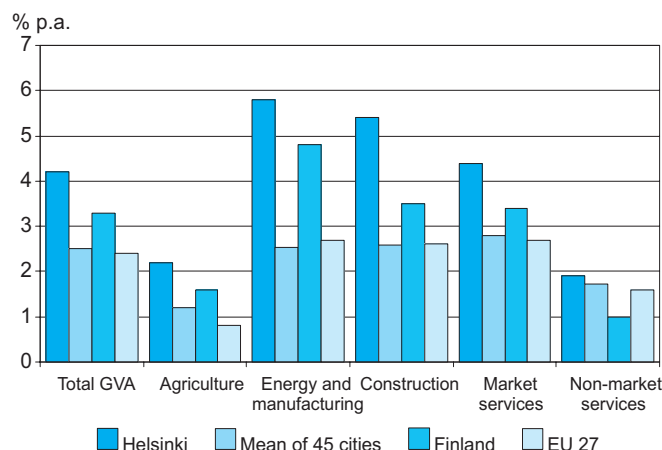
expected to maintain economic expansion in such cities as Stockholm and Helsinki.

According to the forecast, the fastest growing metropolises will be those in the eastern part of central Europe (Warsaw, Prague, Dresden and Budapest), in the north (Helsinki, Stockholm and Oslo), in Ireland (Dublin) and in Greece (Athens). The slowest growing group will consist of the manufacturing cities of Italy (Turin, Bologna and Milan), the regional centres of France (Lille and Bordeaux), and the capital city of Germany (Berlin).

**Figure 8.3: The forecast for GVA growth (% p.a.) in metropolises (2006-2011)**



**Figure 8.4: The forecast for GVA growth (% p.a.) by sector (2006-2011)**



The above notwithstanding, even with a smaller gap between the cities and the EU area as a whole, metropolises are expected to remain the motors of the European economy during the next few years.

Sector specific differences in predicted GVA growth are presented in Figure 8.4. The GVA of manufacturing, construction and market services are expected to grow approximately at the same rate (2.5–3 % p.a.) in all of the 45 cities and in the EU area as a whole, while in Helsinki and in Finland manufacturing, thanks to the electronics and machinery industries, is predicted to grow faster than the other two sectors. Agriculture and non-market services are expected to grow slower than other sectors in all regions of the EU. As in the case of employment, GVA is predicted to grow more in Helsinki than in other Finnish regions in all sectors.

There is a large gap between the growth rates of GVA and employment in manufacturing and agriculture, while the gap is smaller in other sectors. This indicates growth of productivity in the economy in all regions. The productivity is anticipated to increase rapidly in manufacturing and agriculture while in construction, market services and non-market services the change will be slower.

## Why do metropolises grow faster than other regions?

The previous data show that as a group the metropolises of Europe have grown faster than the mean growth of their respective countries in terms of population, employment and GVA. Exceptionally, however, there was no difference in the GVA growth rate between metropolises and other regions in the period 2001-2005. The slowdown of the economy in most EU countries clearly shrank the gap. In the forecasts for the period 2006-2011, the metropolises as a group are again anticipated to grow faster than the EU area as a whole, but the difference is not expected to be as big as in 1990s.

Economies of scale and the benefits of agglomeration are important factors that explain the faster growth rates of big cities. However, within the group of metropolises, the size of the population does not provide a clear explanation for short or middle-term differences in growth.

Unlike size, the structure of the economy has a crucial influence on the economic performance of a city. A rough separation can be made between metropolises in terms of economic diversity. At one extreme, are the cities of London and Paris, which have several strong export clusters. These two economically diverse metropolises are most likely to experience stable economic growth because the economic fluctuations of individual clusters or industries normally balance each other out. At the other extreme, are cities highly dependent on one single cluster, typically a branch of manufacturing. In this case, the economic development of a city is strongly determined by fluctuations in this key cluster. When the key cluster grows rapidly, this city grows fast, too, but if the cluster suffers long-term structural problems, it will limit the growth opportunities of the entire metropolis for a considerable time.

The economies of metropolises are closely tied into their national economies. Consequently, national macro-economic development is a significant factor explaining differences in growth between metropolises. Thus, a sluggish national economy is likely to lead to a slower growing metropolis. However, in most cases the growth rate of a metropolis remains higher than that of its respective country.



# 9 HELSINKI IN THE EUROPEAN URBAN NETWORK - A SYNTHESIS

## The economic map of Urban Europe

Collectively, the metropolises of Europe are the engine of economic growth in the EU. Cities provide benefits of agglomeration for businesses, and attract the most dynamic companies and fastest growing industries. They are concentrations of research, development and other innovation capacity necessary for high tech manufacturing and specialist business services. Moreover, it is evident that the strategic role of metropolises in driving economic growth will continue in Europe in the future. However, metropolises do not form a homogeneous group. They perform differently, and it is the most diverse and dynamic centres that have grown the fastest and this trend is expected to continue.

Cities highly dependent on a single industrial cluster typically experience strong shifts in their economic situations because of fluctuations in the performance of that cluster. Similarly, cities typically oriented towards traditional manufacturing or public administration may suffer from structural problems and, therefore, the economy will grow rather slowly.

The broad economic map of Europe describes a contrast between a core of rich (high GVA per capita) regions and metropolises located in central and western areas and the poorer regions and cities, which tend to be found on the peripheries of the continent. However, there are several wealthy areas outside the core as well, and these are in the northern and western fringes.

As well as being wealthy, the prosperous core is also the most urbanised area of Europe with several metropolises close to each other. Roughly speaking, the rich core extends from south-east England via the central parts of the Netherlands and Belgium, western parts of

Germany and Austria to Switzerland, and down to northern Italy. The rich areas outside this core are Paris and the other metropolises of France, Madrid and Barcelona in Spain,

Hamburg and Berlin in Germany, Vienna in eastern Austria, all capital regions – Helsinki, Stockholm, Oslo and Copenhagen – and some other regions in Nordic countries, parts of northern England and eastern Scotland, and Dublin together with south-east Ireland.

The economic map looks rather different when we look at the regional variation in economic growth. The overall picture since 1995 is that the big cities of the countries fringing the zones that surround the wealthy core of the Europe have grown fastest, and this pattern is predicted to continue. Leading the fast growing outer ring of metropolises are the capital cities and regional centres of eastern central Europe (Budapest, Dresden, Prague and Warsaw), which have been restructuring their institutions and economies with the help of EU regional funds, and in turn have been attracting foreign investments. In the case of the capitals of these eastern and central European countries, it is their pre-eminent economic position, coupled with a low starting level of GVA also which explains the speed of their growth. Another group of fast growing fringe metropolises consists of those in Ireland (Dublin), Scotland (Edinburgh) and Wales (Cardiff), all of which have successfully restructured their economies and attracted investments for their expanding industries. The rapidly growing metropolises of Spain (Barcelona and Madrid) and Greece (Athens) have benefited greatly from the regional funds of the EU. In the northern Europe, the Nordic capital cities, notably Helsinki, Stockholm and Oslo, have expanded rapidly, both helped by their growth clusters, and unhindered by major structural problems.

## Helsinki - a connecting metropolis

Helsinki is the only metropolis in Finland. The population of the Helsinki Region (the functional region of 14 municipalities in 2006) is 1 290 000. There are about 715 000 jobs in the region and the value of the gross value added (GVA) is approximately 49 billion euros. Put another way, Helsinki's share of the national population is 24 %, and it has 29 % of the jobs and 36 % of GVA of Finland as a whole. Compared with the rest of the country, the economy of Helsinki is



heavily based on business and financial services, trade and logistics, culture and leisure services, research and development (R&D), manufacturing of high-technology products, higher education and national level administration.

Viewed from the extensive markets of western and central Europe, Helsinki's location may look remote. This constraint, however, has effectively been eliminated by sophisticated communications technology and a modern transport infrastructure. Helsinki has become a major air traffic bridge between Europe and the Far East. In addition, a well trained labour force coupled with systematic investments in R&D and in other human capital has enabled considerable specialisation in high technology export products in which the transport costs to the main market areas are not a crucial factor.

At the same time, Helsinki is located optimally both from the point of view of Finnish national markets and the markets of north-west Russia, Poland and the Baltic states. The city is also an international network node for the rest of Finland.

## Helsinki's specialisms

Among the metropolises of Europe, Helsinki stands out as a modern and dynamic city. The service sector predominates, as is the case in most other metropolises.

The share of the economy occupied by the public sector is close to the average of all the metropolises together. In this respect, all the Nordic capitals resemble each other. In the market services sector, Helsinki specialises predominantly in transport and communications.

The share occupied by manufacturing is approximately the same as the average of the 45 metropolises, but clearly lower than the national figure, and that of the European countries as a whole. Helsinki specialises particularly in the manufacturing of electronics, machinery and printing industry. With the exception of food processing, the percentage taken up by traditional heavy manufacturing is marginal.

Helsinki is a productive and prosperous city. GVA per capita in Helsinki is approximately 50 % higher than the national average; it is the 11th wealthiest metropolis in Europe, according to this study.

## Future prospects for Helsinki

Helsinki grew rapidly between 1995 and 2000 and during the period Helsinki was among the three fastest growing cities among the 45 with respect to population, employment and GVA growth. It should be noted, however, that the starting point, in 1995, for employment and production was low in Helsinki in the wake of the economic depression in Finland in the early 1990s. After the boom in the 1990s, growth slowed markedly during the years 2001 to 2003. Consequently, Helsinki's rank in economic growth dropped in the period 2001-2005 - though it did remain clearly in the upper half of the 45 metropolises in all respects. From 2004 onwards, GVA in Helsinki has grown reasonably fast again. Moreover, employment and population trends have followed that growth in production, albeit with a lag.

Looking forward to 2011, the growth rates of GVA, employment and population are expected to remain fairly high: GVA 4 % p.a. and employment 2 % p.a. according to the forecasts in this study. In spite of the fact that this growth rate is much lower than in the second half of the 1990s, Helsinki will remain among the fastest growing cities with respect to all key variables.

The relatively optimistic economic prospects for Helsinki stem from several factors. For a start, despite several risks and uncertainties, Helsinki's ICT sector remains competitive and well-placed in the global markets and will be able to take its share of the worldwide growth in demand. Second, the expansion of the private service sector is predicted to continue, maintained by steady domestic consumption. Beyond that, the vibrant property markets will keep levels of construction investments high. Residential construction is expected to revive once building starts in new planning areas in the Helsinki metropolitan area. And major infrastructure investments, such as the Vuosaari port area and new transport projects (the western Metro line, and the Ring Rail Line to the airport) will impact favourably on the economy, too. Improved economic prospects in EU countries, which remain the main destinations for Finnish goods etc, have benefited the Helsinki-based export companies and compensated for the difficulties in the markets of USA. Within the EU, the Baltic and east European EU member countries are important for Helsinki because growth there enhances home markets for Helsinki-based industries. Economic growth in Russia is expected to expand, in turn generating demand in manu-

facturing, trade, transport and business services in Helsinki, which will continue to act as a logistic hub (in the trade) between western Europe and Russia. Farther afield, demand from China and other Far East countries will further advance the ICT and machinery sectors.

## Helsinki's challenges and solutions

While the mid-term prospects for Helsinki are reasonably optimistic, the city faces several challenges if it wants to remain a competitive location for firms and, at the same time, provide adequate welfare for its citizens in the longer term.

Helsinki needs to diversify its economic base by developing new, robust industrial clusters to complement the modern ICT cluster, and its more traditional industries. This would greatly diminish the risks associated with the considerable volatility of the global ICT business. In general terms, Helsinki should further diversify and become more innovative in order to attract not only new industries but also more domestic and foreign investments. The Helsinki business environment strategy recognises this, and aims to support the preconditions required to promote particularly knowledge-intensive business services (KIBS), the creative industries (architecture, design, art, publishing etc.) and tourism.

The ageing of the population presents a challenge to welfare service provision in Helsinki. An example of a new approach to ageing is "The Healthy Neighbourhood" project, led by the City of Helsinki Health Centre and Forum Virium Helsinki. As the website states: it is a "wide-reaching Living Lab project exploring comprehensive solutions for health care challenges." In practice, the project uses technological solutions to encourage individuals to take greater responsibility for their own health, which is particularly important for older citizens.

The ageing population will start impacting on labour supply, too. Without an inward migration surplus the number of people of working age will start to decline within a few years. A permanent inflow of working age immigrants will be necessary to keep the labour markets of Helsinki functioning. It is evident that an increasing proportion of the migrants will come from abroad in the future, with the result that the share of population having foreign origin will gradually approach

the level of other European metropolises. With this in mind, obstacles hindering the integration of immigrants into society must be removed, for example by smoothing the entry of foreign graduates into the labour markets. In Helsinki – as in all metropolises – migrants make an essential contribution to the urban patchwork and innovative potential, and the Helsinki region should take full advantage of this to make it a successful multi-cultural metropolis.

A well-educated population and the considerable investments in research and development both by the private and the public sector are among the evident strengths of Helsinki. They form the basis for knowledge economics, which is one of the keys to the city's dynamism. However, this innovativeness should be further fostered by more life-long learning programmes and by supporting people at all educational levels to develop their skills.

To attract new migrants to the region, Helsinki needs to offer more choice in its regional housing markets. As a result of the rather standardised industrial concrete construction of 1960s, 1970s and 1980s, Helsinki's housing stock remains dominated by blocks of flats. Moreover, the majority of individual dwellings are rather small, which results in households having less floor space per capita in Helsinki than in most other European metropolises. However, house building has been active and supply has increased rapidly during the last decades, which should go some way to attracting talented people for the varied labour market. But greater diversity of housing is needed, too. This has been recognised by the region's decision makers, and in 2007 a new housing and land use programme covering the entire Helsinki Region was accepted by the 14 municipalities.

Housing production dropped to historically low level in Helsinki in 2006. The main reason for this is the current severe lack of available vacant land in the city of Helsinki. The large new construction areas started in the 1990s have mostly been completed whereas several new building areas planned in Helsinki and the neighbouring cities Espoo and Vantaa have not yet started. The collapse in housing construction at the same time as the economy expanded and the concomitant demand for labour demand grew is problematic because housing markets are becoming a bottleneck to in-migration and the associated increase in labour supply.

Looking ahead to the end of the first decade of this millennium, Helsinki has an exceptional (historical) opportunity to use

its city planning instruments to boost its dynamism and innovation. The construction of the new Vuosaari port will release the large, old, inner city port areas for redevelopment as a mix of residential and business land use. The new port will also free up extensive tracts of land in Pasila, in the northern inner city, which are currently used for transporting goods to and from the existing inner city harbours. This offers an opportunity to plan and develop new, modern and attractive residential and business areas close to the heart of the city. At the same time, other cities of the metropolitan area are planning new residential areas in the vicinities of Ring Road II, the western metro line in the city of Espoo, and those of the planned Ring Rail Line to Helsinki-Vantaa Airport, in the city of Vantaa.

It is generally accepted that metropolitan-scale urban planning is the way forward for the Helsinki Region. This is highlighted by the example of the open competition for future land use and spatial vision of Greater Helsinki. The competition, open to architects and planners worldwide, was organized and financed by the municipalities of the Helsinki Region and the State of Finland (Ministry of Environment). The purpose of the competition was to find innovative ideas for future land use planning and to develop sustainable strategies and concrete solutions for strengthening the status and competitiveness of Greater Helsinki as an attractive region in which to live and conduct business. The results of the competition, which attracted 86 entries from several countries, will be announced in December 2007.

Close, active cooperation between these three key local actors – the local public sector, the business sector, and educational and research institutions – promotes a dynamic and fruitful economic environment. Their collaboration also builds networks, and in turn fosters the accumulation of social capital. This is the essence of the what is called the “triple helix” approach, i.e. close cooperation between industry, centres of learning and the public sector. Good communication and firm trust among the various actors is one of Helsinki’s major strengths.

Helsinki University of Technology (HUT) plays a central role in the regional triple helix. This university has long traditions of cooperation with the business community. The City of

Helsinki has taken up agreement-based research collaboration with HUT. The idea has been to mobilise basic research to the benefit of urban research and planning and to bring feedback from these fields back into basic research. An example of knowledge-and-skills oriented cooperation between the cities of the Metropolitan area and universities is the establishment and partial financing of nine professorships in urban studies at the University of Helsinki and at HUT. This network for urban studies is a unique form of cooperation not only in Finland but also internationally.

Other fruits of cooperation are the science parks: Art and Design City, at Arabianranta, and Bio and Food Science City in Viikki, both located towards the north-east of the city. The newest science park will be Forum Virium – a cluster for developing digital services – in Pasila, in the northern inner city. The oldest and largest science park of Helsinki, however, is in Otaniemi, in the city of Espoo, where Helsinki University of Technology is situated together with a major concentration high-tech firms. Otaniemi is also home Culminatum Ltd, a development company owned by the cities of the Helsinki Metropolitan area, Uusimaa Regional Council, and the universities, polytechnics, research institutes and business community of the Helsinki Region. Culminatum’s strategy is built on two main platforms: (1) developing the regionally important knowledge based growth clusters (Centre of Expertise Programme) and (2) strengthening the regional knowledge base and developing the regional innovation environment (Urban Innovation Policy).

Regional level decision making concerning regional land use, housing, the environment, education, migration policy and other topical matters having strong regional dimensions presents a major challenge. However, in Finland municipalities are both strong and independent with respect to land use and provision of local public services. Currently, regional cooperation and decision making in the Helsinki region are based on voluntary, networking cooperation between the 14 municipalities and the state, without heavy regional bureaucracy or detailed legislation, which gives municipalities significant scope for managing local initiatives. This will also be the basis for future development towards rational and more effective regional coordination.

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# THE ECONOMIC MAP OF URBAN EUROPE

A COMPARATIVE STUDY OF 45 EUROPEAN METROPOLISES

STATISTICS  
2007:42

The western and central parts of Europe are among the most urbanized zones in the world, and the big cities – metropolises – are powerful driving forces behind Europe's economic growth. They provide benefits of agglomeration for businesses, attracting the most dynamic companies and fastest growing industries to gather within their domains.

Compared with other European metropolises the Helsinki Region (hereinafter Helsinki) is not among the biggest, but it is a modern, dynamic and networking city. The Helsinki Region has the largest population concentration in Finland and it is the primary economic centre. It grew rapidly during the second half of the 1990s, but this expansion slowed in the first three years of this millennium. Since 2004, Helsinki's growth has accelerated again and it is predicted that it will remain among the fastest growing cities in Europe during the second half of this decade.

This publication provides a comparative overview of the economies of a number of European metropolises, and particularly how Helsinki compares with other European metropolises with respect to size, economic structure and economic performance.