



HELSINKI CITY URBAN FACTS OFFICE:

w e b p u b l i c a t i o n s

2003

10

THE REGIONAL ECONOMY OF HELSINKI FROM AN INTERNATIONAL PERSPECTIVE

Web Publications

ISSN 1458-5707

ISBN 952-473-090-1

Also in print

ISSN 1455-7231

FURTHER INFORMATION

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Preface

This study aims at an overview of both differences and similarities between European metropolises with respect to economic structure and the growth rate of the economies. The study is based on research made by The European Economic Research Consortium (ERECO) and co-ordinated by Cambridge Econometrics (UK). *Seppo Laakso*, ERECO's associate in Finland and the researcher/author of this study, clearly brings about that the metropolises lead economic growth in Europe. The metropolises provide agglomeration benefits for business, explaining the higher productivity and greater innovation of firms in the metropolises than in other areas.

The current state and the prospects of future development of the economy in the metropolises of Western and Middle Europe are analysed. This piece of research is based on a study concerning the regional economy of 20 countries and their metropolises in Western and Middle Europe. All 15 EU countries along with Norway, Switzerland, Poland, The Czech Republic and Hungary are included. In total, 45 of the urban areas in these countries have been defined as metropolises. Of these, 39 urban areas are located in EU –countries, and six are in non-EU countries.

Almost all of the metropolitan regions are considerably more productive than their host countries. In other words, the per capita value-added goods and services produced in those areas is higher than the respective ratio for the country as a whole. Furthermore, with a few exceptions, the productivity in metropolises is higher than the average of the 20 countries as a whole. One-third of the GVA in Western and Central Europe is generated in the metropolitan regions, even though their share of the population is one-fourth.

In some Western and Central European countries the capital region, which constitutes the only metropolis in the country, dominates the production of the whole country. About half of the value-added production in Hungary is produced in the Budapest area. Some 40 % of the GVA in Denmark is generated in the Copenhagen area, and the respective figure for Athens, Greece is comparable. Dublin produces one-third of the GVA in Ireland, and the figures are similar for *Helsinki* in Finland, Lisbon in Portugal and Vienna in Austria.

The economic structure and productivity of metropolises has a clear link to the growth rate. The 45 metropolises of Western and Central Europe differ significantly with respect to their growth rates in production (GVA), employment and population. There are booming metropolises with very high growth rates and stagnating metropolises with no growth at all.

Looking at the top and bottom metropolises with respect to employment growth, there is no clear geographical pattern in the location of the most rapidly growing metropolises. Still, a certain structure can be found. The Western, Northern and Southern fringes of Europe are well presented in the top category. Dublin in the West, *Helsinki* in the North, and Lisbon in the South all belong to the top group of growing metropolises during 1995 - 2001. The location of the most powerful growth cities does not give support

to the assumption often quoted that in the EU, centrally located core areas would grow at the expense of fringe areas. However, the assumption may be true for individual countries.

One main aim of the research of the ERECO and Cambridge Econometrics is forecasting future economic growth in European metropolises. According to the forecast published in summer 2002, GVA and employment growth in European metropolises is expected to be slower during the period 2001-2006 than it used to be in the second half of the 1990s. However, the metropolises in average are anticipated to grow faster than the 20 countries as a whole.

This study is a joint project conducted by City of Helsinki Urban Facts and the Business Development Unit of the City Office.

Helsinki, January 31st, 2003

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1 INTRODUCTION

The Western and Central parts of Europe belong to the most urbanised areas in the world. Approximately 80 % of the population of this area lives in urban regions. However, cities and towns differ considerably with respect to size, urban structure and economic basis, ranging from small agricultural towns to huge mega-metropolises. This wide range in size distribution of urban areas is an essential feature of the urban network in Europe.

The largest urban areas are generally called metropolises. There is no universally accepted definition for a metropolis. In this study the simple rule is that a large and economically significant urban area is called a metropolis. Normally the area of a metropolis does not equate to that of an administrative municipality but instead, 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.

In Europe the metropolises have a significant role in the economy. In addition to being centres of population they are also centres of economic activity. The metropolises play an essential role as the motor of Europe's economic growth. They

provide agglomeration benefits for businesses, 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 is the only urban area in Finland which, because of its size and economic significance, can be called a metropolis. Within Finland it forms a significant population concentration and economic centre, having a greater population than the six next biggest urban areas put together. Still, on a European scale it is only a medium sized or even small metropolis, for example, only one tenth of the population of the Paris Region.

The aim of this study is to provide 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 special interest is the role of Helsinki and other metropolises in the economic growth of their home countries, as well as their impact on Europe as a whole.

2 THE METROPOLISES IN EUROPE

This study is based on empirical research carried out and published by The European Economic Research Consortium¹ (ERECO). The research work was led and co-ordinated by Cambridge Econometrics Ltd. The Finnish contributor in the project was Kaupunkitutkimus TA Oy (The Urban Research TA Ltd).

The study covers 20 countries in Western and Central Europe. All 15 EU countries are included and, in addition to them, Norway, Switzerland, Poland, the Czech Republic and Hungary. The set of metropolises consists of 45 urban areas from these countries. In almost all countries the capital is included, with the exception of Luxembourg, and Switzerland where Zurich and Geneva are included instead of Bern. In the Nordic countries the capital is the only metropolis in the study, Finland - Helsinki, Sweden - Stockholm, Denmark - Copenhagen and Norway - Oslo. This is the case also in most other small countries of the EU: Austria - Vienna, Belgium - Brussels, Greece - Athens, Ireland - Dublin and Portugal - Lisbon, as well as the future member countries of the EU: the Czech Republic - Prague, Hungary - Budapest and Poland - Warsaw. In big EU-countries, Germany, France, UK, Italy, Spain and also in the Netherlands several major metropolises are included in addition to the capitals. The metropolises of the study are presented on the map 2.1.

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, such as Geneva in Switzerland and Cardiff in the UK. On the other hand, some urban areas with more than one million inhabitants are not included.

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. Depending on the country and urban area, the metropolis is defined at NUTS-1, NUTS-2, NUTS-3 or NUTS-4 level. In most cases the region is defined as a NUTS-3 area. Helsinki is the only region defined at NUTS-4 level as the Helsinki sub-region (Helsingin seutukunta). Stockholm and a couple of other regions are defined at NUTS-2 level while London, Paris, Berlin, Brussels, Hamburg, Athens and Madrid are defined at NUTS-1 level. As a consequence, the areas of the metropolises are not defined as functional urban areas by a homogenous criteria. In some cases the area of the metropolis is very large, consisting of huge agricultural areas and remote towns, as in the case of Warsaw and Lyon. At the other extreme there are cities like Copenhagen (NUTS-3) and London (NUTS-1) where the real functional urban area is significantly larger than the statistical NUTS area. This affects the results of this study in some cases, especially when the size of the area is considered. Still, in the case of Helsinki the NUTS-4 area corresponds reasonably well with the real functional urban region, in spite of the fact that it is not exactly the same as the area normally defined as the Helsinki Region².

The data concerning economic, labour and population statistics is in general based on official statistics of each country. Still, there are problems in some cases with the comparability of data. However, the study gives a reasonably reliable picture of the variation between metropolises and the differences between Helsinki and other metropolises.

The forecasts concerning economic developments are based on the views of both the national experts of each country and those of Cambridge Econometrics, the co-ordinator of the project.

¹ERECO. 2002. European Regional Prospects. Analysis and forecasts to 2006.

²The Helsinki Metropolitan Area (Cities of Helsinki, Espoo Kauniainen and Vantaa), and the 8 fringe municipalities.

Map 2.1: Metropolises in Europe



3 SIZE OF THE METROPOLISES

The ranking and relative differences with respect to 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 related to the economic structure and economic growth potential as will be shown in the following sections.

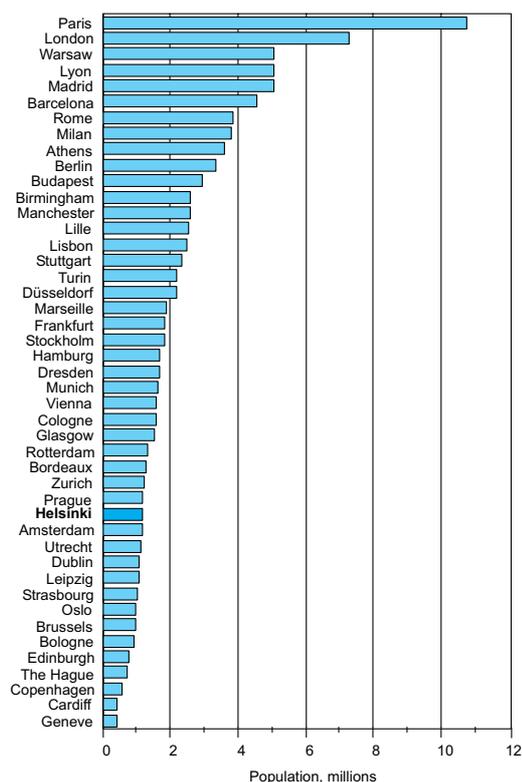
The size of a metropolis is crucially dependent on how the area is defined. As mentioned in the previous section, the metropolises in this study are not defined by the criteria of a functional urban area. The definition used and the NUTS level selected affects the size figures of each metropolis.

Population

Population is the most usual size measure of urban areas. Rank ordering by population of European metropolises is presented in figure 3.1. According to the area definition of this study Paris with 10,8 million inhabitants is the biggest metropolis in Europe. London is second with a population of 7,3 million. It must be noted that in this study London covers only the areas of Inner London and Outer London while in some other statistical sources the functional urban area of London is significantly larger³. The next metropolises in rank order, after the above two mega-metropolises, are Warsaw, Lyon and Madrid with about 5 million inhabitants and Barcelona with 4,6 million. In the case of Warsaw, Lyon and Barcelona the areas of these metropolises are defined as very large in this study⁴.

Helsinki with 1,2 million inhabitants ranks 32nd among the metropolises of this study⁵. Helsinki's population is approximately one tenth that of Paris. Stockholm's rank is 21 with a

Figure 3.1: The Population of metropolises in 2001



population of 1,8 million while Oslo's rank is 38 (1,0 million) and Copenhagen's⁶ 43 (0,6 million).

For comparison, the population of the 10 biggest metropolises of Western and Central Europe and the Nordic countries' capitals, defined according to the area definitions applied by the United Nations and NORDSTAT⁷, in addition to ERECO, are presented in table 3.1. It demonstrates how sensitive city size comparison is to the definition of the urban area.

³According to the definition used by the UN London had 9,6 million inhabitants in 2000 (Statistics Finland).

⁴According to the UN's areadefinition Warsaw had 2,3 (2001), Lyon 1,3 (1999) and Barcelona 2,7 (2000) million inhabitants.

⁵Note that some urban areas in Germany, Italy and UK not included in this study are bigger than Helsinki w.r.t population.

⁶Copenhagen is defined as significantly smaller than the real functional urban area.

⁷NORDSTAT is a database on Nordic major urban regions maintained by the City of Helsinki Urban Facts in co-operation with statistical units of other cities included in the database.

Table 3.1: Population (1000's) in the 10 biggest urban areas of Western and Central Europe and the Nordic capitals; according to the area definitions of UN, ERECO and NORDSTAT (Source: Statistics Finland, Statistical Yearbook of Finland 2002 and NORDSTAT)

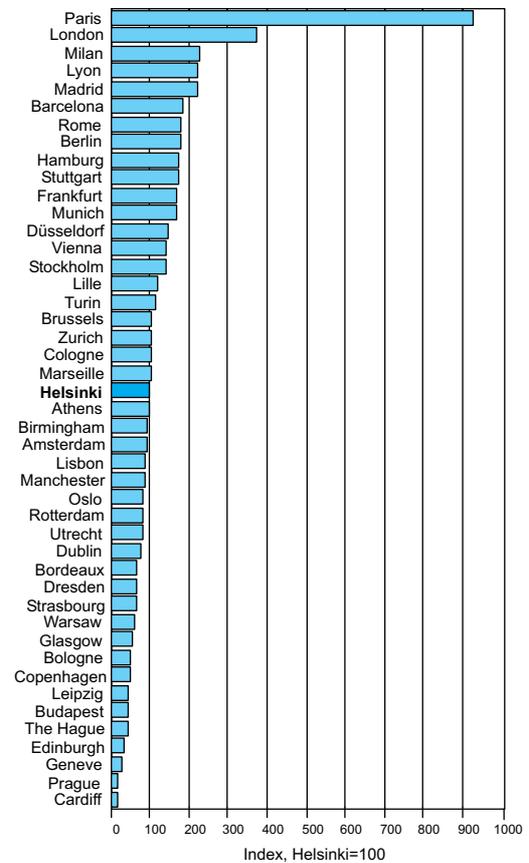
Urban area	Population (year) UN's definition	Population 2001 ERECO's definition	Population 2001 NORDSTAT's definition
Paris	9 645 (1999)	10 763	
London	9 620 (1991)	7 279	
Berlin	5 075 (2000)	3 363	
Milan	4 251 (2000)	3 783	
Madrid	3 969 (2001)	5 055	
Rome	3 810 (1998)	3 852	
Frankfurt	3 681 (2000)	1 847	
Düsseldorf	3 233 (2000)	2 172	
Athens	3 120 (2001)	3 610	
Cologne	3 050 (2000)	1 581	
Copenhagen	1 786 (2000)	591	1 799
Stockholm	1 661 (2000)	1 833	1 658
Oslo	981 (2001)	991	
Helsinki	965 (2001)	1 196	1 201

From the point of view of the European urban network the size distribution of major cities is interesting. According to several studies, size distributions of urban areas in different countries and other reasonably homogenous economic areas resemble each other (see Laakso & Loikkanen 2003, Mills & Hamilton 1994). However, when Western and Central Europe is considered as one area it is noticed that the size distribution of European metropolises is significantly more even than for example in the USA. There are two mega metropolises (Paris and London) and after them there are about 10 metropolises in the size category of 3 - 5 million inhabitants. This indicates that Western and Central Europe still consists of several national or sub-national urban networks.

Volume of production

Another criteria by which to analyse the size of urban areas is the volume of production⁸. The size ranking of the European metropolises with respect to total gross value added is pre-

Figure 3.2: The Gross Value Added of metropolises in 2001, Index, Helsinki = 100



sented in figure 3.2. Paris is overwhelmingly the biggest metropolis with respect to production and the size difference between Paris and most other metropolises is even bigger than with respect to population because Paris is one of the most productive cities in Europe. Helsinki's rank is 22 in GVA size comparison while it is 32 with respect to population. The volume of production in Helsinki is approximately one ninth that of Paris and about the same as in Athens, Marseille and Cologne.

The rank of Eastern European metropolises Warsaw, Budapest and Prague is significantly lower with respect to production than with respect to population. According to the study the volume of production in Warsaw is one third less than in Helsinki while the population of Warsaw is 4 times greater.

⁸The GVA figures of 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 of Eastern European countries.

4 ECONOMIC STRUCTURE

Importance of the service sector

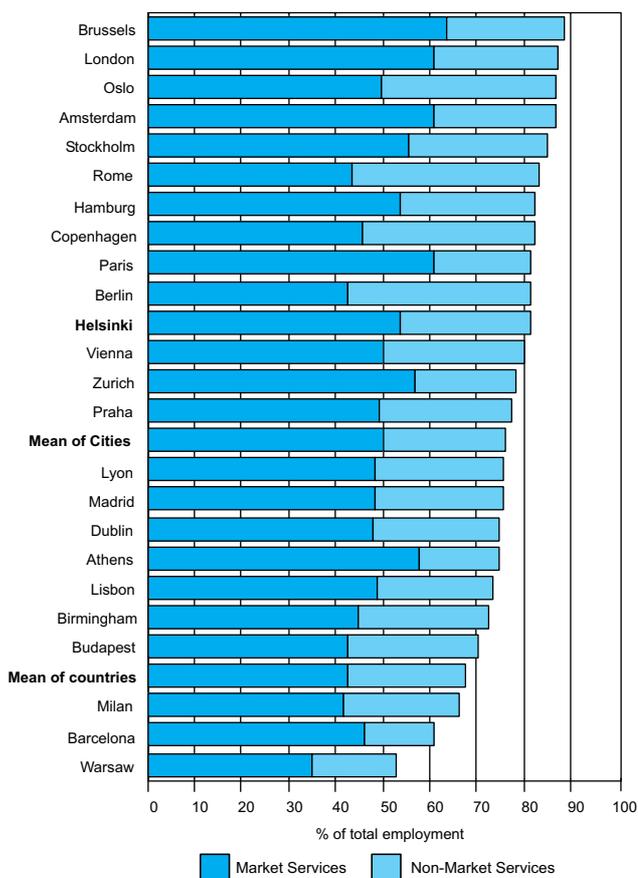
Common to almost all the metropolises is the great importance of the service sector. In all metropolises the service sector's share of total employment is 77 % while in Western and Central European countries, the service sector employs two-thirds of the workforce on average.

However, there are significant differences between the cities with respect to the employment share and specialisation of the service sector. The domination of the service sector is highest in Brussels, London, Oslo, Amsterdam, Stockholm and The Hague. In all of these cities, the service sector's share of employment is over 85 %. Like other Northern capitals Helsinki also belongs to the service sector-oriented cities of Europe: the service sector in Helsinki employs more than 80 % of the workforce, approximately the same as in Copenhagen.

Within the service sector, the public administration and public service branches in Rome, Berlin, Oslo, Copenhagen and The Hague employ over 35 % of the workforce. In contrast, only one-fourth of the workforce in Western and Central European countries and metropolises on the whole are employed in the public administration and public services sectors. Naturally, capital cities employ more in the public sector because of the concentration of central government functions and associated activities. This clearly affects the economic structure of Rome and Berlin. In the Nordic countries, the high proportion of public sector employment can partly be explained by the significant role of municipalities and counties in providing education, social and health care services. In Helsinki, public administration and services employ a slightly higher share than the average of all metropolises. Nonetheless, the figure is lower than in other Nordic metropolises.

A large private service sector is a common feature of all metropolises. On average, half of the workforce in the European

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



metropolises is employed by private services, while the equivalent figure for Western and Central Europe as a whole is slightly over 40 %. The highest concentrations of private service sector jobs in Europe are found in Brussels, London, Paris and Amsterdam, where over 60 % of the workforce is employed by the private service sector. In Helsinki, the private service sector employs nearly 55 % of the workforce. Warsaw is the exception as it still has a rather poorly developed private service sector.

The role of manufacturing

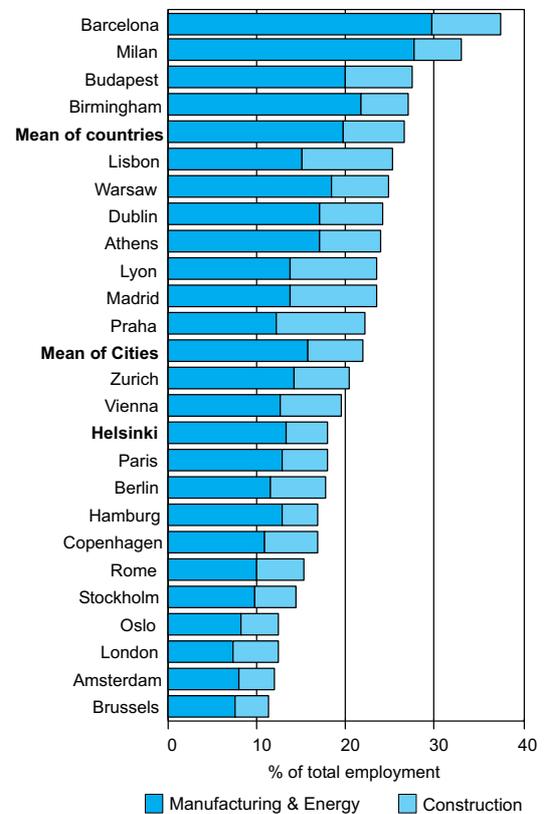
During its time, industrialisation caused a huge development impulse for almost all of the cities which today are the metropolises of Europe. Over the previous decades, the service sector has grown and expanded at the expense of the manufacturing industry in almost all the large cities. In most metropolises, the manufacturing industry employs a smaller share of the workforce and accounts for a value-added production rate clearly below that of the average of the 20 countries. The manufacturing and construction sector employs 22 % of the workforce in the metropolises on average, while the equivalent figure for Western and Central Europe as a whole is 28 %. In Helsinki, this share of the manufacturing industry (less than 20 %) is lower than the average of all the metropolises.

Nevertheless, the manufacturing industry still has a solid role to play in the economy of many European metropolitan areas. It employs over one-third of the workforce in Barcelona and Milan, as well as in Stuttgart, Leipzig, Turin and Dresden. One or several predominating industry clusters may be found in each of these industrial metropolises: textile, machinery and instrument industries in Milan and Barcelona, and an automotive manufacturing and related industry cluster in Stuttgart and Turin. In Dresden and Leipzig, the construction sector acts as the predominant industry cluster. Noteworthy is that most of the industrialised metropolises in Europe cannot be characterised as declining cities. On the contrary, Milan and Barcelona, for example, belong to the most dynamic and economically robust metropolises in the whole of Europe.

Specialisation of metropolises

Practically all metropolises in Europe are specialised in certain industries within the service and/or manufacturing sector. The above figures indicate significant differences between metropolises with respect to the orientation of the economy.

Figure 4.2: The share of manufacturing and construction employment in selected metropolises



In the following the specialisation, especially within the service sector, is analysed using the location quotient approach. Location quotient for a certain industry is calculated by dividing that industry's proportion of total employment by the respective proportion the average of all metropolises and multiplying the result by 100. The statistic equals 100 if the share of the industry in a city is the same as the average in all metropolises. If the share of the industry in a city is higher than the average of all metropolises then the statistic is greater than 100, and the city is specialised in that particular industry. Instead, if the share is lower than the metropolis' average then the statistic is lower than 100, and in this case the city is not specialised in that industry. It must be noted that in the following analysis metropolises are related to the average of all metropolises, not to the average of the whole area or individual countries⁹.

⁹The detailed division within the service sector is only available at metropolis level in this study.

The specialisation of metropolises in trade, transport & communication, finance, business services, public sector and manufacturing are analysed in figures 4.3 - 4.8. The top ten metropolises most specialised in the particular industry are presented in each figure, along with equivalent details from Helsinki, Stockholm and Copenhagen. It must be noted that the high value of the location quotient indicates specialisation relative to other industries in this city, not necessarily the size of the sector relative to other metropolises. In other words, if a smallish metropolis is at the top with respect to specialisation it does not mean that it is the biggest concentration of that industry in Europe.

According to figure 4.3 the Dutch metropolises Utrecht and Amsterdam are most specialised in *trade*, with the employment share of trade 1,5 - 1,8 times as high as the mean of the metropolises. In addition to them, Rotterdam is highly specialised in trade also. This indicates the strong position of the Netherlands as a European and global trade centre. London is another global trade centre within Europe and at the same time the biggest concentration of trade among European metropolises. Frankfurt and Munich are the most significant trade centres in Central Europe while Athens, Dublin, Lisbon and Bologna are major concentrations of trade in their own countries. In spite of the fact that Helsinki is an overwhelmingly strong trade centre within Finland it does not differ significantly from the average of European metropolises with respect to the employment share of trade. This is the case also in Copenhagen while Stockholm is slightly more specialised.

All Nordic metropolises are highly specialised in *transport and communication*. In Stockholm and Oslo the employment proportion of this industry is 1,5 times as high as the average of metropolises while in Copenhagen and Helsinki the share is slightly lower. All Nordic capitals have a major role as port cities (both cargo and passenger transport) and as national centres of international air traffic. They also all have a strong and well developed telecommunication industry. In addition to the Nordic capitals all Dutch metropolises (Utrecht, Amsterdam, Rotterdam and The Hague) are highly specialised in transport and communication complementing their role as trade centres. Athens and Hamburg are also major European transport centres on account of their ports and other business related to sea transport.

Figure 4.3: Trade cities in Europe: metropolises with highest location quotient in Wholesale and Retail Trade (top ten plus Helsinki, Copenhagen & Stockholm)

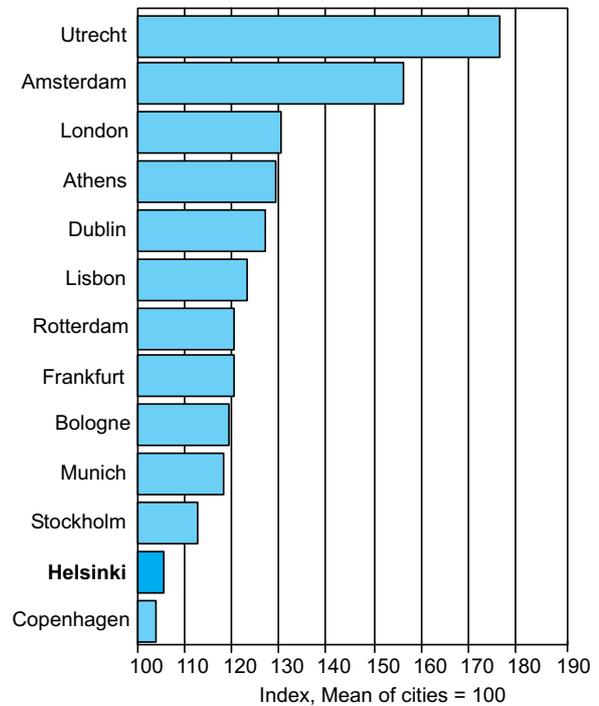
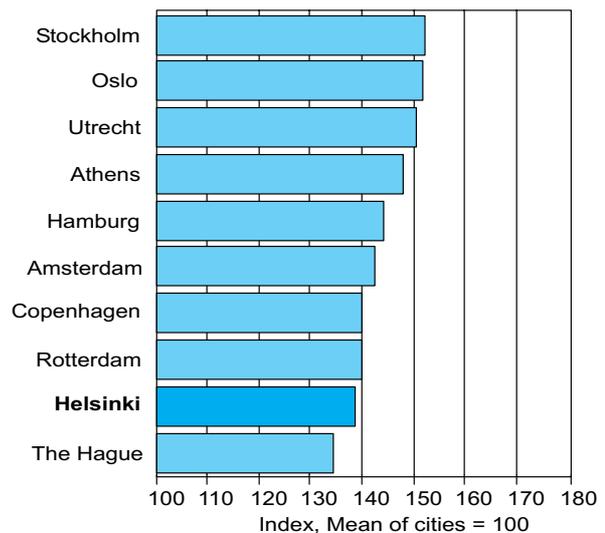


Figure 4.4: Transport & communication cities in Europe: metropolises with highest location quotient in Transport and Communication (top ten including Helsinki, Copenhagen & Stockholm)



Finance and insurance business is clearly concentrated in a few global and national centres in Europe. This is manifested by the high values (200 - 300) of location quotient in the top cities, Brussels, Geneva, Zurich and Frankfurt which are the most specialised in the Finance sector in Europe. They all have a global role as financial centres. Still, the biggest financial centres of Europe are Paris and London, in spite of the fact that the employment share of the finance sector in Paris is only 20 % higher and in London only slightly higher than the average of the metropolises. Hamburg, Stockholm, Munich, Vienna and Copenhagen are strong national centres of the finance sectors. In Helsinki the employment share of the financial sector is only a little higher than the average of all metropolises. However, within Finland the finance sector is strongly concentrated in Helsinki.

Business services consists of a wide range of services, like real estate, data processing, research & development, marketing, planning and consulting. Brussels and Paris are the most specialised in business services with the employment share about 1,7 times as high as the average of metropolises. In addition to them London is strongly specialised in this sector, like all French metropolises (Marseille, Strasbourg, Bordeaux and Lille), plus Utrecht, Geneva and Helsinki. It is interesting to note that Helsinki is significantly more specialised in this sector than the other Nordic capitals.

Figure 4.7 continues the analysis of the role of the *public sector* presented in figure 4.1. The capital cities of the Netherlands (The Hague), Italy (Rome) and Germany (Berlin) are the most specialised in the public sector within Europe. In all of them the employment share of the non-market sector is approximately 1,5 times as high as the average of the metropolises. In addition to them, the Nordic capitals Oslo and Copenhagen, and a few regional centres, Cardiff in Wales, Edinburgh and Glasgow in Scotland, and Cologne and Dresden in Germany have relatively strong specialisation in the public sector. Helsinki differs only slightly from the average of the capitals with respect to its share of the public sector and the location quotient is significantly lower in Helsinki than in the other Nordic capitals.

Figure 4.5: Finance cities in Europe: metropolises with highest location quotient in Financial Services (top ten including Stockholm and Helsinki & Copenhagen)

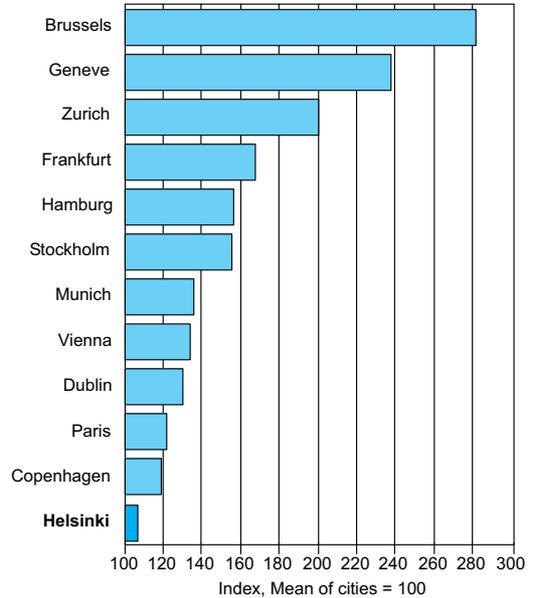
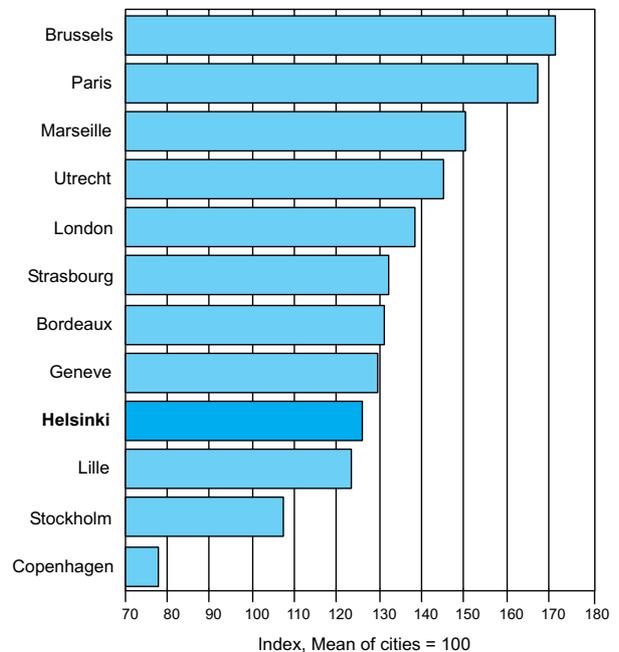


Figure 4.6: Business service cities in Europe: metropolises with highest location quotient in Other Market Services (top ten including Helsinki plus Copenhagen & Stockholm)



None of the capital cities, except Budapest, is specialised in *manufacturing*. Instead, the major manufacturing metropolises in Europe are regional centres of the big EU countries. The metropolises most specialised in manufacturing are Stuttgart, Barcelona, Milan and Turin where the employment share is 1,6 - 2,2 times as high as the average of metropolises. Besides Budapest, the other strong manufacturing centres are located in Germany, France, Italy and the UK. In Helsinki the employment share of manufacturing is lower than the average of the European metropolises but still higher than in the other Nordic capitals.

Figure 4.7: Public sector cities in Europe: metropolises with highest location quotient in Non-Market Services (top ten including Copenhagen plus Helsinki & Stockholm)

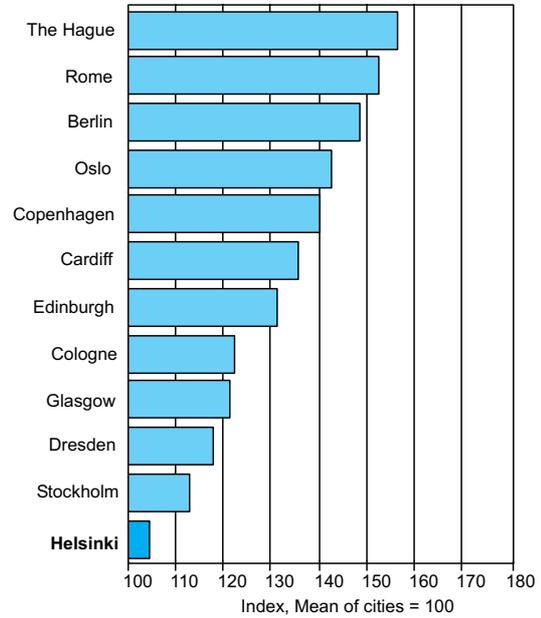
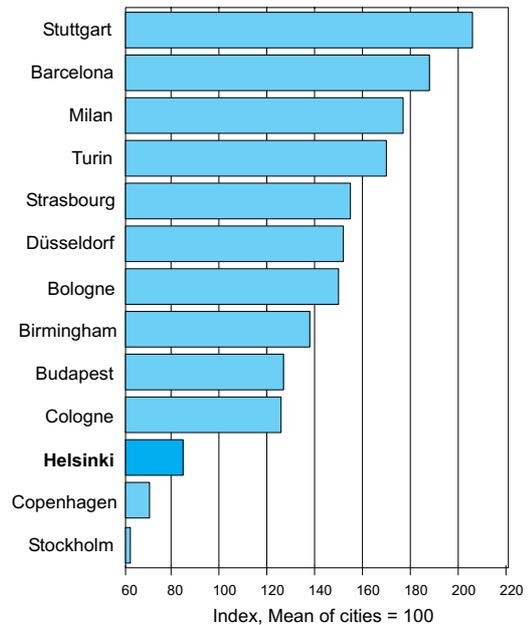


Figure 4.8: Manufacturing cities in Europe: metropolises with highest location quotient in Manufacturing (construction not included) (top ten plus Helsinki, Copenhagen & Stockholm)



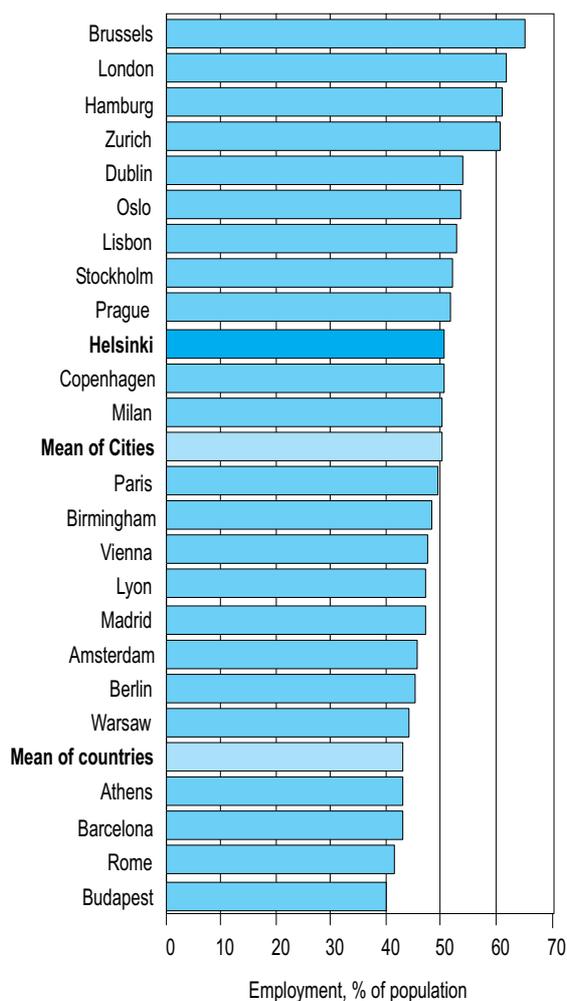
5 LABOUR FORCE

The labour force is the most important resource for production in all metropolises, especially when most big cities are highly specialised 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 labour in each metropolis.

However, figure 5.1 presents the activity rate of the population - the number of employed per 100 inhabitants - in selected metropolises. It shows that the activity rate is significantly higher in metropolises (50 %) than in the total area (43 %), indicating that more jobs are generated and labour markets function better in metropolises than in other regions. The activity rate is highest - over 60 % - in Brussels, London, Hamburg and Zurich. This may be partly explained by the fact that in these cities the data represents jobs located in the area rather than employed people living in the area. Consequently, people commuting to these cities from outside cause additions to the figures.

In all the Nordic capitals (Oslo, Stockholm, Helsinki and Copenhagen) and in Dublin, Lisbon and Prague the activity rate is slightly higher than the average of the metropolises. In most of these cities employment grew reasonably fast during the second half of the 1990s. The lowest activity rate is in the Southern and Eastern capitals, Budapest, Rome, Barcelona, Athens and Warsaw, which is at least partly due to the age structure of the population and low participation of females in the labour markets.

Figure 5.1: The number of employed per 100 inhabitants in selected metropolises in 2001



6 PRODUCTION AND PRODUCTIVITY

The Gross Value Added (GVA) per capita is a rough indicator both for the productivity and the income level of the area. In this study the GVA figures are based on regional national accounting in each country. As mentioned in section 3, the GVA figures of 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 of Eastern European countries and lower values, for example, for Helsinki.

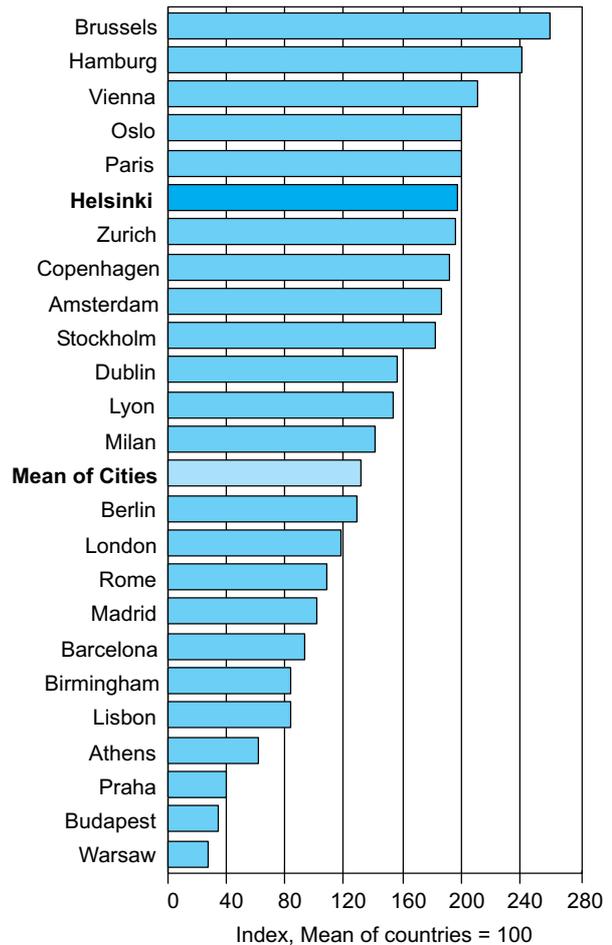
According to figure 6.1 the average GVA per capita of the metropolises is approximately one third higher than the average of the countries, indicating that metropolises are more productive and richer areas than the countries as a whole.

There are many reasons which explain the high productivity of the metropolises. The capital-intensive enterprises of manufacturing and specialised services are concentrated in large city regions because of optimal functional conditions. The possibilities of harnessing economies of scale, competition, the availability of competent labour and transport as well as communication networks are strengths of metropolises. In addition, primary production – essentially the sector of low productivity – is absent from the metropolises.

One-third of the GVA in Western and Central Europe is generated in the metropolitan regions, even though their share of the population is one-fourth. The economically most significant metropolises, Paris, London, and Milan, produce approximately one-tenth of the total combined GVA of the 20 countries.

The highest GVA per capita in Western and Central Europe (in 2000) is in Brussels where it is 2,6 times as high as the average of the entire area of the 20 countries. The next metropolises in the ranking are Hamburg, Vienna, Oslo, Paris, Helsinki and Zurich where the GVA per capita ratio is 2 - 2,4 times as high as the average of the countries. The values for Copenhagen and Stockholm are slightly lower than for Helsinki.

Figure 6.1: Gross Value Added (euros) per Capita in selected metropolises in 2000 (Index, Mean of countries=100)



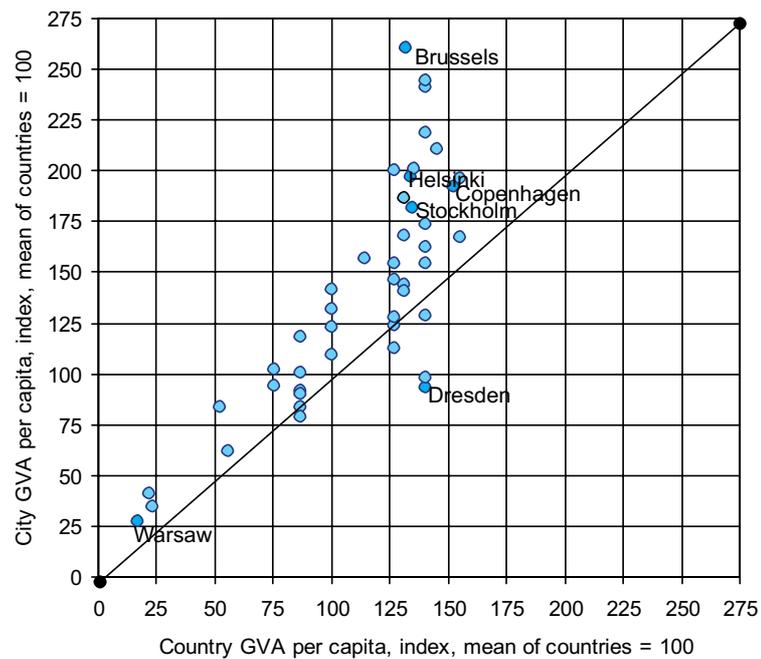
One of the main factors explaining the GVA per capita differences between metropolises is the national GVA per capita. According to figure 6.2 there is a strong correlation between city GVA and national GVA per capita. This is natural because normally the economic structure and performance of the country and major metropolises in this country are closely related. In most European countries typically 30 - 40 % of the national GVA is produced in the capital region and other major metropolises.

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 areas are higher than the respective ratio for the country as a whole. This is demonstrated in figure 6.2 where the location of the city above the diagonal line indicates that the GVA per capita in the city is higher than in the country. Only in the metropolises located in Eastern Germany, and in a few manufacturing cities in Italy, Ger-

many, UK and France is GVA per capita lower than in the country.

The figure also shows that the gap between the metropolis and the country with respect to GVA per capita tends to be higher in “rich” countries than in “poor” countries. In other words, the richer the country the bigger the gap between the capital city and other major metropolises, and the rest of the country.

Figure 6.2: Gross Value Added per Capita in metropolises v.s. countries in 2000



7 ECONOMIC GROWTH OF METROPOLISES IN 1995-2001

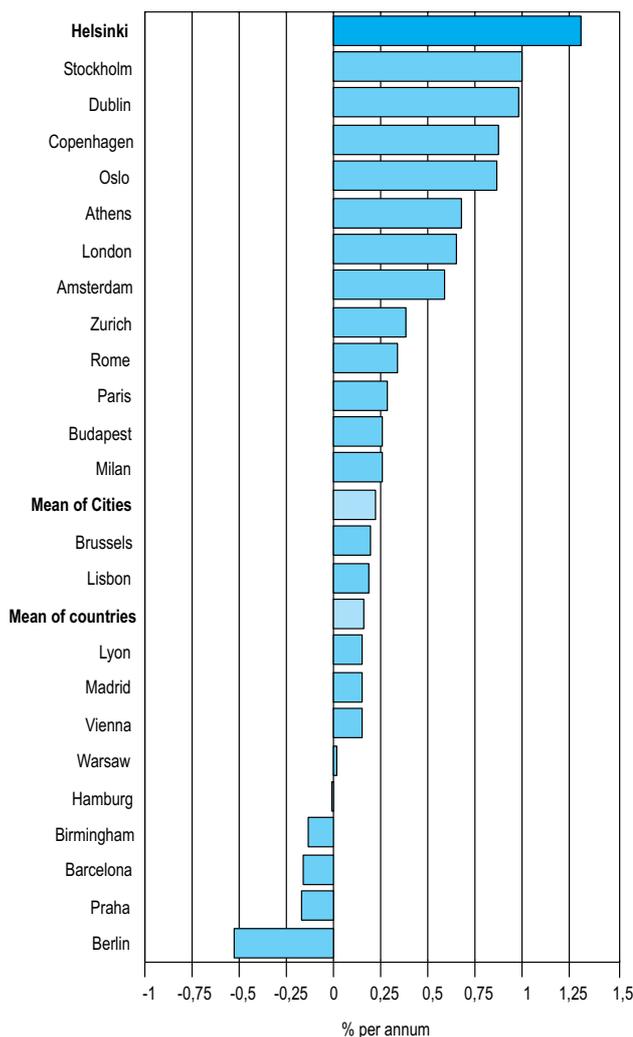
The economic growth of metropolises during the past years (1995 - 2001) is analysed using three variables - population, employment and production (GVA).

Figure 7.1: Population growth (% p.a.) in selected metropolises in 1995-2001

Population growth

Population change in any area during some period of time is based on net migration and natural population change (equaling the difference between births and deaths). According to several studies, migration is related to local supply and demand of labour and to many other regional and individual factors (see Laakso and Loikkanen 2003). Natural population changes are related to the age structure of the population together with age and sex dependent mortality rates and age dependent fertility rates.

According to figure 7.1 the population grew faster in metropolises - approximately 0,25 % annually - than in the 20 countries on average (0,15 % p.a.) during the period 1995 - 2001. Population growth was fastest in Helsinki - with annual growth rate 1,3 % - in the period 1995 - 2001. The other Nordic capitals (Stockholm, Copenhagen and Oslo) together with Dublin also grew fast with a growth rate of 0,8 - 1,0 % p.a. Population declined significantly (-0,5 % annually) in Berlin but less in Prague, Barcelona and Birmingham. The number of inhabitants decreased also in the cities of the previous DDR and some other manufacturing cities in Central Europe.



Employment growth

Employment also grew significantly faster in metropolises than in all countries. The average growth rate in the metropolises was 1,6 % p.a. while the average growth in the 20 countries was 1,0 % p.a. (figure 7.2).

Employment growth was very rapid in Dublin, over 5 % p.a. in 1995 - 2001. The next fastest growth rates were in Helsinki and Lisbon, 4 % annually while in Lyon, Madrid, Barcelona and Copenhagen employment increased by 3 % p.a. In Stockholm employment growth was slightly higher and in Oslo a slightly lower than the mean of cities. Employment declined in Berlin by almost 1 % annually.

There is a clear correlation between employment and population growth which is illustrated in figure 7.3. However, there is a lot of variation between cities in the mid-range. This indicates that in many metropolises there is considerable flexibility in the local labour markets and consequently, employment growth does not automatically lead to massive inward-migration. On the other hand, there is significant migration to metropolises without a direct link to local labour markets, for example immigration from other countries.

Figure 7.2: Employment growth in selected metropolises in 1995-2001

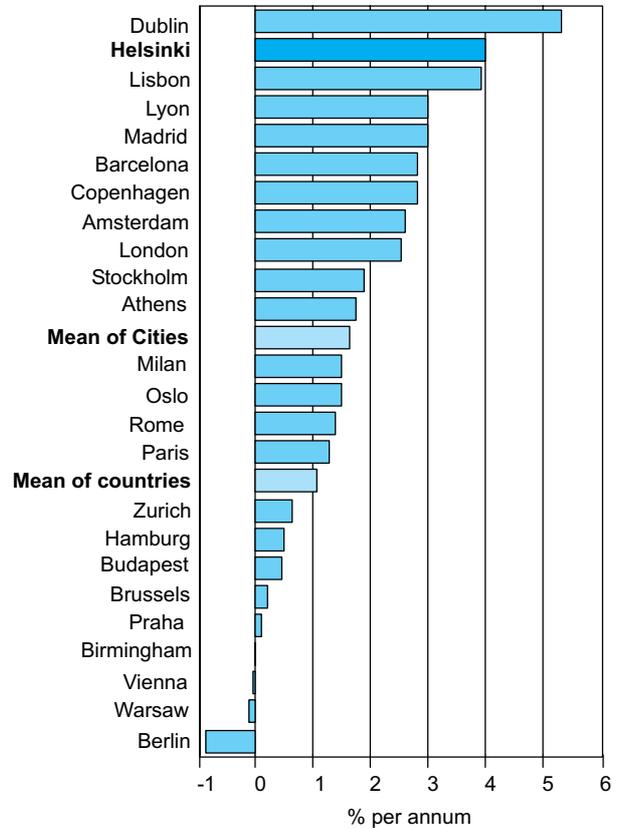
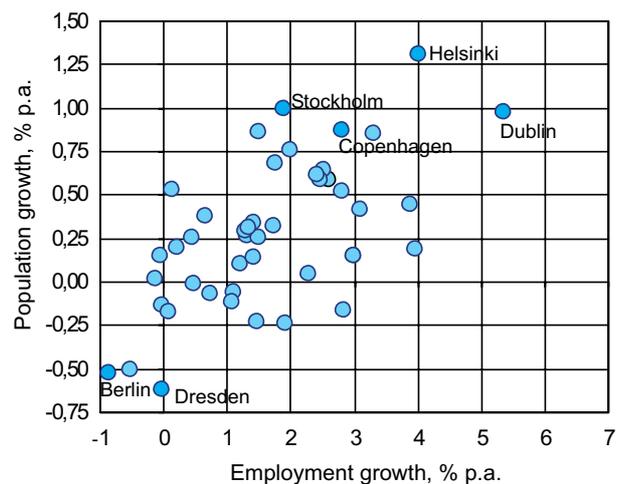


Figure 7.3: Relation between population and employment growth in metropolises in



Production growth

Not surprisingly, production grew faster in the metropolises (3 % p.a.) than in the countries as a whole (on average 2,5 % p.a.) during the period 1995 - 2001.

The growth rate of GVA was fastest in Dublin, 9,5 % p.a., closely followed by Warsaw. In Budapest and Helsinki the growth rate of GVA was approximately 7 % p.a. while in Lisbon 6 % and in Stockholm 5 %. In Oslo GVA growth was 1 percent point higher and in Copenhagen slightly lower than the mean of cities. GVA declined in Berlin by almost 1 % annually, as with employment (figure 7.4).

The relation between GVA and employment growth is illustrated in figure 7.5. In general there is a strong correlation between GVA and employment growth but there are some exceptions.

Two such exceptions are Warsaw and Budapest. In these cities GVA grew fast but at the same time there was practically no growth in employment at all. The explanation is the rapid change of economic structures in Eastern Europe leading to a fast increase in productivity.

Relation between city growth and national growth

The above figures show that as a group the metropolises of Europe have grown faster than the mean growth of the respective countries with respect to both population, employment and production. 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 urban area does not provide a clear explanation to short or middle-term differences in growth.

Contrary to size, the structure of the economy has a crucial influence on the economic performance of the city. A rough division can be made between metropolises in terms of versatility. At one extreme, there are versatile cities such as London and Paris having several strong export clusters. These metropolises have the best chances of growing in a stable man-

Figure 7.4: GVA growth in selected metropolises in 1995-2001

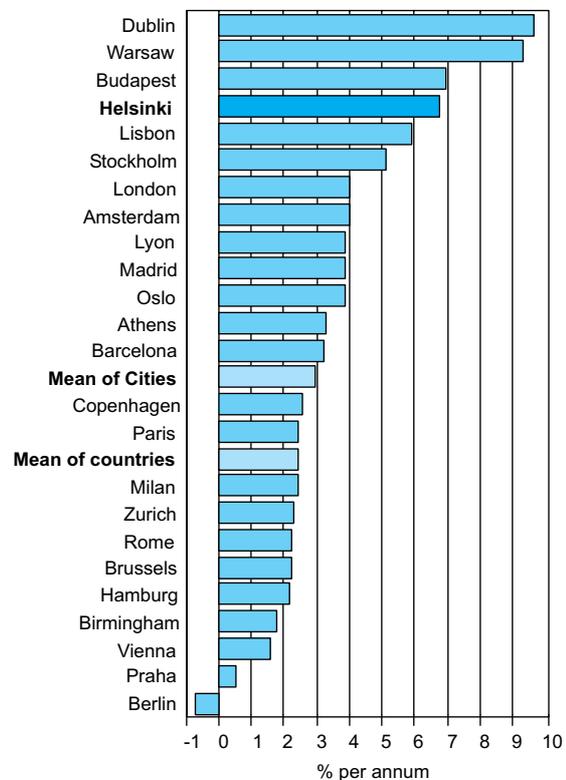
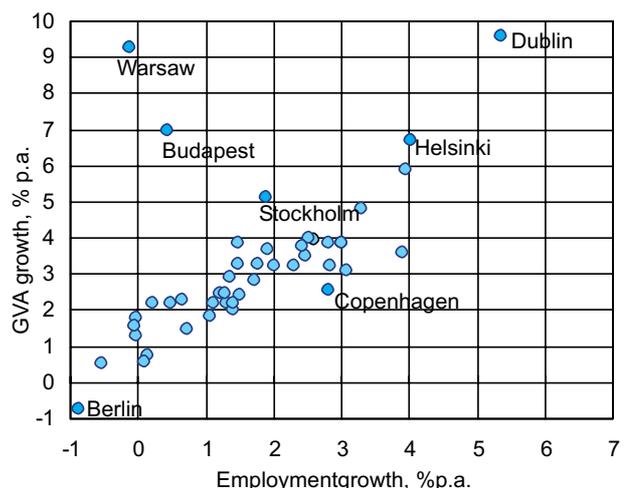


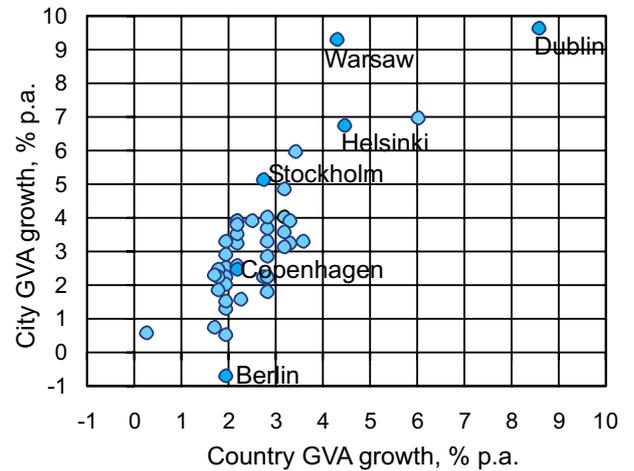
Figure 7.5: Relation between employment and GVA growth in metropolises in 1995-2001



ner because the booms and busts of individual clusters or industries normally balance each other out. At the other extreme, there are cities highly dependent on one single cluster, typically some branch of manufacturing. In this case the economic development of the city is dominated by fluctuations in this key cluster. When the key cluster grows fast, the city grows fast, too, but if the cluster gets into long-lasting structural trouble, this will limit the growth opportunities of the entire metropolis for a long time. Most metropolises belonging to the latter category in terms of growth ranking have permanent or temporary difficulties in their core industries. On the other hand, during the period 1995 – 2000, rapid growth in Dublin, Helsinki and Stockholm, for example, was motored by their expanding ICT sectors.

Macro-economic development at national level is a significant factor explaining differences in growth between metropolises. Figure 7.6 compares GVA growth rates in metropolises and their respective countries during the period 1995 - 2001. The figure indicates strong correlation between urban growth and national growth. The interpretation is that growth rate variations between European metropolises are mainly explained by differences in macro-economic development at national level.

Figure 7.6: Relation between GVA growth of metropolises and GVA growth of countries in 1995-2001



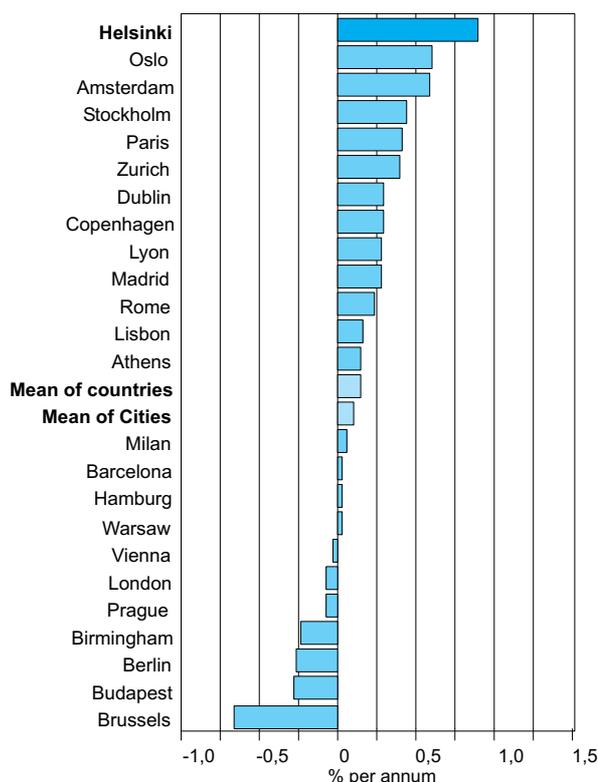
8 FUTURE ECONOMIC GROWTH IN METROPOLISES

An essential part of the research carried out by ENHR is the middle term forecasts of the economy of metropolises. Forecasts are made on production (GVA) and employment using an econometric model developed and applied by Cambridge Economics. The forecasts are based on detailed analysis of the development of economic sectors at European, national and regional level. The analysis is made by Cambridge Econometrics in intensive co-operation with specialists in each country. In addition to GVA and employment forecasts, population forecasts are also published in ENHR's study. However, these population forecasts are not made systematically by Cambridge econometrics. Instead, they have been made independently by local research institutes or public authorities. In the case of Helsinki the population forecast for the years 2002 - 2006 is based on the forecast for the Helsinki Region made in 2002 by the City of Helsinki Urban Facts and Urban Research¹⁰.

Population forecast

According to population forecasts made for metropolises (figure 8.1) the population growth of big cities is expected to slow down compared with the growth rates in 1995-2001 (figure 7.1). If the forecasts are true the mean of the metropolises will drop slightly below the predicted mean of the countries. In almost all metropolises which grew rapidly during the period 1995 - 2001 the growth rate is expected to decrease. Consequently, the differences between cities will shrink with respect to population growth during the next period. According to forecasts, population growth will be fastest in Helsinki, 0,9 % p.a., in spite of the fact that even in Helsinki population growth is expected to slow down. The other Nordic capitals are expected to grow reasonably fast, too. The population growth is predicted to continue also in Amsterdam, Paris, Zurich, Dublin, Lyon, Madrid and Rome.

Figure 8.1: The forecast for population growth in selected metropolises in 2001-2006



There are several reasons for slowing population growth in European metropolises. Pessimistic economic prospects are expected to slow down the migration. The ageing of the population tends to decrease birth rates and increase mortality rates. In addition, in many metropolises a significant share of population growth is expected to be directed to areas just outside the city regions. Finally, the general feature of population forecasts is that growth is expected to slow down. Consequently, in expanding cities inward-migration is often under-estimated.

¹⁰The City of Helsinki Urban Facts. 2002.

Employment forecast

The employment growth of big cities, presented in figure 8.2, is also expected to slow down compared with the growth rates in 1995-2001 (figure 7.2). This is an essential factor that explains the expected slowing of population growth noted above. The mean predicted employment growth of the cities is 1,0 % p.a. while it was 1,6 % p.a. in the previous period. However, the growth rate of metropolises is expected to remain significantly above the predicted mean of countries.

If the forecasts are true the differences between cities will become smaller with respect to employment growth during the next period. According to forecasts, employment growth will be fastest in Lyon, Madrid and Helsinki, 2 % p.a. Also in Dublin, Barcelona, Athens, Zurich, Lisbon, Amsterdam and Paris the growth rate is expected to be clearly above the mean of metropolises. Instead, in other Nordic capitals employment growth is predicted to remain slightly lower than the mean of cities.

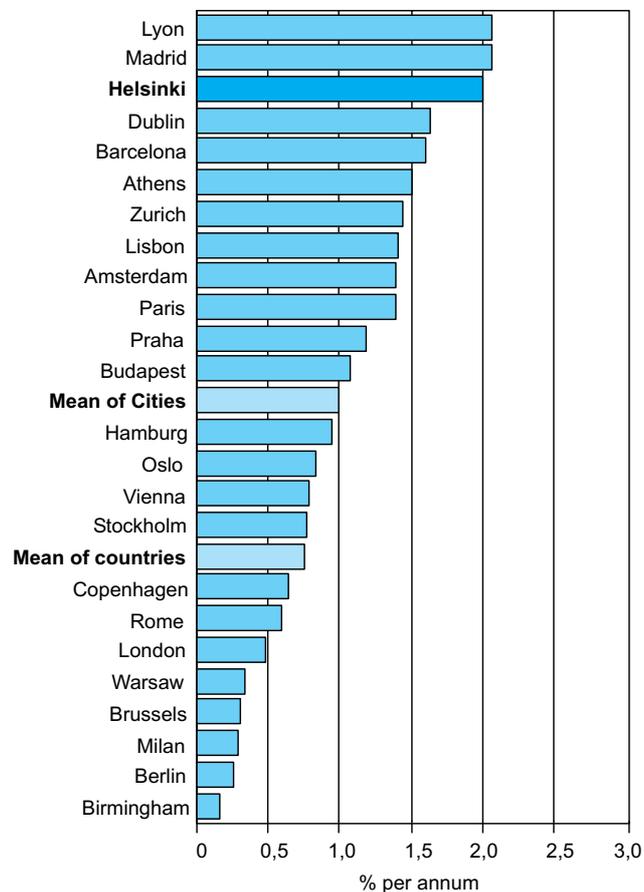
Employment growth is closely related to production growth as demonstrated in figure 7.5. Consequently the main reason for the slower employment growth is the anticipated slow down of production.

Production forecast

The main feature of the anticipated economic development during the next years is the slowing down of production growth. This is also the main reason explaining the employment development. GVA growth in most metropolises (figure 8.3) is expected to be slower than in the period 1995-2001 (figure 7.4). The mean, predicted GVA growth of the cities is 2,5 % p.a. while it was 3 % p.a. in the previous period. The growth rate of metropolises is expected to be only slightly above the predicted mean of countries. This indicates that the gap in the economic growth between metropolises and other regions will not widen in the near future.

According to the forecast the differences between cities will shrink with respect to GVA growth during the next period. It

Figure 8.2: The forecast for employment growth in selected metropolises in 2001-2006



is predicted that GVA growth will be fastest in Warsaw, Prague, Dublin, Athens, Budapest and Helsinki, 4 % p.a. Also in Stockholm the growth (3,5 % p.a.) is expected to be higher than the mean of cities. Instead, in Oslo and Copenhagen GVA growth is predicted to be at the same level as the mean of the cities.

Figure 8.4 demonstrates the relation between the past GVA growth (1995 - 2001) and the growth forecast for 2001 - 2006. It shows that, in general, cities which grew fast in the previous period are expected to grow fast in the future, and vice versa. However, in such fast growing cities the growth is expected to slow down while in cities having grown slowly the growth is expected to accelerate. This holds especially in the case of Prague.

The main reason for the slowing down of production growth and, consequently employment and population growth, is the modest world wide demand of the industries concentrated in metropolises; for example the ICT branch and financial services. In addition, many big cities suffer from structural problems of the local economy affecting negatively their economic prospects.

However, even at lower growth rates, metropolises are expected to remain the motors of the European economy in the next few years.

Figure 8.3: The forecast for GVA growth in selected metropolises in 2001-2006

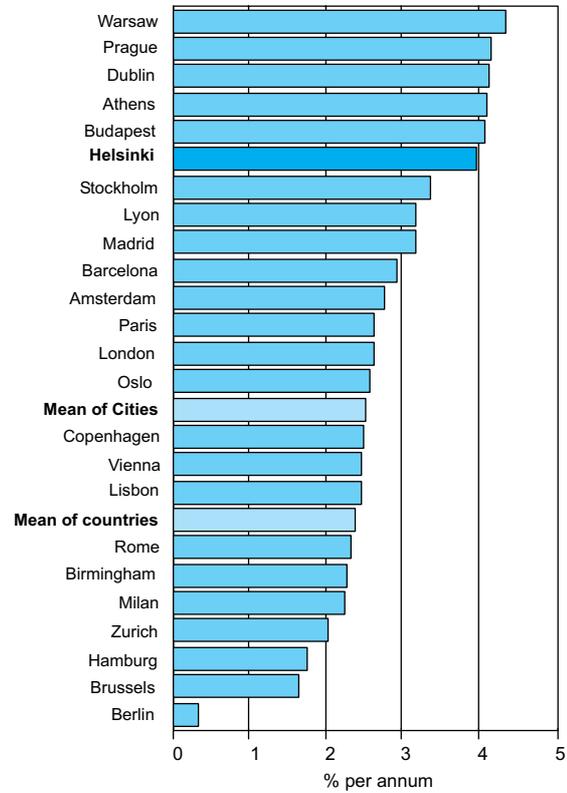
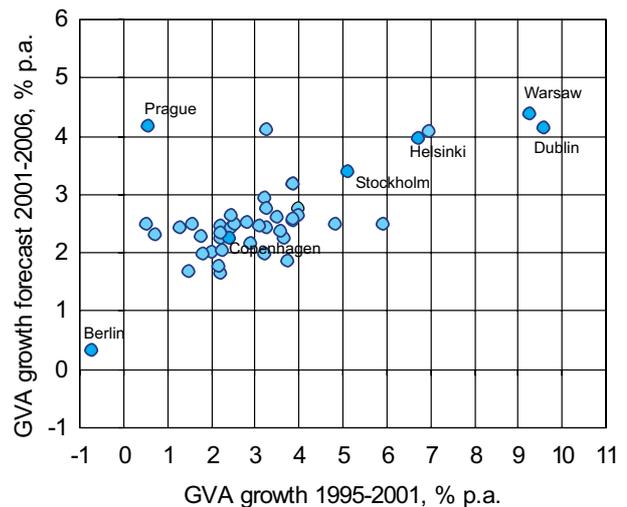


Figure 8.4: Relation between past GVA growth in 1995-2001 and GVA growth forecast in 2001-2006



9 THE HELSINKI REGION FROM AN INTERNATIONAL PERSPECTIVE

Helsinki is the only metropolis in Finland. The population of the Helsinki Region is 1,2 million, there are 680 000 jobs in the region and the value of the GVA is approximately 40 milliard euros (2002). Helsinki's share is 23 % of the population, 29 % of jobs and 34 % of GVA of Finland as a whole. Compared with the rest of Finland, Helsinki is specialised in business and financial services, trade and logistics, culture and leisure services, research & development, high technology manufacturing and services, higher education and national level administration.

From the point of view of the large market areas of Western and Central Europe Helsinki's location is remote. However, this disadvantage has effectively been eliminated by sophisticated communication technology and a modern transport infrastructure. A high educational level of the labour force together with systematic investments in Research and Development and in other human capital have made it possible to specialise in high technology export products in which the transport cost to main market areas is not a crucial factor. At the same time Helsinki is located optimally from the point of view of national markets as well as the markets of North Western Russia and the Baltic countries. Helsinki's domestic role is basically to act as a trade, transport, communication and service centre for the rest of Finland and her neighbouring countries.

Compared with other European metropolises Helsinki is a modern and dynamic city. The service sector is the dominant industry as in most other metropolises. The share of the public sector is at the same level as that of the average of the metropolises in and significantly lower than in the other Nordic capitals. Within the sector of market services Helsinki is specialised predominantly in transport & communication and business services. The share of manufacturing is smaller in Helsinki than in most other metropolises or in European countries as a whole. Within manufacturing Helsinki is par-

ticularly specialised in electronics and the graphics industry. The share of traditional heavy manufacturing is marginal.

Consequently, Helsinki is a productive and wealthy city. GVA per capita in Helsinki is approximately 50 % higher than the national average and the city belongs to the top ten group of the wealthiest metropolises in Europe.

Helsinki grew rapidly during the period 1995 - 2001. When the metropolises are ranked with respect to growth rate Helsinki was first in population growth, third in employment growth and fourth in GVA growth. However, it must be noted that in the first half of 1990s employment and GVA declined in Helsinki more than in any other metropolis due to the economic crisis in Finland.

In the near future, up to the year 2006, the growth rate of GVA, employment and population is expected to slow down in Helsinki, as in most other European metropolises. Still, according to forecasts, Helsinki will remain among the fastest growing cities with respect to all variables. The relatively positive economic prospects for Helsinki are based on several factors. Helsinki's ICT sector is competitive and well-placed in the global markets when the overall demand in the industry recovers. The growth of the private service sector is expected to continue due to domestic demand. Renewed economic growth in Russia is expected to benefit manufacturing, trade, transport and business services in Helsinki. The enlargement of the EU to the Baltic and East European countries is expected to accelerate growth in new member countries, enhancing markets for Helsinki based industries.

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