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City of Helsinki Urban Facts

# HOUSING IN EUROPEAN CITIES

## Statistical Comparisons



Ruoholahti, Helsinki in 2001

Photo: Jussi Kautto

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# HOUSING IN EUROPEAN CITIES

## Statistical Comparisons



|                     |  |
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Ruoholahti, Helsinki in 2001

Photo: Jussi Kautto

## **PREFACE**

The international community development programmes of the European Union and the knowledge needed to support them were at the background, when the Helsinki City Office Development Unit published the Dwellings in European Cities report in 2000. Recently, new statistics on housing and construction have appeared, and updating the information contained in the report has become necessary. Furthermore, the new data, which partly extend to the very recent years, create an opportunity to examine the changes that occurred during the 1990s in housing and, to some extent, in construction and the urban population.

The last decade has been a time of rapid change in Helsinki and in the surrounding region. Thus, the latest information on housing and construction specifies the picture of the recent development also in relation to other European cities. Drawing up European-wide statistical comparisons is made meaningful by the fact that the position of large population centres often proves exceptional when compared with other cities and regions within the country. International comparisons therefore create new perspectives for assessing the housing conditions and place the observed development as part of European trends.

This publication has been produced by City of Helsinki Urban Facts in collaboration with the Helsinki City Office Development Unit.

The data contained in the publication have been gathered by trainee Mr. Turo Pekari and edited by registrar Ms. Tuula Lappalainen and researcher Ms. Maija Vihavainen.

Helsinki, 12 September 2002  
Ms. Leila Lankinen  
Acting Information Manager

## **TO THE READER**

This publication contains statistical information on population, housing stock, households and housing conditions in European cities. Included are member cities of the EU's Eurocities network as well as some Baltic and eastern European cities that are not members. The choice of the cities has been affected by the availability of data.

The population comparisons of this survey cover both metropolitan areas and cities. The concept of metropolitan area is not quite unambiguous and its definition varies by city in the statistics available. Different terms have been used. Nevertheless, it is always an area larger than the city proper and covers its sphere of influence. The concept of city population used in the report means the number of inhabitants living within the administrative boundaries of the city. The data concerning population development and structure have been confined, as a rule, to the cities.

The statistics on housing concentrate on the housing stock, households and housing construction. The housing market - demand and supply, the prices and cost levels - have been excluded because of the diversity of the subject and problems related to the comparability of data. Problems of comparability and lack of data also affect the information on the housing stock and households. This, for its part, has led to housing information not being presented for all those cities that are included in the population comparison.

The sources of the population data of the cities and metropolitan areas include the Major Cities of the World statistics of Statistics Finland as well as the statistical yearbooks and websites of some cities. The most important sources of housing and construction information have been the UN-published Compendium of Human Settlement Statistics, the Nordstat database and the statistical yearbooks and websites of different cities.





## 1. POPULATION

# 1. POPULATION

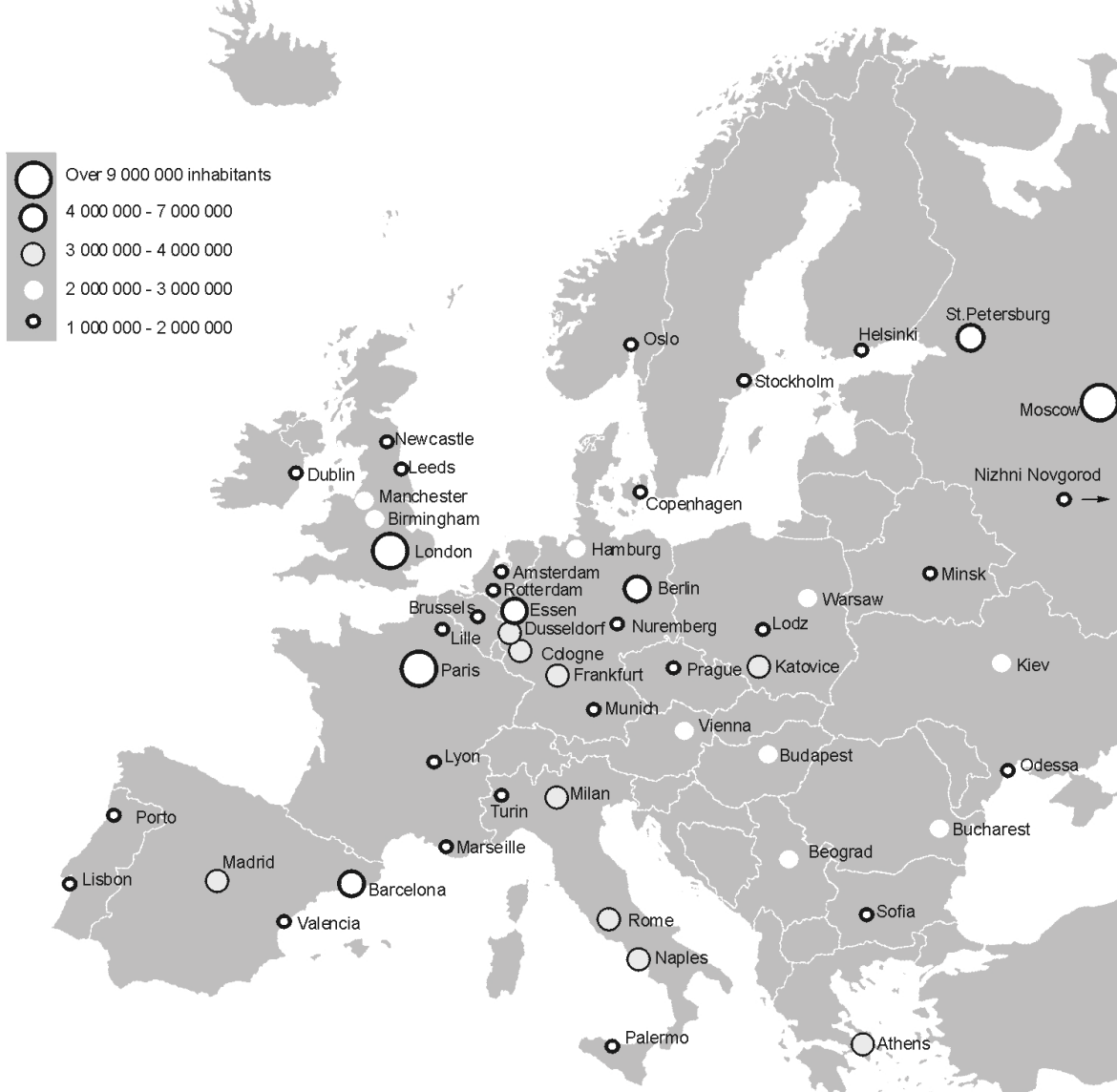
## 1.1 Population by City

The most significant population centres are generally either past or present capitals of large European countries. There are over nine million inhabitants in the metropolitan areas of Paris, London and Moscow. They are followed by the metropolitan areas of Essen, St. Petersburg and Berlin, each of which has a population of more than five million. In addition, Barcelona, Madrid, Rome and Milan, with their surroundings, belong to the top ten economic regions.

Of the large population centres of the Nordic and Baltic countries, the metropolitan areas of Copenhagen, Stockholm and Helsinki have more than one million inhabitants.

In terms of population, the largest European cities are Moscow, London, St. Petersburg and Berlin. Correspondingly, the largest Nordic and Baltic cities are Riga and Stockholm.

Map of Europe. Largest Population Centres

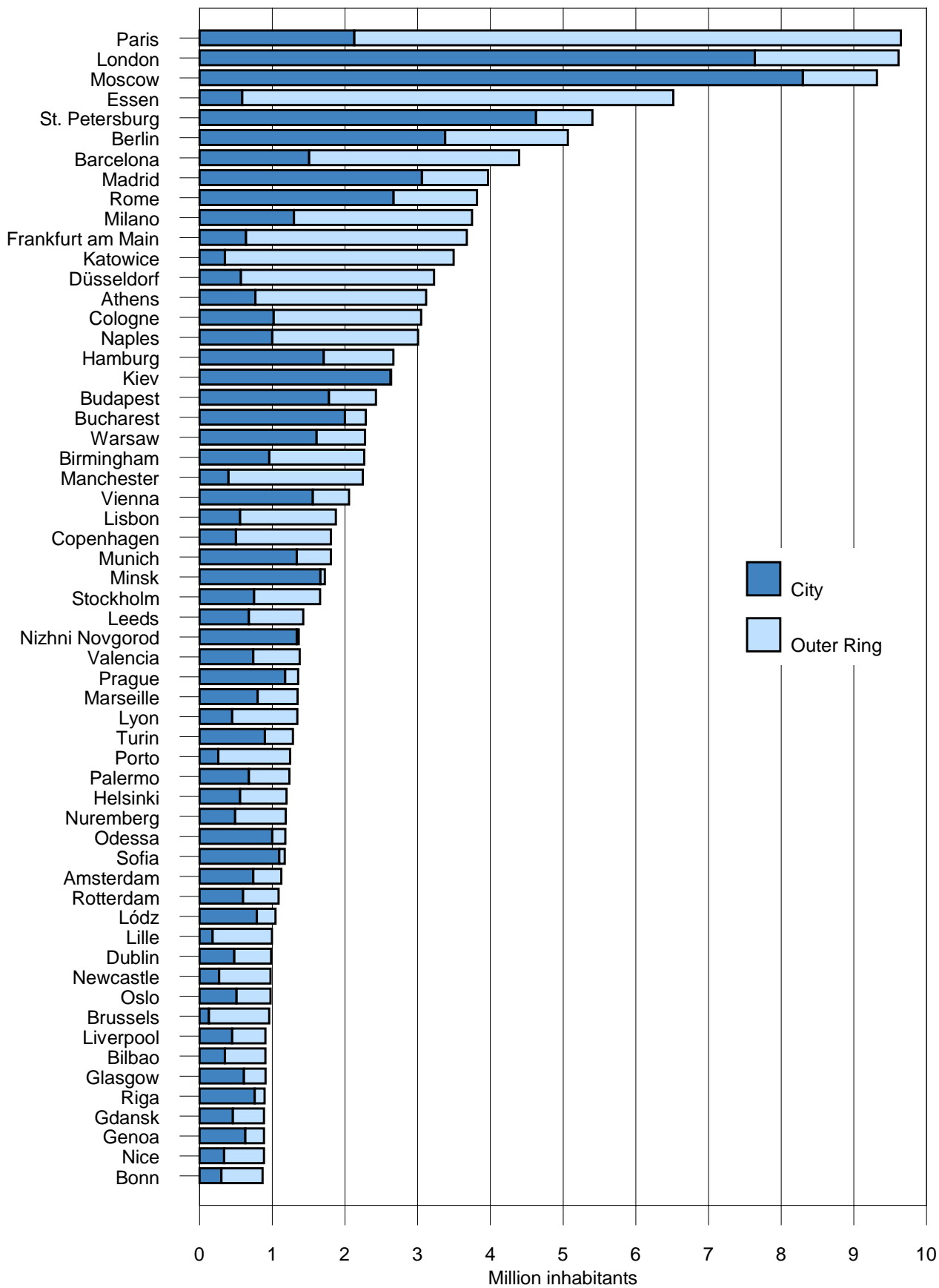




**Table 1. Europe's Largest Population Centres**

|                                | City      | Region    |                              | City      | Region    |
|--------------------------------|-----------|-----------|------------------------------|-----------|-----------|
| Amsterdam (2002, 1999)         | 735 668   | 1 121 303 | Lyon (1999)                  | 445 452   | 1 348 832 |
| Antwerp (2001, 1990)           | 445 570   | 668 125   | Madrid (2002, 2001)          | 3 062 462 | 3 969 000 |
| Athens (1991, 2001)            | 772 072   | 3 120 000 | Málaga (2000, 1999)          | 531 565   | 835 225   |
| Barcelona (2001)               | 1 505 325 | 4 390 413 | Malmo (2001, 2000)           | 262 397   | 522 857   |
| Belfast (1999, 1991)           | 297 200   | 554 994   | Manchester (1999, 2000)      | 404 861   | 2 252 000 |
| Berlin (2000, 1999)            | 3 383 334 | 5 075 301 | Marseille (1999)             | 798 430   | 1 349 772 |
| Bilbao (2000, 1999)            | 354 271   | 911 302   | Milano (2000, 1998)          | 1 301 551 | 3 752 956 |
| Birmingham (1999, 2000)        | 961 041   | 2 272 000 | Minsk (2001, 1999)           | 1 664 000 | 1 728 945 |
| Bologna (2001, 1986)           | 378 356   | 525 000   | Montpellier (1999)           | 225 392   | 287 981   |
| Bonn (1999)                    | 301 048   | 873 685   | Moscow (2001, 2000)          | 8 304 600 | 9 321 000 |
| Bordeaux (1999)                | 215 363   | 753 931   | Munich (2000, 1999)          | 1 336 949 | 1 803 229 |
| Bradford 1999, 1991)           | 289 376   | 457 344   | Münster (1999)               | 264 670   |           |
| Bratislava (1999)              | 448 292   | 616 982   | Nancy (1999)                 | 103 605   | 331 363   |
| Bristol (1999, 1991)           | 399 600   | 522 784   | Nantes (1999)                | 270 251   | 544 932   |
| Brno (2001)                    | 379 185   | 539 135   | Naples (2000)                | 1 000 470 | 3 012 000 |
| Brussels (2001)                | 134 395   | 964 405   | Newcastle (2001, 2000)       | 270 500   | 981 000   |
| Bucharest (2001, 1998)         | 1 998 000 | 2 292 941 | Nicosia (1999, 2001)         | 199 000   | 270 800   |
| Budapest (2001, 1990)          | 1 775 203 | 2 430 100 | Nizhni Novgorod (2001, 1999) | 1 343 300 | 1 375 000 |
| Cardiff (1990, 1999)           | 315 040   | 294 962   | Nizza (1999)                 | 342 738   | 888 784   |
| Charleroi (1990, 2001)         | 200 233   | 294 962   | Nottingham (1999, 1991)      | 284 000   | 613 726   |
| Chemnitz (1999)                | 263 222   | 405 618   | Nuremberg (2000, 1999)       | 486 628   | 1 189 000 |
| Cologne (1999, 2000)           | 1 017 721 | 3 050 000 | Odessa (2001, 1991)          | 1 002 000 | 1 185 000 |
| Copenhagen (2001)              | 499 148   | 1 806 227 | Oslo (2001)                  | 508 726   | 980 714   |
| Cracow (2000)                  | 741 500   | 859 000   | Oulu (2001)                  | 123 274   |           |
| Dortmund (1999)                | 590 213   |           | Palermo (2000, 1998)         | 679 290   | 1 242 055 |
| Dublin (1996, 2001)            | 481 854   | 993 000   | Paris (1999)                 | 2 125 246 | 9 644 507 |
| Düsseldorf (1999, 2000)        | 568 855   | 3 233 000 | Porto (2001)                 | 262 928   | 1 256 633 |
| Edinburgh (1999)               | 451 710   | 533 390   | Prague (2001)                | 1 178 576 | 1 358 900 |
| Eindhoven (1999, 2002)         | 205 023   | 412 707   | Reykjavík (2000)             | 111 345   | 174 991   |
| Espoo (2001)                   | 216 836   |           | Riga (2001)                  | 759 186   | 903 757   |
| Essen (1999, 2000)             | 599 515   | 6 531 000 | Rome ( 2001,1999)            | 2 667 122 | 3 814 000 |
| Frankfurt am Main (1999, 2000) | 643 821   | 3 681 000 | Rotterdam (2002, 1999)       | 599 048   | 1 089 979 |
| Gdansk (1998, 2000)            | 458 988   | 893 000   | Sevilla (2000, 1991)         | 700 716   | 704 818   |
| Geneve (2000)                  | 174 999   | 408 800   | Sheffield (1999, 1991)       | 501 202   | 633 362   |
| Genoa (2000)                   | 632 366   | 890 000   | Sofia (2001)                 | 1 096 389 | 1 173 811 |
| Gent (1990, 2001)              | 224 685   | 250 666   | Southampton (1991, 1999)     | 214 859   | 276 752   |
| Gijón (1991, 2000)             | 267 426   | 270 129   | St. Petersburg (2001,1994)   | 4 627 800 | 5 410 000 |
| Glasgow (1999, 1998)           | 611 440   | 911 200   | St-Étienne (1999)            | 180 210   | 291 960   |
| Gothenburg (2001, 2000)        | 471 267   | 796 705   | Stockholm (2001, 2000)       | 754 948   | 1 660 700 |
| Graz (2000, 2001)              | 226 424   | 371 139   | Strasbourg (1999)            | 264 115   | 427 245   |
| Grenoble (1999)                | 153 317   | 419 334   | Szczecin (1987, 1998)        | 416 988   | 449 000   |
| The Hague (2002, 1999)         | 458 286   | 701 211   | Tallinn (2001)               | 399 850   | 525 132   |
| Hamburg (2000)                 | 1 708 368 | 2 664 000 | Tampere (2001)               | 197 774   | 302 136   |
| Helsinki (2002, 2001)          | 559 718   | 1 200 568 | Timisoara (1998)             | 324 304   |           |
| Katowice (1998, 2000)          | 345 934   | 3 494 000 | Trieste (1998, 2000)         | 215 096   | 248 998   |
| Kiev (2001)                    | 2 629 000 | 2 637 100 | Turin (2001, 2000)           | 899 806   | 1 294 000 |
| Klaipeda (2001)                | 194 400   | 240 900   | Turku (2001)                 | 173 686   | 285 682   |
| Leeds (1999, 2000)             | 680 722   | 1 433 000 | Utrecht (2002, 1999)         | 260 652   | 559 054   |
| Leipzig (1999)                 | 489 532   | 650 603   | Valencia (2000, 1999)        | 739 014   | 1 374 842 |
| Lille (1999)                   | 184 657   | 1 000 900 | Valladolid (1999, 2000)      | 319 129   | 403 365   |
| Lisbon (2001)                  | 556 797   | 1 878 006 | Vantaa (2001)                | 179 856   |           |
| Liverpool (1999, 2000)         | 452 450   | 915 000   | Venice (1986, 2000)          | 275 368   | 420 000   |
| Ljubljana (1999, 2001)         | 250 000   | 519 047   | Vienna (2001)                | 1 562 676 | 2 066 000 |
| Lódz (2000)                    | 793 200   | 1 053 000 | Vilnius (2001)               | 543 000   | 642 000   |
| London (2001, 1991)            | 7 640 000 | 9 619 700 | Warsaw (2000, 2001)          | 1 610 500 | 2 282 000 |

**Figure 1. Largest Population Centres in Europe**



## 1.2 Development of Population

During the 1990s, the population growth rate has been the highest in the Nordic cities of Helsinki, Reykjavik, Oslo and Stockholm, approximately 10 % during the decade.

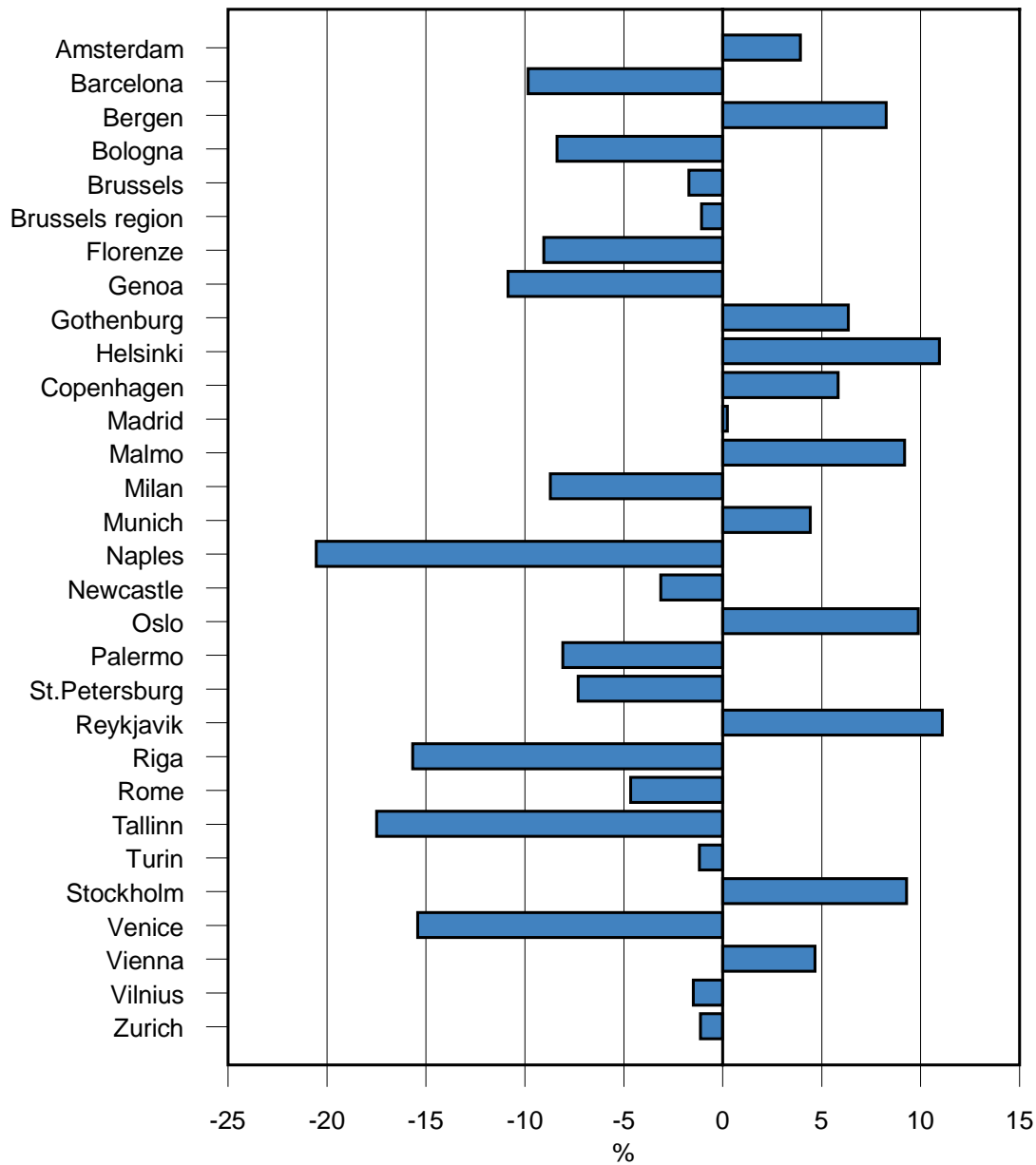
In the central European cities Vienna, Munich and Amsterdam, the growth of the population has been slower than in the Nordic cities.

In some cities in southern Europe and the Baltic states, by contrast, the population has declined. The largest decrease, 15 % to 20 %, has occurred in Naples, Venice, Tallinn and Riga. In absolute terms, St. Petersburg has experienced the strongest depopulation, 340 000 inhabitants since 1990.

**Table 2. Population and Population Change in 1990-2000**

|                 | 1990      | 1995      | 2000      | Change %<br>1990-2000 |
|-----------------|-----------|-----------|-----------|-----------------------|
| Amsterdam       | 702 444   | 722 200   | 731 289   | 3,9                   |
| Barcelona       | 1 643 542 | 1 556 700 | 1 496 266 | -9,8                  |
| Bergen          | 211 826   | 221 717   | 230 948   | 8,3                   |
| Bologna         | 411 803   | 390 400   | 379 964   | -8,4                  |
| Brussels        | 136 706   | 135 700   | 134 395   | -1,7                  |
| Brussels region | 964 385   | 951 600   | 954 045   | -1,1                  |
| Florenze        | 408 403   | 388 300   | 374 501   | -9,1                  |
| Genoa           | 701 032   | 661 800   | 632 366   | -10,9                 |
| Gothenburg      | 433 042   | 444 553   | 462 470   | 6,4                   |
| Helsinki        | 490 691   | 515 765   | 551 123   | 11,0                  |
| Copenhagen      | 466 723   | 471 300   | 495 699   | 5,8                   |
| Madrid          | 2 991 200 | 2 947 200 | 2 998 741 | 0,3                   |
| Malmo           | 233 887   | 242 706   | 257 574   | 9,2                   |
| Milan           | 1 415 000 | 1 321 600 | 1 301 551 | -8,7                  |
| Munich          | 1 277 576 | 1 244 700 | 1 336 949 | 4,4                   |
| Naples          | 1 206 013 | 1 062 200 | 1 000 470 | -20,5                 |
| Newcastle       | 279 000   | 283 600   | 270 500   | -3,1                  |
| Oslo            | 458 364   | 483 401   | 508 726   | 9,9                   |
| Palermo         | 734 238   | 693 400   | 679 290   | -8,1                  |
| St.Petersburg   | 5 001 938 | 4 805 178 | 4 660 792 | -7,3                  |
| Reykjavik       | 97 569    | 103 036   | 109 763   | 11,1                  |
| Riga            | 911 830   | 825 044   | 788 283   | -15,7                 |
| Rome            | 2 791 354 | 2 667 100 | 2 667 112 | -4,7                  |
| Tallinn         | 479 750   | 434 763   | 408 329   | -17,5                 |
| Turin           | 911 670   | 934 700   | 900 987   | -1,2                  |
| Stockholm       | 674 452   | 703 627   | 743 703   | 9,3                   |
| Venice          | 317 837   | 301 100   | 275 368   | -15,4                 |
| Vienna          | 1 539 848 | 1 595 800 | 1 615 438 | 4,7                   |
| Vilnius         | 586 623   | 575 663   | 577 969   | -1,5                  |
| Zurich          | 365 043   | 342 900   | 360 980   | -1,1                  |

**Figure 2. Population Change in 1990-2000, %**



### 1.3 Age Structure

The cities differ quite much as regards the age structures of the population. Children form the largest proportion of the population in Reykjavik and London, the metropolitan areas of Lyon and Paris, Dublin, Cracow, and Minsk. The smallest shares are found in Italian and Spanish cities and in the German-speaking central Europe.

In Bologna and Barcelona, old people make up a larger proportion of the urban population than in any of the other cities studied. Helsinki has the thirteenth smallest percentage of old people. Minsk, Copenhagen, Vilnius and Berlin have the largest shares of working-aged population. In Helsinki too, more than 70 % of the population are in working age. The smallest percentage is found in London.

**Table 3. Population by Age (%)**

|                         | 0-14 years | 15-29 years | 30-64 years | over 65 years |
|-------------------------|------------|-------------|-------------|---------------|
| Amsterdam (1999)        | 15,8       | 22,8        | 48,9        | 12,5          |
| Barcelona (2000)        | 11,6       | 19,8        | 46,7        | 21,9          |
| Berlin (1998)           | 14,0       | 18,6        | 53,5        | 13,8          |
| Bologna (2000)          | 9,3        | 14,5        | 50,1        | 26,1          |
| Bratislava (1998)       | 16,5       | 23,3        | 48,1        | 12,1          |
| Brussels region (1999)  | 17,4       | 21,5        | 43,5        | 17,5          |
| Budapest (1999)         | 14,2       | 23,1        | 46,0        | 16,7          |
| Cologne (1998)          | 14,2       | 18,1        | 52,2        | 15,4          |
| Copenhagen (2001)       | 14,2       | 28,6        | 44,1        | 13,1          |
| Cracow (1995)           | 18,2       | 22,5        | 46,8        | 12,4          |
| Dublin (1996)           | 18,3       | 29,3        | 39,4        | 13,1          |
| Göteborg (1999)         | 16,6       | 22,2        | 44,5        | 16,7          |
| Hague (1999)            | 16,7       | 21,6        | 45,5        | 16,2          |
| Hamburg (1998)          | 13,5       | 18,2        | 51,6        | 16,7          |
| Helsinki (2001)         | 15,1       | 21,9        | 49,6        | 13,4          |
| Lisbon (1991)           | 14,2       | 21,4        | 45,6        | 18,8          |
| London (1996)           | 21,3       | 14,9        | 47,2        | 16,7          |
| Lyon region (1990)      | 18,9       | 25,1        | 43,4        | 12,6          |
| Madrid (1998)           | 12,5       | 22,6        | 46,1        | 16,9          |
| Malmö (1999)            | 16,9       | 19,8        | 44,1        | 19,1          |
| Marseille region (1990) | 17,8       | 22,5        | 43,9        | 15,8          |
| Minsk (1999)            | 18,2       | 25,6        | 47,6        | 8,6           |
| Munich (1998)           | 12,6       | 17,8        | 53,7        | 15,9          |
| Newcastle (2000)        | 16,7       | 23,0        | 41,9        | 18,3          |
| Oslo (2001)             | 16,8       | 21,2        | 47,5        | 14,5          |
| Paris region (1990)     | 18,8       | 23,9        | 45,7        | 11,6          |
| Prague (1998)           | 14,3       | 21,8        | 47,6        | 16,3          |
| Reykjavik (1999)        | 21,4       | 23,6        | 42,1        | 12,9          |
| Riga (2001)             | 14,4       | 21,2        | 48,3        | 16,1          |
| Rome (2000)             | 12,5       | 17,3        | 51,7        | 18,5          |
| Rotterdam (1999)        | 17,4       | 22,3        | 44,9        | 15,4          |
| Sevilla (1998)          | 15,7       | 26,5        | 43,7        | 14,1          |
| Sofia (1998)            | 14,3       | 24,8        | 46,5        | 14,4          |
| St.Petersburg (2001)    | 15,4       | 19,9        | 50,3        | 14,4          |
| Stockholm (1999)        | 15,8       | 20,5        | 46,5        | 17,1          |
| Tallinn (1999)          | 16,4       | 21,3        | 48,3        | 14,0          |
| Toulouse region (1990)  | 16,7       | 27,6        | 43,0        | 12,7          |
| Valencia (1998)         | 13,4       | 24,0        | 45,9        | 16,8          |
| Warsaw (1995)           | 16,8       | 19,5        | 50,9        | 13,4          |
| Vienna (1991)           | 13,9       | 22,6        | 45,6        | 17,8          |
| Vilnius (2001)          | 16,4       | 22,2        | 50,2        | 11,3          |
| Zurich (2000)           | 12,0       | 21,4        | 48,5        | 18,2          |

Note:

St.Peterburg: 0-15 years, 16-29 years

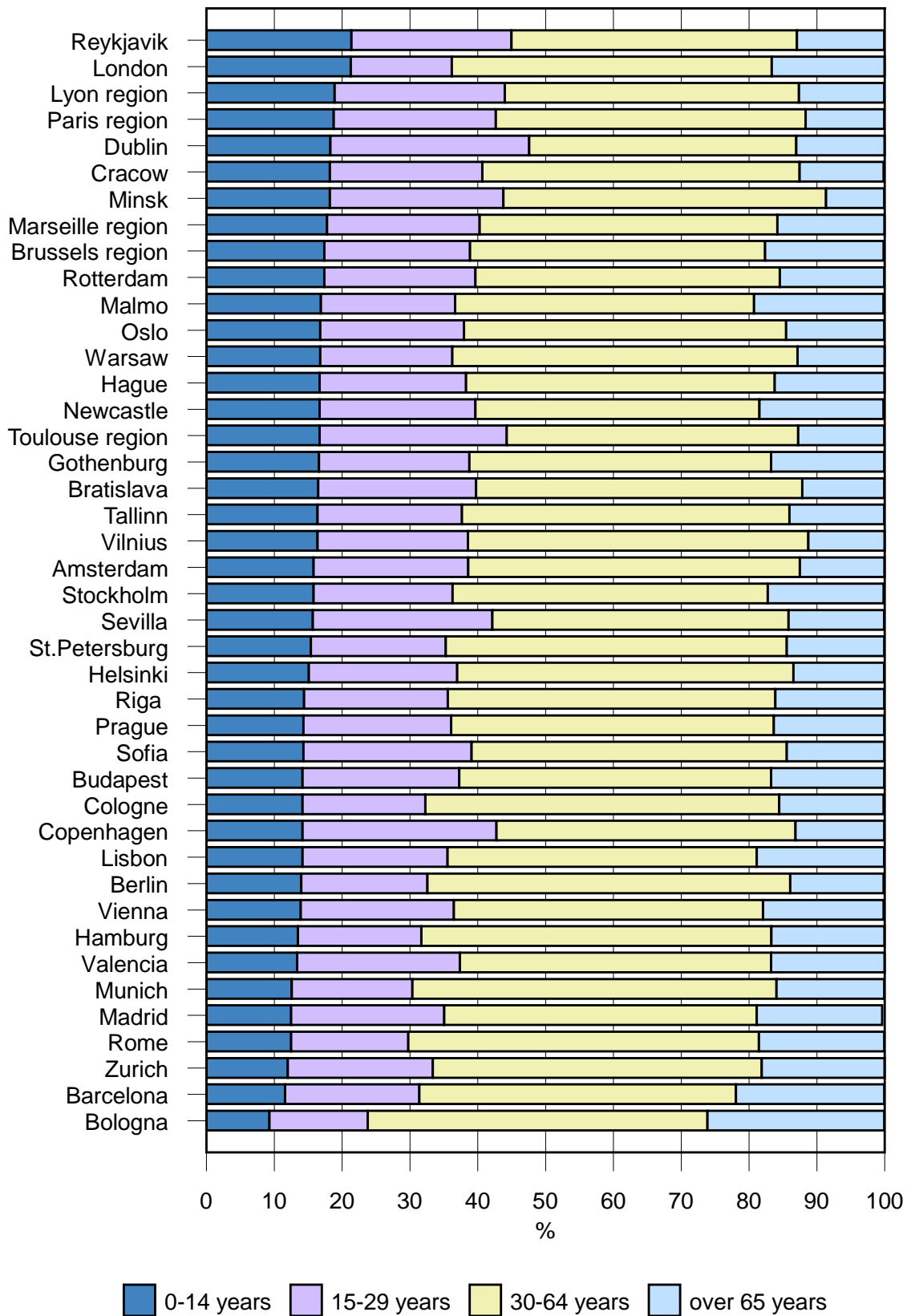
Berlin, Hamburg, Cologne, Munich: 0-15 years, 15-30 years, 30-65 years, over 65 years

London: 0-14 years, 15-25 years, 25-59/64 years (women/men), over 60/65 years (women/men)

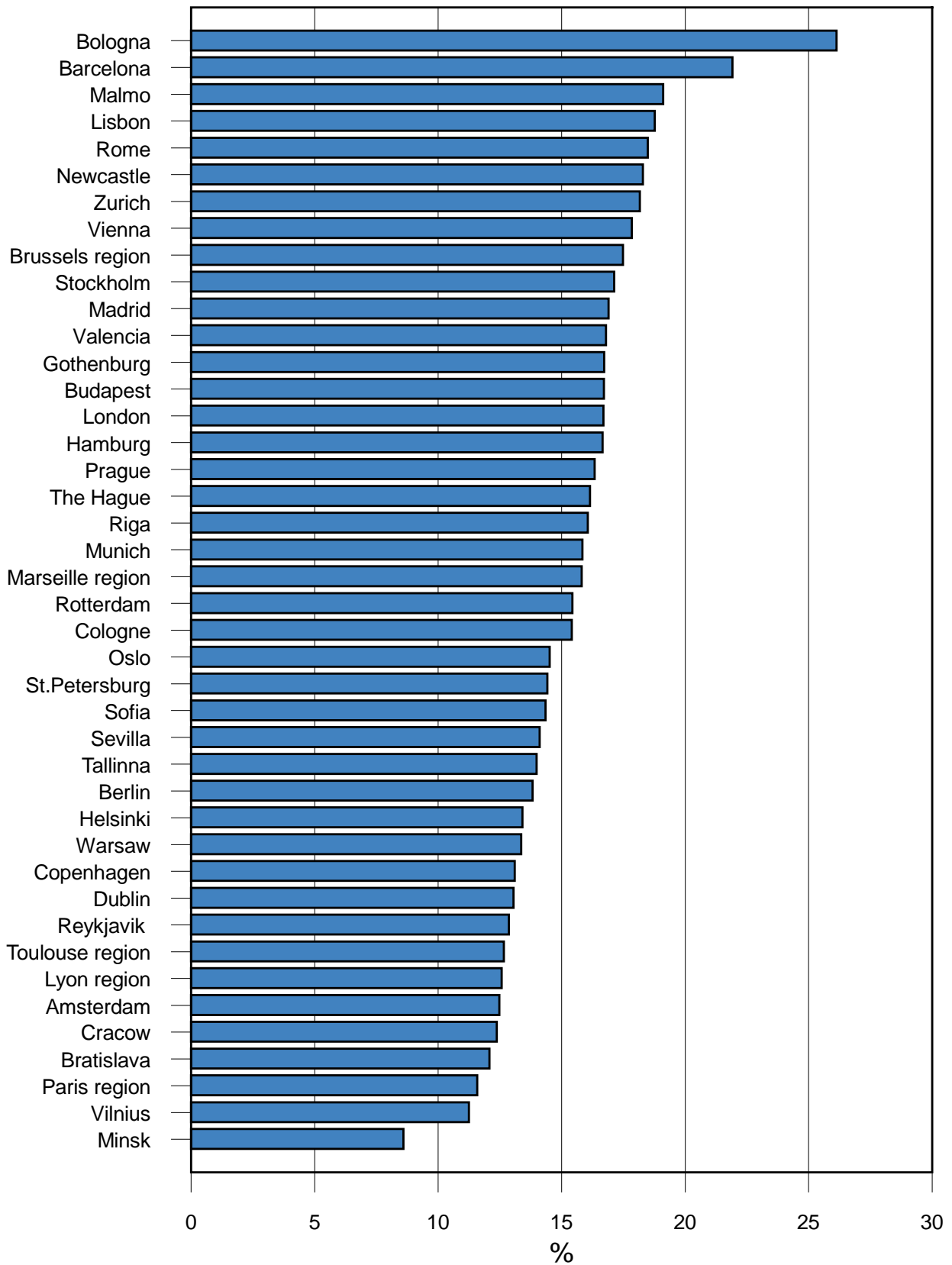
Tallinn: over 58/63 years (women/men)



**Figure 3. Population by Age (%)**



**Figure 4. Proportion of Population over 65 Years of Age %**





## 2. HOUSING STOCK

Bergen, Norway in 1997

Photo: Jussi Kautto

## 2. HOUSING STOCK

### 2.1 Number of Dwellings and Dwelling Type Distribution

In the large population centres - London, Berlin and St. Petersburg - there are clearly more dwellings than in the other cities. In London, there are almost three million dwellings, In Berlin, 1.7 million and in St. Petersburg, 1.6 million. On the other hand, it must be noted that for some large population centres - Moscow, Madrid, Rome and Paris - data on the number of dwellings or the dwelling type distribution have not been available. In Helsinki, there are approximately 300 000 dwellings.

**Table 4. Number of Dwellings**

| City                 | Dwellings |
|----------------------|-----------|
| Amsterdam (2001)     | 371 092   |
| Barcelona (1991)     | 669 459   |
| Bergen (1999)        | 100 456   |
| Berlin (1998)        | 1 692 100 |
| Bratislava (1991)    | 161 494   |
| Brussels (1991)      | 394 468   |
| Budapest (1990)      | 775 523   |
| Cologne (2000)       | 518 420   |
| Copenhagen (2001)    | 279 653   |
| Cracow (1995)        | 238 760   |
| Gothenburg (2001)    | 238 144   |
| The Hague (1998)     | 222 800   |
| Helsinki (2001)      | 296 013   |
| Lisbon (1991)        | 227 580   |
| London (1996)        | 2 954 000 |
| Lyon (1990)          | 493 008   |
| Malmo (2001)         | 136 865   |
| Manchester (1991)    | 183 751   |
| Marseille (1990)     | 481 172   |
| Munich (2000)        | 701 553   |
| Oslo (1999)          | 253 949   |
| Prague (1991)        | 495 804   |
| Riga (2000)          | 240 360   |
| Rotterdam (1998)     | 283 200   |
| St.Petersburg (2000) | 1 595 563 |
| Stockholm (2001)     | 404 988   |
| Tallinn (2001)       | 183 362   |
| Warsaw (1995)        | 594 473   |
| Vienna (2000)        | 920 083   |
| Vilnius (2001)       | 227 018   |
| Zurich (2000)        | 187 587   |

**Table 5. Dwelling Stock by Number of Rooms (%)**

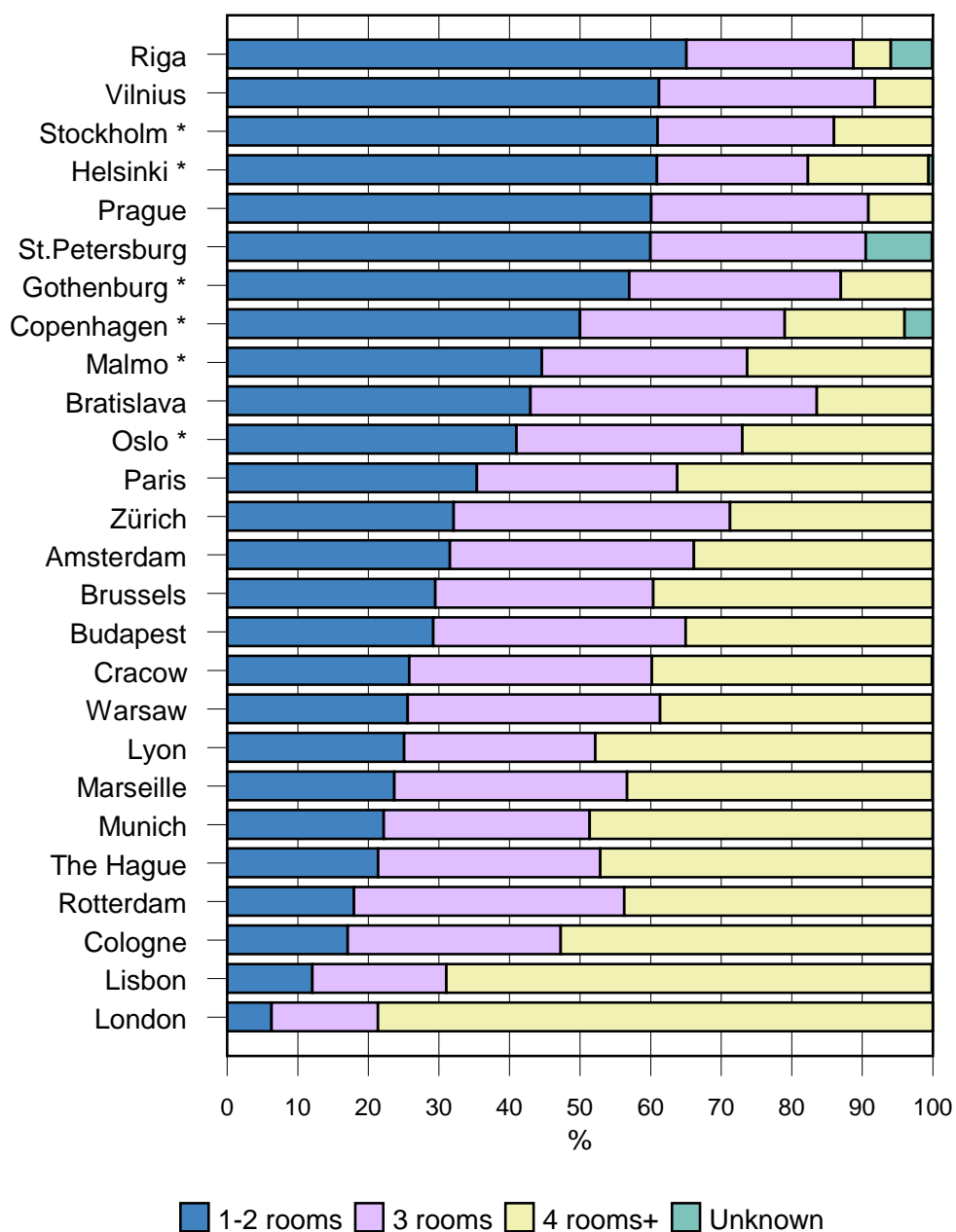
| City                 | 1-2 rooms | 3 rooms | 4+ rooms |
|----------------------|-----------|---------|----------|
| Amsterdam (2001)     | 31,6      | 34,6    | 33,9     |
| Bratislava (1991)    | 43,0      | 40,6    | 16,4     |
| Brussels (1991)      | 29,5      | 30,9    | 39,6     |
| Budapest (1990)      | 29,2      | 35,8    | 35,0     |
| Cologne (2000)       | 17,1      | 30,2    | 52,7     |
| Copenhagen (2001) *  | 50,0      | 29,0    | 17,0     |
| Cracow (1995)        | 25,8      | 34,4    | 39,7     |
| Gothengurg (2001) *  | 57,0      | 30,0    | 13,0     |
| The Hague (1998)     | 21,4      | 31,5    | 47,2     |
| Helsinki (2001) *    | 68,0      | 21,0    | 11,0     |
| Lisbon (1991)        | 12,1      | 19,0    | 68,8     |
| London (1996)        | 6,3       | 15,1    | 78,7     |
| Lyon (1990)          | 25,1      | 27,1    | 47,8     |
| Malmo (1997) *       | 44,6      | 29,1    | 26,2     |
| Marseille (1990)     | 23,7      | 33,0    | 43,3     |
| Munich (2000)        | 22,2      | 29,2    | 48,6     |
| Oslo (1999) *        | 41,0      | 32,0    | 27,0     |
| Paris (1990)         | 35,4      | 28,4    | 36,2     |
| Prague (1991)        | 60,1      | 30,8    | 9,1      |
| Riga (2000)          | 65,1      | 23,7    | 5,3      |
| Rotterdam (1998)     | 18,0      | 38,3    | 43,7     |
| St.Petersburg (2000) | 60,0      | 30,5    | 0,0      |
| Stockholm (2001) *   | 61,0      | 25,0    | 14,0     |
| Warsaw (1995)        | 25,6      | 35,8    | 38,6     |
| Vilnius (2001)       | 61,2      | 30,6    | 8,3      |
| Zurich (2000)        | 32,1      | 39,2    | 28,7     |

\* In multi-dwelling buildings

The dwelling type distribution of the housing stock varies greatly by city. London and Lisbon resemble each other in that both have a low number of small dwellings and a high number of large ones. London has the least small dwellings, only 6 % of all dwellings. Four fifths of the housing stock of London consist of dwellings with four or more rooms.

Helsinki, together with St. Petersburg, Vilnius, Prague and Riga, is a city of small flats. In all these cities, small dwellings make up at least 60 % of the housing stock. This domination by small dwellings is in Riga, Vilnius and Prague highlighted by the fact that the proportion of large dwellings with four or more rooms is less than 10 %.

**Figure 5. Dwelling Stock by Number of Rooms (%)**



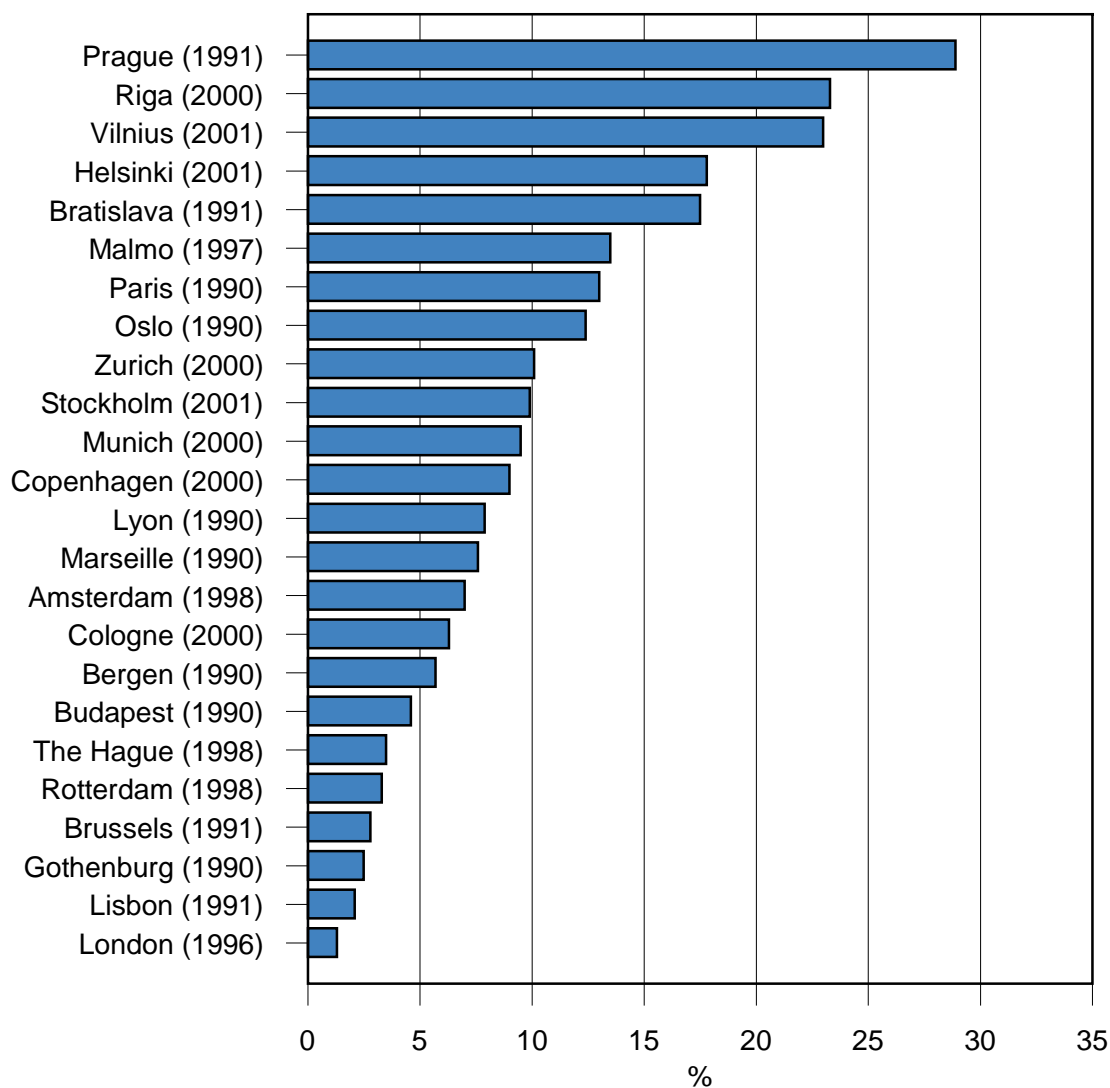
\* In multi-dwelling buildings



**Table 6. Proportion of Single Room Dwellings (%)**

| City              | Amount | %    | City             | Amount  | %    |
|-------------------|--------|------|------------------|---------|------|
| Amsterdam (1998)  | 27 700 | 7,0  | Lyon (1990)      | 38 784  | 7,9  |
| Bergen (1990)     | 5 376  | 5,7  | Malmo (1997)     | 18 257  | 13,5 |
| Bratislava (1991) | 28 302 | 17,5 | Marseille (1990) | 36 468  | 7,6  |
| Brussels (1991)   | 10 962 | 2,8  | Munich (2000)    | 66 521  | 9,5  |
| Budapest (1990)   | 35 809 | 4,6  | Oslo (1990)      | 30 206  | 12,4 |
| Cologne (2000)    | 32 658 | 6,3  | Paris (1990)     | 490 556 | 13,0 |
| Copenhagen (2000) | 25 152 | 9,0  | Prague (1991)    | 143 498 | 28,9 |
| Gothenburg (1990) | 5 341  | 2,5  | Riga (2000)      | 56 048  | 23,3 |
| The Hague (1998)  | 7 800  | 3,5  | Rotterdam (1998) | 9 300   | 3,3  |
| Helsinki (2001)   | 52 707 | 17,8 | Stockholm (2001) | 39 977  | 9,9  |
| Lisbon (1991)     | 4 804  | 2,1  | Vilnius (2001)   | 44 227  | 23,0 |
| London (1996)     | 39 000 | 1,3  | Zurich (2000)    | 18 865  | 10,1 |

**Figure 6. Proportion of Single Room Dwellings (%)**



## 2.2 Dwellings by Type of Building

Of the cities compared, living in a detached house is most common in Bergen, where almost a third of all dwellings are in detached houses of one to two dwellings. In Gothenburg also, detached houses have a higher share than in the other cities, approximately one fifth. Helsinki has the lowest figure of the Nordic cities. In Helsinki 7 % of the housing stock is made up by detached houses, and of all the cities compared, the figure is lower only in Barcelona and Zurich.

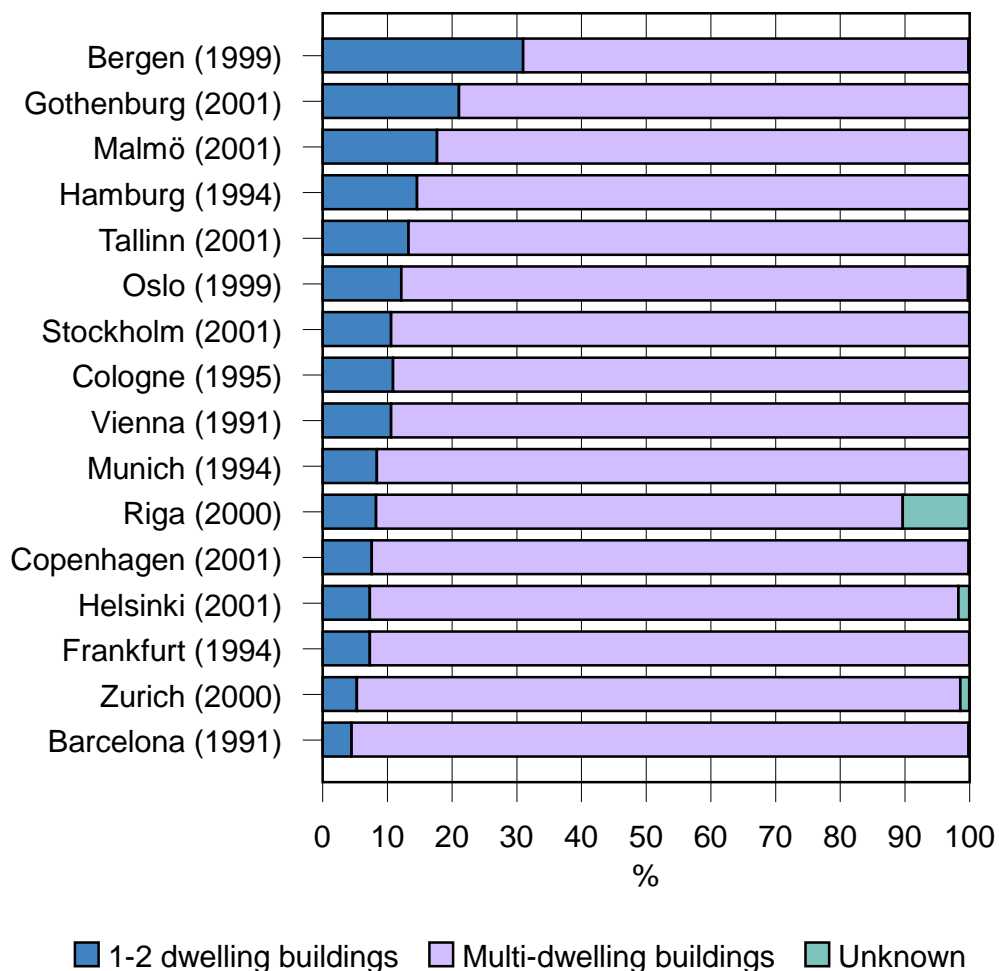
**Table 7. Dwellings by Type of Building (%)**

|                   | Multi-dwelling<br>buildings | 1 or 2-dwelling<br>buildings | Other or<br>unknown |
|-------------------|-----------------------------|------------------------------|---------------------|
| Barcelona (1991)  | 95,4                        | 4,5                          | 0,1                 |
| Bergen (1999)     | 68,9                        | 31,0                         | 0,1                 |
| Frankfurt (1994)  | 92,7                        | 7,3                          | 0,0                 |
| Gothenburg (2001) | 78,9                        | 21,1                         | 0,0                 |
| Hamburg (1994)    | 85,4                        | 14,6                         | 0,0                 |
| Helsinki (2001)   | 91,0                        | 7,3                          | 1,7                 |
| Cologne (1995)    | 89,1                        | 10,9                         | 0,0                 |
| Copenhagen (2001) | 92,3                        | 7,6                          | 0,2                 |
| Malmö (2001)      | 82,3                        | 17,7                         | 0,0                 |
| Munich (1994)     | 91,6                        | 8,4                          | 0,0                 |
| Oslo (1999)       | 87,6                        | 12,2                         | 0,2                 |
| Riga (2000)       | 81,4                        | 8,3                          | 10,2                |
| Tallinn (2001)    | 86,7                        | 13,3                         | 0,0                 |
| Stockholm (2001)  | 89,4                        | 10,6                         | 0,0                 |
| Vienna (1991)     | 89,4                        | 10,6                         | 0,0                 |
| Zurich (2000)     | 93,3                        | 5,3                          | 1,4                 |

## 2.3 Dwellings by Year of Construction

Data on the year of construction was not available for many cities. Helsinki has a young housing stock. Of all the cities compared, only in Helsinki has over 40 % of the stock been built after 1970 and over 75 % after 1949. By contrast, for example in Copenhagen, 69 % and in London, 62 % of the housing stock have been constructed before 1950.

**Figure 7. Dwellings by Type of Building**



**Table 8. Dwelling Stock by Year of Construction (%)**

|             | -1949 | 1950-1969 | 1970- |
|-------------|-------|-----------|-------|
| Amsterdam * | 49,3  | 27,7      | 23,0  |
| Barcelona   | 25,5  | 47,2      | 28,1  |
| Copenhagen  | 68,9  | 20,6      | 12,8  |
| Gothenburg  | 33,6  | 43,5      | 21,5  |
| Helsinki    | 24,8  | 33,5      | 41,6  |
| London      | 62,4  | 22,0      | 15,6  |
| Malmo       | 34,3  | 40,7      | 25,1  |
| Oslo        | 27,7  | 35,4      | 36,9  |
| Vienna      | 49,6  | 29,3      | 21,1  |
| Zurich      | 52,3  | 28,6      | 19,1  |
| Amsterdam * | -1946 | 1947-1979 | 1980- |



St.Erik's Hospital area, Stockholm in 1997

Photo: Jussi Kautto



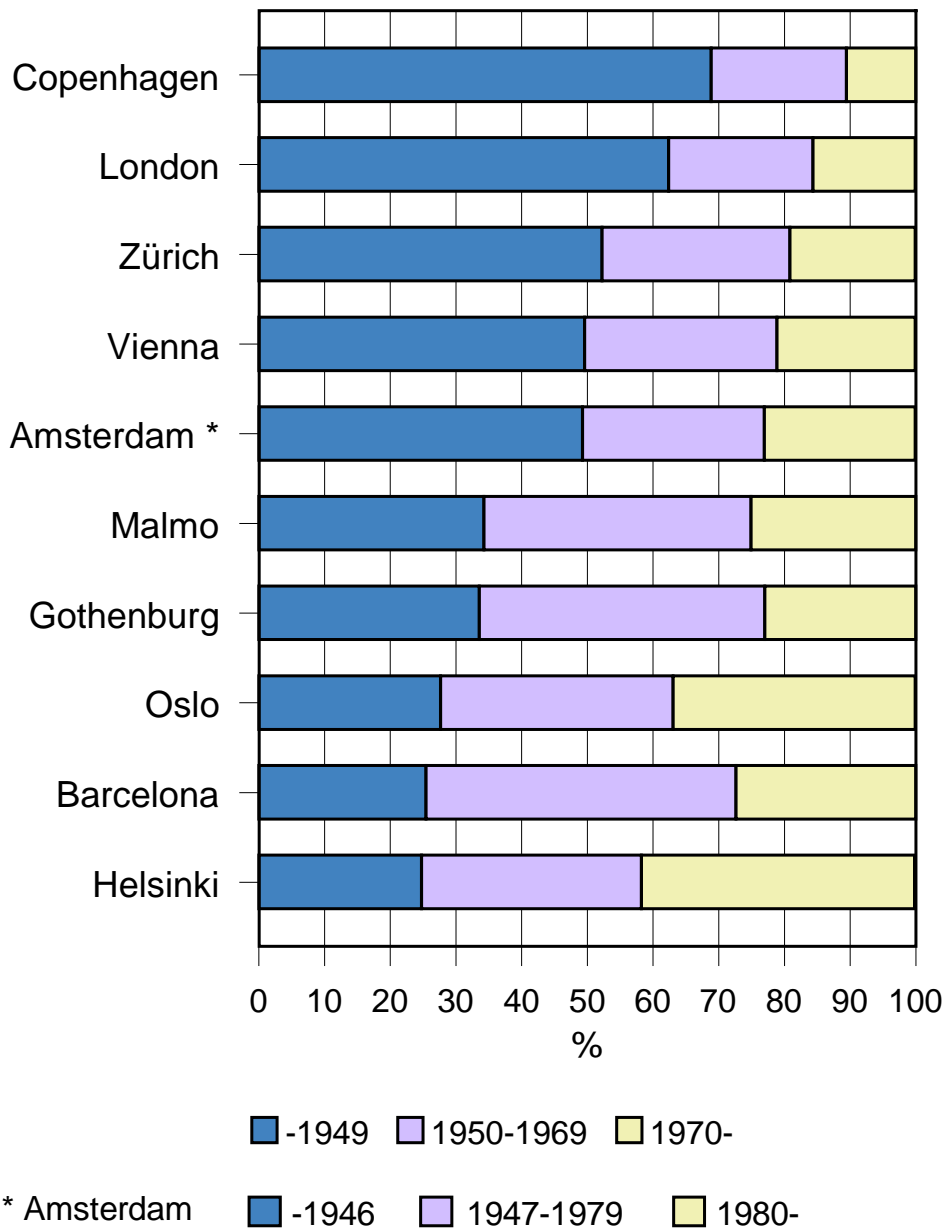


New housing in the centre of Frankfurt am Main in 1995

Photo: Jussi Kautto



Figure 8. Dwelling Stock by Year of Construction (%)



## 2.4 Population by Number of Rooms

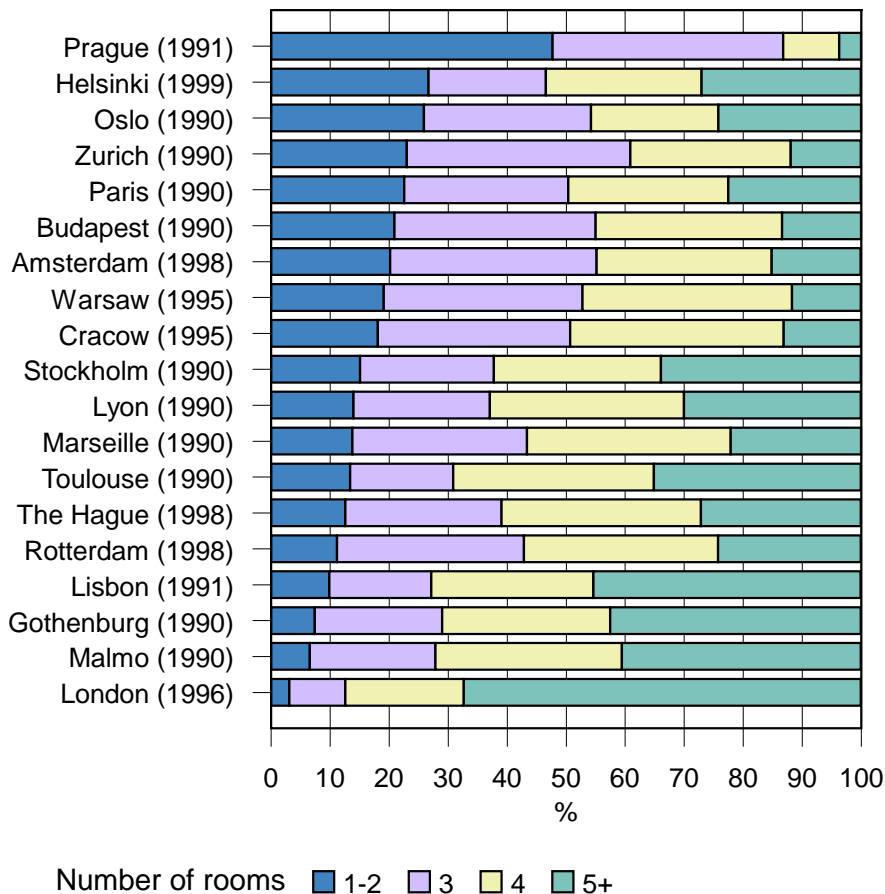
The distribution of the population by the number of rooms is to a large extent similar to the dwelling type distribution. In London 67 % of the population live in dwellings of at least five rooms, which is based on the fact that the majority of dwelling in London are large dwellings. A great majority of people live in large dwellings also in Lisbon, Malmo and Gothenburg. However, this is a question of two different phenomena: in Malmo and Gothenburg the housing density is low, whereas in Lisbon households are large. The share of persons living in one-room dwellings is the largest, almost one fifth, in Prague. Helsinki comes second in this respect. Here, one tenth of the population live in dwellings with one room.

**Table 9. Population by Number of Rooms (%)**

|                   | Number of rooms (incl. kitchen) |      |      |      |      |
|-------------------|---------------------------------|------|------|------|------|
|                   | 1                               | 2    | 3    | 4    | 5+   |
| London (1996)     | 0,6                             | 2,5  | 9,5  | 20,1 | 67,3 |
| Amsterdam (1998)  | 4,0                             | 16,2 | 35,0 | 29,7 | 15,1 |
| Budapest (1990)   | 2,8                             | 18,0 | 34,1 | 31,6 | 13,5 |
| Gothenburg (1990) | 1,4                             | 5,9  | 21,6 | 28,5 | 41,5 |
| The Hague (1998)  | 1,9                             | 10,7 | 26,5 | 33,8 | 27,1 |
| Helsinki (1999)   | 10,1                            | 16,6 | 19,9 | 26,4 | 26,2 |
| Cracow (1995)     | -                               | 18,1 | 32,6 | 36,2 | 13,1 |
| Lisbon (1991)     | 1,7                             | 8,2  | 17,3 | 27,5 | 45,3 |
| Lyon (1990)       | 3,8                             | 10,3 | 23,1 | 32,9 | 30,0 |
| Malmö (1990)      | 1,6                             | 5,0  | 21,3 | 31,6 | 39,5 |
| Marseille (1990)  | 3,8                             | 10,0 | 29,6 | 34,5 | 22,0 |
| Oslo (1990)       | 7,5                             | 18,4 | 28,3 | 21,6 | 24,2 |
| Paris (1990)      | 7,1                             | 15,5 | 27,8 | 27,1 | 22,5 |
| Prague (1991)     | 18,6                            | 29,1 | 39,1 | 9,5  | 3,6  |
| Rotterdam (1998)  | 1,8                             | 9,4  | 31,7 | 32,9 | 24,3 |
| Toulouse (1990)   | 4,9                             | 8,5  | 17,5 | 34,0 | 35,1 |
| Stockholm (1990)  | 4,1                             | 11,0 | 22,7 | 28,3 | 33,2 |
| Warsaw (1995)     | -                               | 19,1 | 33,7 | 35,5 | 11,7 |
| Zurich (1990)     | 7,9                             | 15,1 | 37,9 | 27,2 | 11,9 |

\* Includes population in 1- and 2-room dwellings

**Figure 9. Population by Number of Rooms (%)**



## 2.5 Housing Standard of Households

The households of the Nordic countries and the German-speaking central Europe are small on the average. Vienna and Copenhagen have the smallest households: the mean value is 1.8 persons per dwelling. Stockholm, Helsinki, Zurich and Munich have almost equally low average household size (1.9 persons per dwelling). Large households are found in the cities of eastern Europe as well as in France. In addition to these, the average size exceeds 2.4 persons per dwelling only in Lisbon and London.

Mean household size by the number of rooms has been used here as the indicator of housing conditions. Used in this manner, it measures primarily cramped living conditions especially in dwellings with few rooms. In Lisbon, Budapest, Prague, Riga and Warsaw people are living crowded in small dwellings. For instance, in Lisbon the average number of persons living in one-room dwellings is 2.2 and in two-room dwellings 2.3. The lowest densities are in Amsterdam, The Hague, Stockholm, Gothenburg and London. The comparison is, however, hampered by the incompleteness and availability of the up-date data.

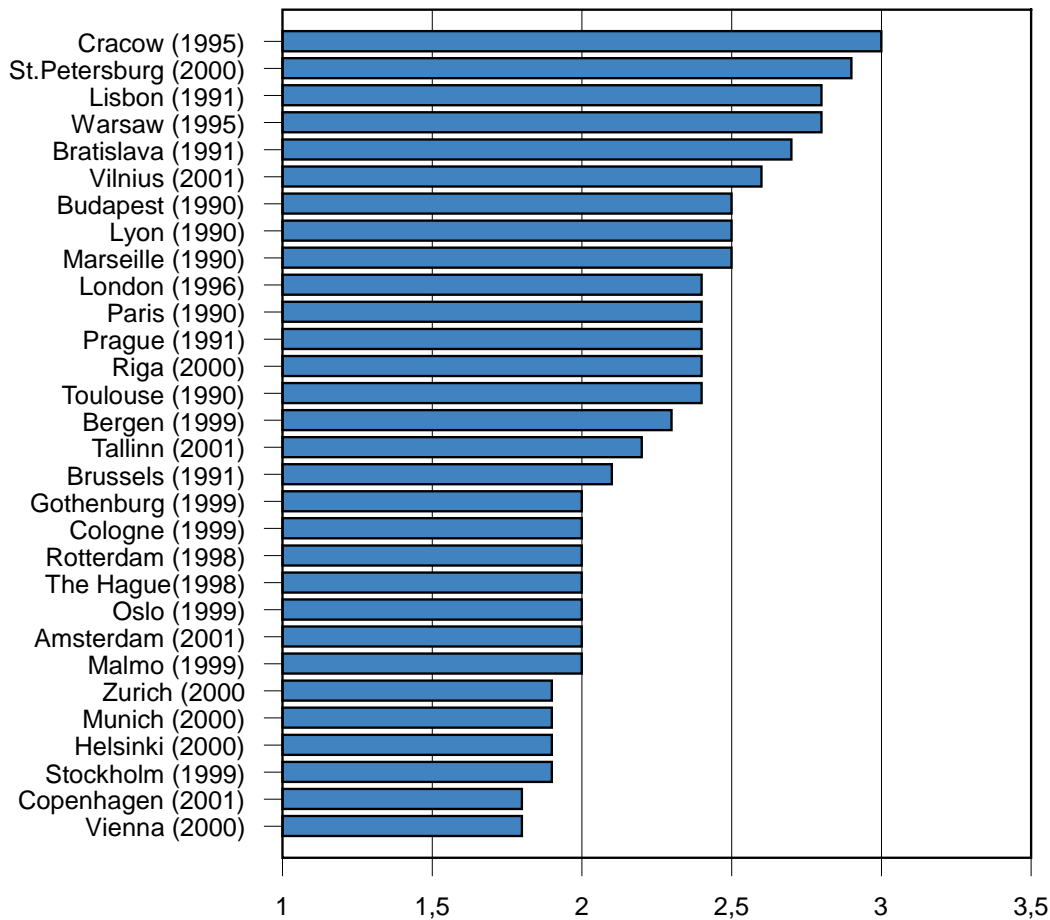
**Table 10. Average Dwelling Density**

| City                 | Occupants per dwelling |
|----------------------|------------------------|
| Amsterdam (2001)     | 2,0                    |
| Bergen (1999)        | 2,3                    |
| Bratislava (1991)    | 2,7                    |
| Brussels (1991)      | 2,1                    |
| Budapest (1990)      | 2,5                    |
| Cologne (1999)       | 2,0                    |
| Copenhagen (2001)    | 1,8                    |
| Cracow (1995)        | 3,0                    |
| Gothenburg (1999)    | 2,0                    |
| The Hague(1998)      | 2,0                    |
| Helsinki (2000)      | 1,9                    |
| Lisbon (1991)        | 2,8                    |
| London (1996)        | 2,4                    |
| Lyon (1990)          | 2,5                    |
| Malmö (1999)         | 2,0                    |
| Marseille (1990)     | 2,5                    |
| Munich (2000)        | 1,9                    |
| Oslo (1999)          | 2,0                    |
| Paris (1990)         | 2,4                    |
| Prague (1991)        | 2,4                    |
| Riga (2000)          | 2,4                    |
| Rotterdam (1998)     | 2,0                    |
| St.Petersburg (2000) | 2,9                    |
| Stockholm(1999)      | 1,9                    |
| Tallinn (2001)       | 2,2                    |
| Toulouse (1990)      | 2,4                    |
| Warsaw (1995)        | 2,8                    |
| Vienna (2000)        | 1,8                    |
| Vilnius (2001)       | 2,6                    |
| Zurich (2000)        | 1,9                    |

**Table 11. Occupants per Dwelling by Number of Rooms**

| City              | Total | Number of rooms |     |     |     |     |     |     |     |
|-------------------|-------|-----------------|-----|-----|-----|-----|-----|-----|-----|
|                   |       | 1               | 2   | 3   | 4   | 5   | 6   | 7   | 8+  |
| Amsterdam (2001)  | 1,8   | 1,0             | 1,3 | 1,6 | 2,3 | 2,8 | 3,1 | 1,9 | 3,5 |
| Bergen (1999)     | 2,2   | 1,3             | 1,4 | 1,9 | 2,6 | 3,0 | 3,3 | 3,6 | 3,6 |
| Budapest (1990)   | 2,5   | 1,6             | 1,8 | 2,4 | 3,1 | 3,5 | 4,0 | 4,3 | -   |
| Copenhagen (2001) | 1,8   | 1,2             | 1,4 | 2,0 | 2,4 | 2,8 | -   | -   | -   |
| Cracow (1995)     | 3,0   | -               | 2,1 | 2,9 | 3,6 | 4,2 | -   | -   | -   |
| Gothenburg (1999) | 1,9   | 1,1             | 1,1 | 1,3 | 2,0 | 2,7 | 3,0 | 3,2 | 3,4 |
| The Hague (1998)  | 2,0   | 1,0             | 1,2 | 1,7 | 2,3 | 2,8 | 2,9 | 2,8 | 2,9 |
| Helsinki (2000)   | 1,9   | 1,1             | 1,4 | 1,7 | 2,4 | 3,0 | -   | -   | -   |
| Lisbon (1991)     | 2,8   | 2,2             | 2,3 | 2,5 | 2,7 | 3,0 | 3,1 | 3,1 | 3,3 |
| London (1996)     | 2,4   | 1,1             | 1,2 | 1,5 | 2,1 | 2,6 | 2,9 | 3,2 | 3,4 |
| Lyon (1990)       | 2,5   | 1,2             | 1,5 | 2,1 | 3,0 | 3,6 | 3,9 | -   | -   |
| Malmö (1999)      | 1,8   | 1,1             | 1,1 | 1,3 | 1,9 | 2,6 | 2,8 | 3,0 | 3,2 |
| Marseille (1990)  | 2,5   | 1,2             | 1,5 | 2,2 | 3,0 | 3,6 | 3,9 | -   | -   |
| Oslo (1999)       | 1,9   | 1,1             | 1,4 | 1,8 | 2,3 | 2,7 | 2,9 | 3,1 | 3,3 |
| Paris (1990)      | 2,4   | 1,3             | 1,7 | 2,4 | 3,1 | 3,5 | 3,8 | -   | -   |
| Prague (1991)     | 2,4   | 1,6             | 2,3 | 3,1 | 3,5 | 3,7 | -   | -   | -   |
| Riga (2000)       | 2,4   | 1,7             | 2,3 | 3,0 | 3,3 | -   | -   | -   | -   |
| Rotterdam (1998)  | 2,0   | 1,1             | 1,2 | 1,6 | 2,4 | 2,8 | 3,4 | 3,3 | 2,5 |
| Stockholm(1999)   | 1,8   | 1,1             | 1,1 | 1,4 | 2,0 | 2,6 | 2,8 | 3,0 | 3,1 |
| Toulouse (1990)   | 2,4   | 1,2             | 1,4 | 2,0 | 2,7 | 3,3 | 3,6 | -   | -   |
| Warsaw (1995)     | 2,8   | -               | 2,1 | 2,6 | 3,2 | 3,8 | -   | -   | -   |
| Zurich (2000)     | 1,9   | 1,1             | 1,3 | 1,9 | 2,6 | 2,8 | 3,0 | 3,1 | 3,4 |

**Figure 10. Average Number of Occupants per Dwelling**



## 2.6 Dwellings by Tenure Status

In this report, dwellings are classified by tenure status into owner-occupied and rented dwellings. The latter have their largest proportions in Copenhagen, Vienna, Lyon and Paris. In Copenhagen and Vienna four fifths of dwellings are rented. Owner occupation, on the other hand, is most common in Oslo, where the share of owner-occupied dwellings was 76 % in the 1990 statistics. Also in Zurich and Edinburgh the clear majority of dwellings are occupied by the owner.

However, the picture of the distribution of the housing stock by tenure status becomes a little more elaborate when some cities are examined more closely.

For example, in Helsinki, 47 % of dwellings are rented, and of them, 41 % belong to social housing. The proportion of rented flats owned by the city form 18 % of all dwellings in Helsinki. In Stockholm, rented dwellings make up 58 % of the total housing stock, and there the municipal housing corporations own 27 % of all dwellings. In Copenhagen, by contrast, the state and the city own only one per cent, non-profit organisations 20 % and housing cooperatives 31 % of all dwellings. In Copenhagen the proportion of rented dwellings is 81 % of the total housing stock.

In London, the proportion of municipal rented dwellings is 22 % of the housing stock. In Zurich 8 % of the housing stock is owned by the state or the city and 19 % by housing associations. The proportion of rented dwellings is 27 % of all dwellings in Zurich.

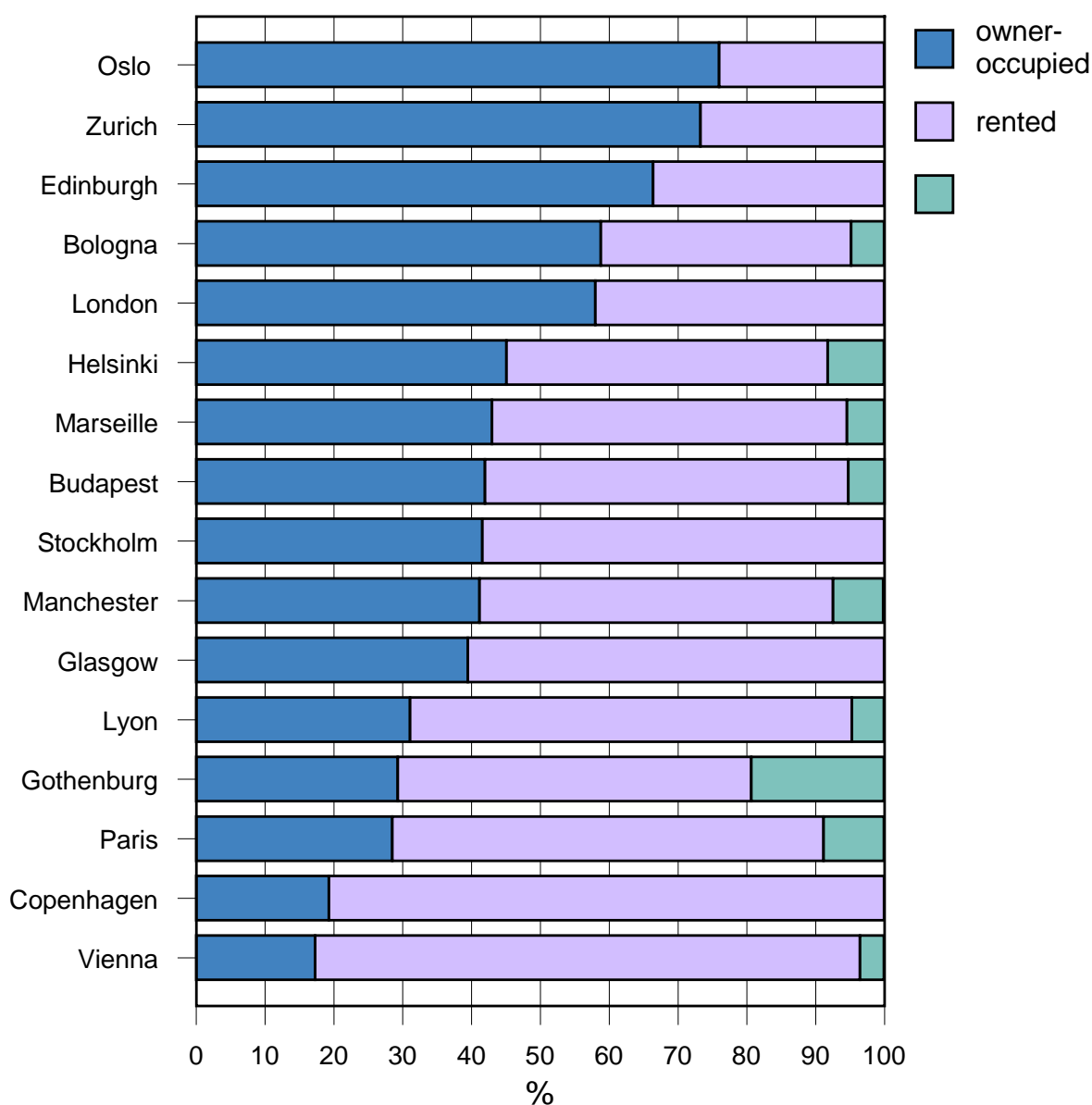
**Table 12. Dwellings by Tenure Status**

| City              | Owner-occupied | Rented | Other / unknown |
|-------------------|----------------|--------|-----------------|
| Bologna (1991)    | 58,8           | 36,4   | 4,8             |
| Budapest (1990)   | 42,0           | 52,8   | 5,3             |
| Copenhagen (2001) | 19,3           | 80,7   |                 |
| Edinburgh (1991)  | 66,4           | 33,6   |                 |
| Glasgow (1995)    | 39,5           | 60,5   |                 |
| Gothenburg (1990) | 29,3           | 51,4   | 19,3            |
| Helsinki (1999)   | 45,1           | 46,7   | 8,2             |
| London (2001)     | 58,0           | 42,0   |                 |

| City              | Owner-occupied | Rented | Other / unknown |
|-------------------|----------------|--------|-----------------|
| Lyon (1990)       | 31,1           | 64,2   | 4,7             |
| Manchester (1991) | 41,2           | 51,4   | 7,3             |
| Marseille (1990)  | 43,0           | 51,6   | 5,4             |
| Oslo (1990)       | 76,0           | 24,0   |                 |
| Paris (1990)      | 28,5           | 62,7   | 8,8             |
| Stockholm (2000)  | 41,6           | 58,4   |                 |
| Vienna (2000)     | 17,3           | 79,2   | 3,5             |
| Zurich (2000)     | 73,3           | 26,7   |                 |

**Figure 11. Dwellings by Tenure Status**







### 3. HOUSING PRODUCTION

Low and dense housing in Gent in 2002

Photos: Jussi Kautto

### 3. HOUSING PRODUCTION

#### 3.1 Completed Dwellings

In the 1990s, the volume of housing production and the numbers of completed dwellings have varied quite significantly in different cities. For instance, housing production has been fairly intensive in Helsinki. In the years 1991 to 2001, an average of 3 828 dwellings were completed each year. The annual production has exceeded that of Helsinki only in London, St. Petersburg, Vienna, Munich and Barcelona. For example, in Stockholm the average number of completed dwellings was 1 673, in Oslo, 1 365 and in Copenhagen, 925 per year.

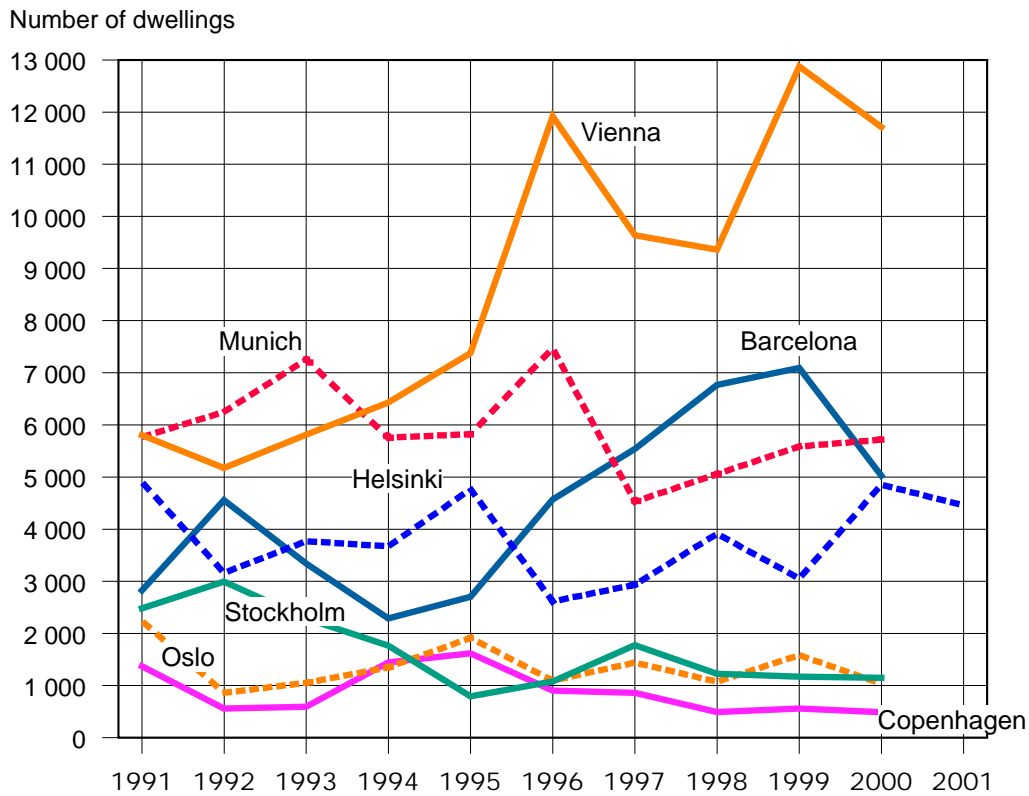
The housing production in Helsinki has been exceptionally large also in relation to the population of the city. For instance, in 2000 the number of completed dwellings per 1000 inhabitants was 8,74. Vienna is also a city of lively housing construction; there the figure was 7,25 per 1000 inhabitants in the same year. More than four dwellings per 1000 inhabitants were completed only in Munich and Zurich. In the other Nordic capitals, the number of dwellings constructed per 1000 inhabitants in 2000 was clearly smaller than in Helsinki - 1.53 in Stockholm, 2.04 in Oslo and 0.98 in Copenhagen.

Table 13. Completed Dwellings 1991-2001

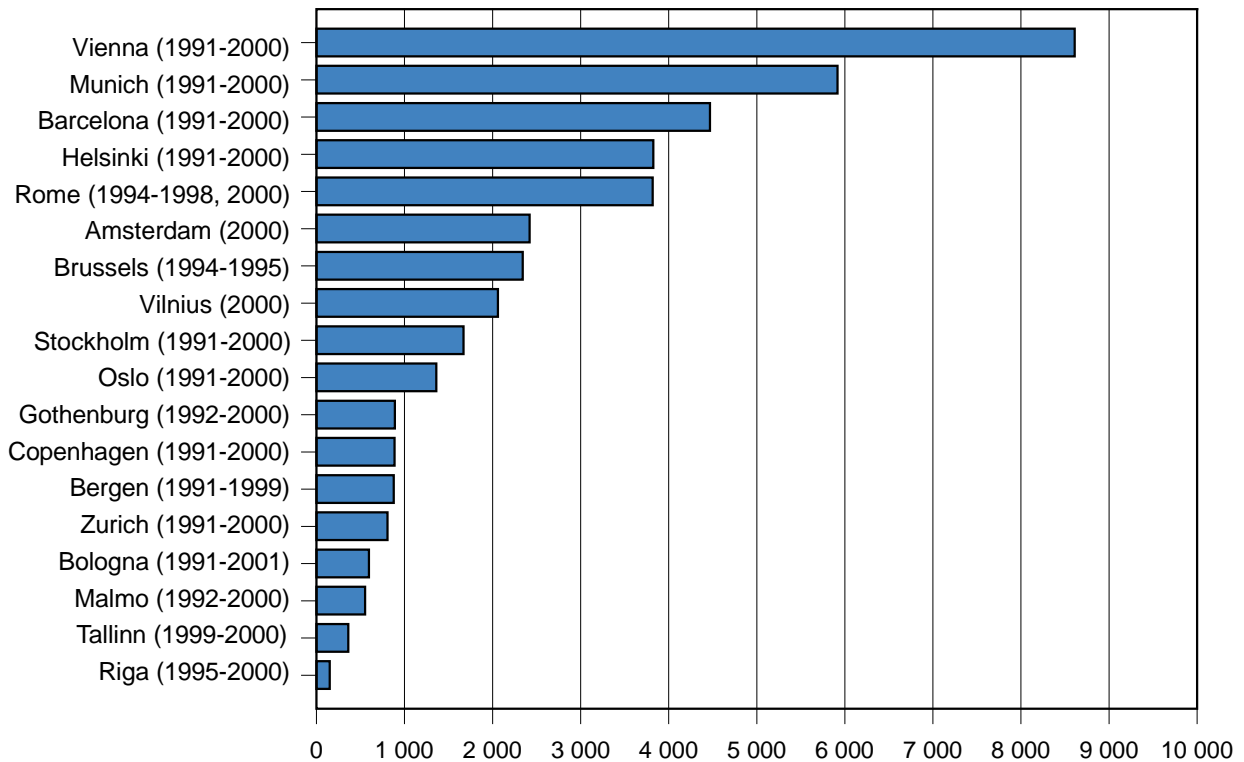
|               | 1991  | 1992  | 1993  | 1994  | 1995  | 1996  | 1997  | 1998  | 1999  | 2000  | 2001  | Annual mean |
|---------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------------|
| Amsterdam     | -     | -     | -     | -     | -     | -     | -     | -     | -     | 2423  | -     | 2423        |
| Barcelona     | 2825  | 4556  | 3344  | 2288  | 2704  | 4569  | 5540  | 6770  | 7096  | 5026  | -     | 4472        |
| Bergen        | 1190  | 774   | 786   | 741   | 1030  | 847   | 1087  | 793   | 694   | 855   | -     | 880         |
| Bologna       | 274   | 779   | 530   | 767   | 767   | 343   | 112   | 439   | 1109  | 866   | 771   | 599         |
| Brussels      | -     | -     | -     | 2124  | 2563  | -     | -     | -     | -     | -     | -     | 2344        |
| Copenhagen    | 1370  | 561   | 595   | 1447  | 1619  | 902   | 863   | 493   | 560   | 491   | -     | 890         |
| Gothenburg    | -     | 1280  | 1092  | 779   | 435   | 1094  | 652   | 929   | 648   | 1138  | -     | 894         |
| Helsinki      | 4908  | 3163  | 3771  | 3671  | 4769  | 2614  | 2935  | 3913  | 3056  | 4853  | 4457  | 3828        |
| London        | 17232 | 17077 | 14433 | 14632 | 15122 | 16291 | 12577 | 13623 | 12480 | 14280 | 14105 | 14775       |
| Malmö         | -     | 981   | 1003  | 553   | 229   | 619   | 300   | 376   | 646   | 292   | -     | 555         |
| Munich        | 5765  | 6250  | 7257  | 5755  | 5824  | 7470  | 4529  | 5057  | 5587  | 5720  | -     | 5921        |
| Oslo          | 2243  | 863   | 1051  | 1349  | 1913  | 1096  | 1442  | 1077  | 1583  | 1037  | -     | 1365        |
| Riga          | -     | -     | -     | -     | 411   | 125   | 166   | 49    | 49    | 115   | -     | 153         |
| Rome          | -     | -     | -     | 5142  | 5554  | 4355  | 3060  | 1905  | -     | 2905  | -     | 3820        |
| St.Petersburg | 18900 | 11100 | 13400 | 15000 | 16400 | -     | -     | -     | 14900 | 15191 | -     | 14984       |
| Stockholm     | 2483  | 2993  | 2285  | 1766  | 796   | 1081  | 1779  | 1224  | 1170  | 1150  | -     | 1673        |
| Tallinn       | -     | -     | -     | -     | -     | -     | -     | -     | 304   | 424   | -     | 364         |
| Vienna        | 5803  | 5176  | 5814  | 6429  | 7381  | 11921 | 9639  | 9363  | 12878 | 11713 | -     | 8612        |
| Vilnius       | -     | -     | -     | -     | -     | -     | -     | -     | -     | 2065  | -     | 2065        |
| Zurich        | 1162  | 562   | 900   | 854   | 630   | 614   | 404   | 787   | 723   | 1465  | -     | 810         |



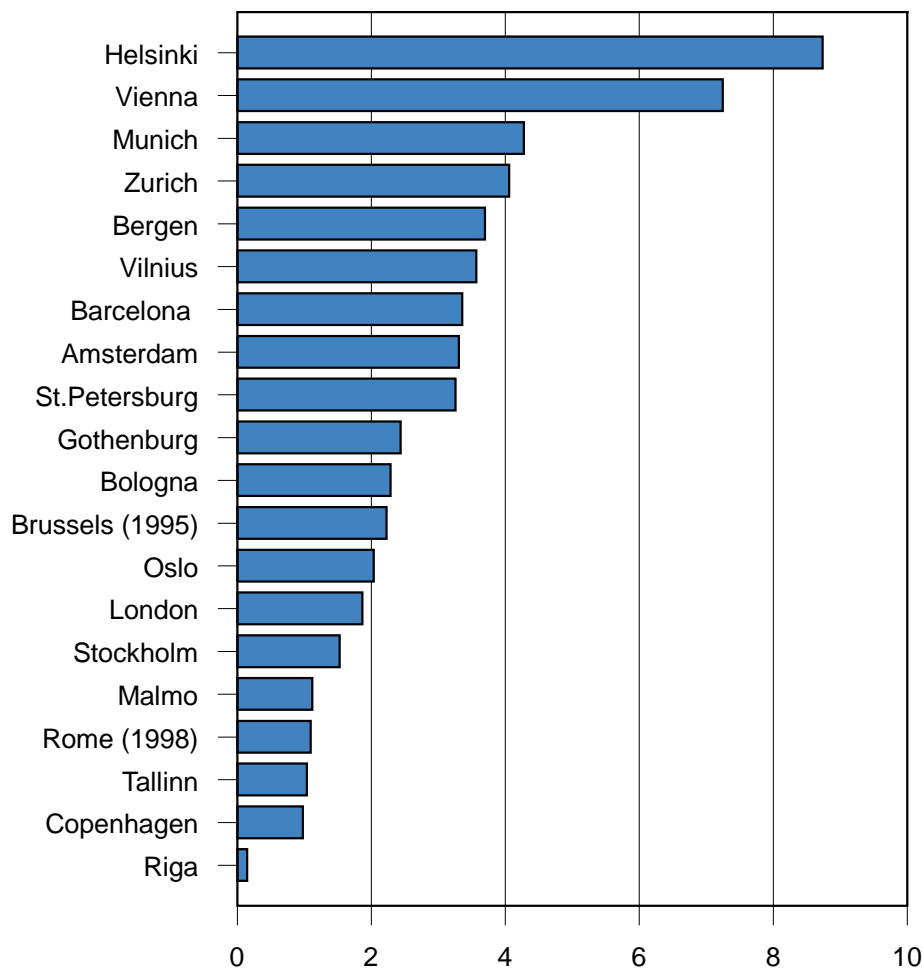
**Figure 12. Completed Dwellings 1991-2001**



**Figure 13. Completed Dwellings, Annual Mean**



**Figure 14. Completed Dwellings per 1000 Inhabitants, year 2000**



### 3.2 Completed Dwellings by Number of Rooms

The housing production has been concentrated in the 1990s on small dwellings in Vienna, Malmö and Gothenburg. In these cities, the average share of one-room dwellings of all completed dwellings has been approximately one fifth. On the other hand, the construction of large dwellings with more than four rooms has been extensive in Malmö and Gothenburg - their proportion being one third of the total housing production in Malmö and slightly over two fifths in Gothenburg.

In Helsinki, more than half of the dwellings constructed have been two- to three-room flats. The share of large dwellings with more than four rooms has been one sixth. The proportion of large dwellings has been smaller only in Vienna, Copenhagen and Zurich. In regard to the number of rooms, the housing production profile in Helsinki resembles the most those of Munich and Zurich.

The share of large dwellings has been the highest in Bergen where they have accounted for over half of the completed new stock. Their proportion has been significant also in Oslo, Stockholm and London.

**Table 14. Completed Dwellings by Number of Rooms (%)**

|                        | Number of rooms |      |        |      |      |
|------------------------|-----------------|------|--------|------|------|
|                        | 1               | 2    | 3      | 4    | 5+   |
| Bergen (1992-2000)     | 0,6             | 1,5  | 19,0   | 21,5 | 57,5 |
| Bologna (1991-2001)    | 13,5            | 5,5  | 22,5   | 39,1 | 19,4 |
| Copenhagen (1994-1997) | 0               | 4,2  | 28,1   | 53,8 | 14,0 |
| Gothenburg (1992-2000) | 18,9            | 3,2  | 17,1   | 18,5 | 42,3 |
| Helsinki (1991-2001)   | 3,1             | 28,1 | 28,4   | 23,2 | 17,2 |
| London (1991-2001)     |                 |      | * 28,3 | 42,4 | 29,3 |
| Malmö (1992-2000)      | 20,1            | 8,7  | 20,9   | 17,2 | 33,1 |
| Munich (1987-2000)     | 6,6             | 15,3 | 33,6   | 26,8 | 17,7 |
| Oslo (1992-2000)       | 2,9             | 1,9  | 29,5   | 27,6 | 38,1 |
| Rome (1994-1998)       | 1,1             | 10,9 | 27,6   | 35,3 | 25,2 |
| Stockholm 1992-2000)   | 5,9             | 6,2  | 29,7   | 28,2 | 30,2 |
| Vienna (1996-2000)     | 18,3            | 29,3 | 37,3   | 12,1 | 3,0  |
| Zurich (1993-2000)     | 5,1             | 20,7 | 27,5   | 31,8 | 14,9 |

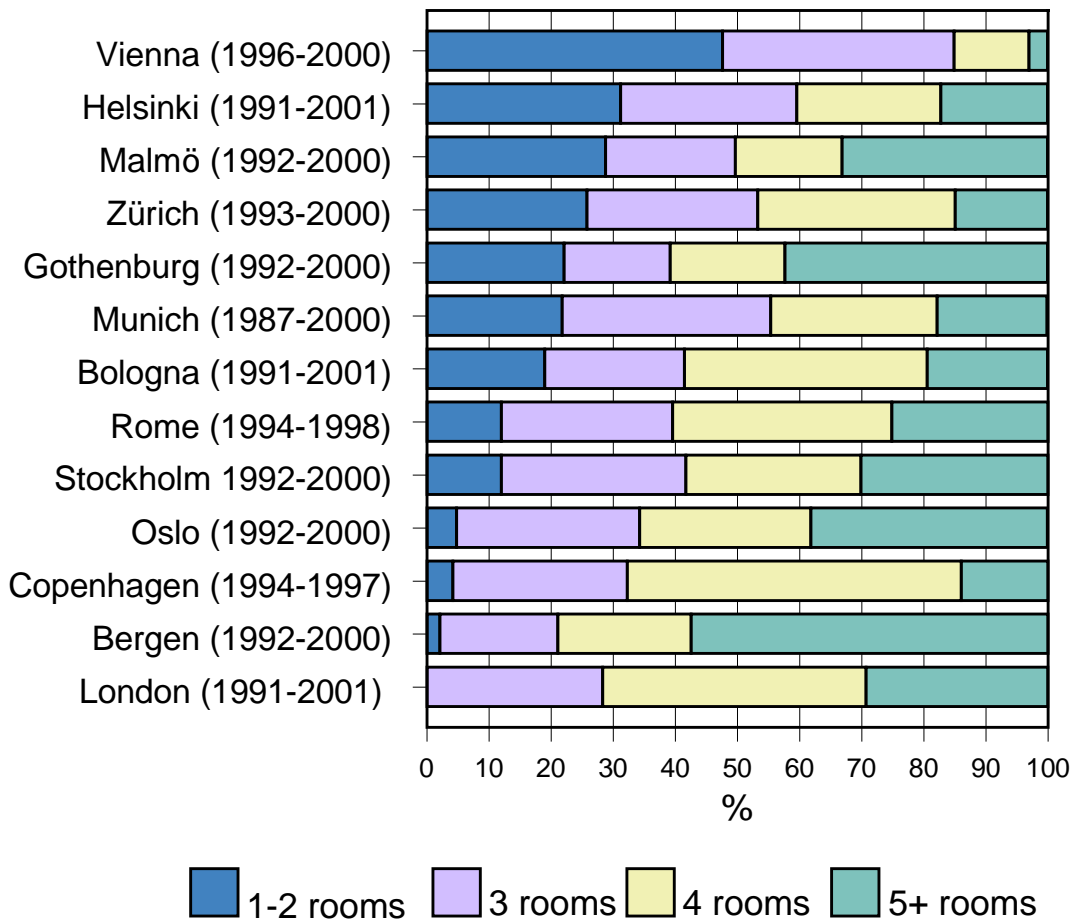
\* Includes dwellings with 1-3 rooms

**Table 15. Annual Mean of Completed Dwellings by Number of Rooms**

|                        | Number of rooms |       |        |       |       | Total  |
|------------------------|-----------------|-------|--------|-------|-------|--------|
|                        | 1               | 2     | 3      | 4     | 5+    |        |
| Bergen (1992-2000)     | 8               | 14    | 160    | 181   | 486   | 845    |
| Bologna (1991-2001)    | 82              | 34    | 137    | 238   | 118   | 608    |
| Copenhagen (1994-1997) | 0               | 39    | 264    | 506   | 131   | 941    |
| Gothenburg (1992-2000) | 169             | 29    | 153    | 166   | 378   | 894    |
| Helsinki (1991-2001)   | 118             | 1077  | 1 086  | 887   | 660   | 3 828  |
| London (1991-2001)     |                 |       | * 4131 | 6 188 | 4 282 | 14 601 |
| Malmö (1992-2000)      | 112             | 48    | 116    | 96    | 184   | 555    |
| Munich (1987-2000)     | 408             | 944   | 2 081  | 1 661 | 1 093 | 6 187  |
| Oslo (1992-2000)       | 42              | 25    | 392    | 363   | 475   | 1 297  |
| Rome (1994-1998)       | 45              | 436   | 1 103  | 1 412 | 1 007 | 4 003  |
| Stockholm 1992-2000)   | 93              | 97    | 470    | 446   | 478   | 1 584  |
| Vienna (1996-2000)     | 2 030           | 3 257 | 4 140  | 1 348 | 328   | 11 103 |
| Zurich (1993-2000)     | 41              | 165   | 219    | 253   | 119   | 797    |

\* Includes dwellings with 1-3 rooms

Figure 19. Completed Dwellings by Number of Rooms (%)



\* Includes dwellings with 1 to 3 rooms



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Jugend style houses under renovation  
in the UNESCO world heritage area,  
Alberta iela -street, Riga in 2002

Photos: Jussi Kautto