Data Management and Analysis Group

Urban Audit III: London and other large European cities
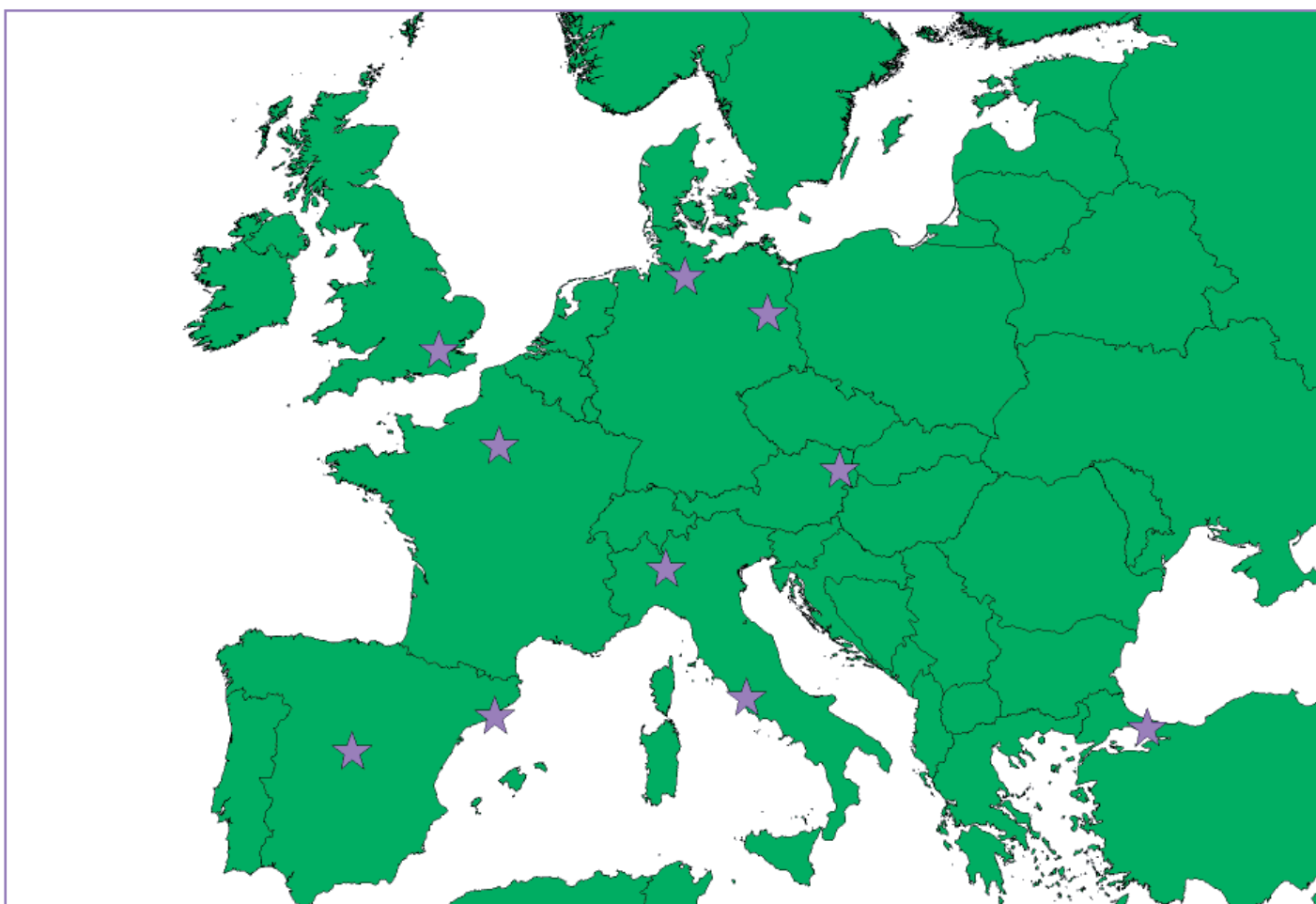
Richard Walker

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Urban Audit III – London and other large European cities

For more information please contact:

Richard Walker
Data Management and Analysis Group
Greater London Authority
City Hall
The Queen's Walk
London SE1 2AA

Tel: 020 7983 4532
e-mail: richard.walker@london.gov.uk

List of tables, charts and maps

1. Introduction

The Urban Audit provides European urban statistics for over 260 cities across 28 countries. It contains almost 300 statistical indicators presenting information on matters such as demography, labour markets and economies, environmental issues and crime.

Data for the Urban Audit III project was collected in 2006/07 with a reference year of 2004. The study is managed by Eurostat in co-operation with the national statistical offices of the 27 member states and Turkey.

Work on the dataset is ongoing with continuing submissions and validation checks, in particular from the French National Statistical Institute in relation to Paris both as a city and Larger Urban Zone (LUZ). Where data has not been submitted to the Eurostat office, the relevant cities have been removed from charts and tables.

For the purposes of this Briefing, we have selected ten of the largest and most cosmopolitan cities in Europe: London, Paris, Madrid, Barcelona, Berlin, Hamburg, Rome, Milan, Vienna and Istanbul (Map 1). Administrative boundaries were used to define each city level region. As a result, for most cities the boundary used in the Urban Audit corresponds to the general perception of that city. However, due to the highly diverse nature of political boundaries within the European Union, some city level regions do not correspond to general perception of that city. The issue of boundary definition may explain many of the incongruities and extreme outliers found within the dataset.

The analysis undertaken within this briefing only uses the data we considered to be most reliable from the Urban Audit. There are many more variables included in the full dataset which were insufficiently complete or reliable, to facilitate effective analysis. Consequently, the report serves a duel purpose; firstly to provide

Map 1: Selected European cities included in the analysis
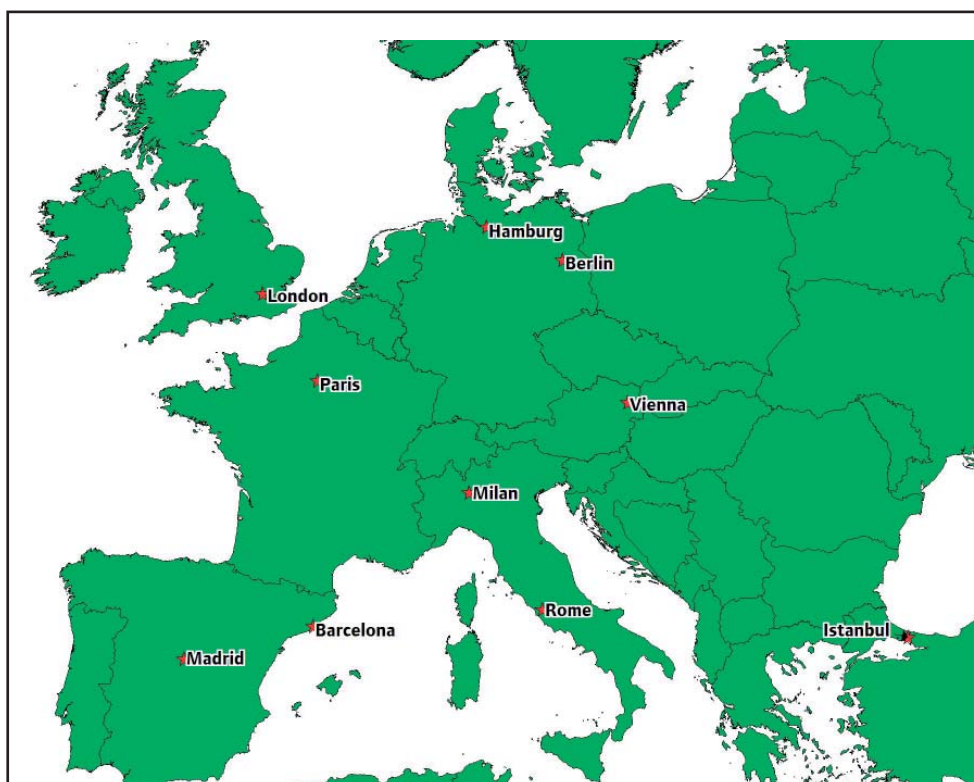
Source: Urban Audit III, Eurostat

a snapshot of the key results from the audit and secondly, to highlight some of the inherent difficulties in using the dataset for cross-city comparisons.

2. Demography

In 2004, London's population of 7.4 million ranked second among those cities submitting data to the Urban Audit III project, behind Istanbul (9.9 million) (Table 2). The next most populous city to return data was Berlin with 3.4 million. Seventy per cent of London's population is of working age which ranks joint second with Vienna, behind Berlin at 71.2 per cent. Milan had the lowest proportion of its population within the working age band at 65 per cent.

Table 2: Total Population and working-age population, 2004

	Total resident population	Total population of working age	Proportion Working Age
Istanbul	9,897,599	6,828,168	69.0
London	7,429,200	5,184,600	69.8
Berlin	3,387,828	2,413,451	71.2
Madrid	3,099,834	2,132,316	68.8
Rome	2,553,873	1,705,699	66.8
Paris	2,151,853	-	-
Hamburg	1,734,830	1,196,576	69.0
Vienna	1,598,626	1,119,627	70.0
Barcelona	1,578,546	1,061,467	67.2
Milan	1,299,439	843,991	65.0

– Value not included in dataset

Source: Urban Audit III, Eurostat

The number of people per household in London (2.39) is consistent with the average across the selected cities. However there is significant variation across Europe, with 4 persons per household in Istanbul compared with just 1.79 in Berlin (Figure 3). The high density per household in Istanbul may be explained by their high rate of young age dependency. The Eurostat young age dependency ratio is calculated by

Figure 3: Number of persons per household, 2004
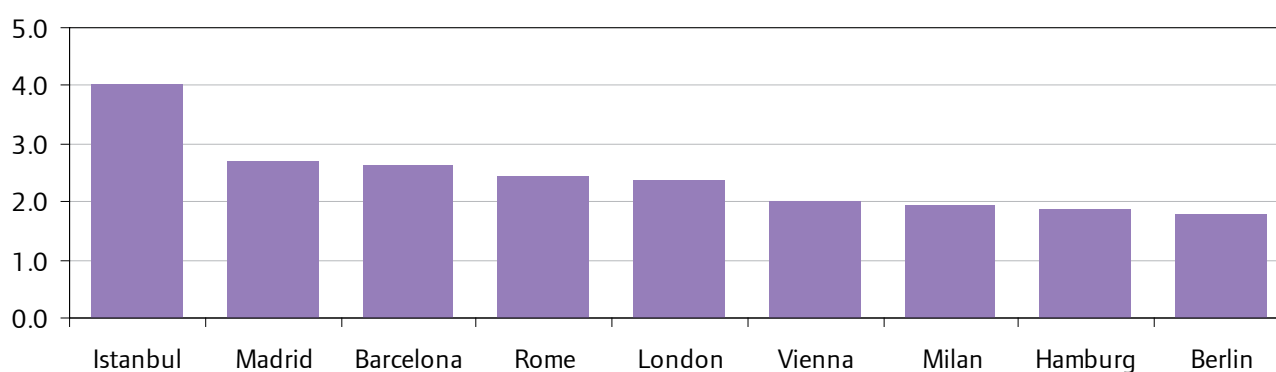
NB Paris did not submit data

Source: Urban Audit III, Eurostat

dividing the population aged less than 20 by that aged 24-60 and multiplying by one hundred. The mean ratio across nine cities was 29. London's figure of 38.2 was by far the highest of the "Western European cities" with Hamburg having the next highest ratio at 27.7 (Figure 4). However, Istanbul recorded a ratio of 62.7 emphasising the high numbers of children per adult. Old age dependency retains the denominator population discussed above, but rather than those aged under 20 looks at the population aged over 65. London is the only Western European city to record a ratio of less than 20 at 18.8 compared with the average of 23.6, indicating that London has a lower proportion of older people compared with most similar European cities. Milan had the highest old age dependency ratio at 37.9. Istanbul's relatively youthful population is further highlighted by an extremely low old age dependency ratio of just 7.6.

Figure 4: Old and young age dependency ratios, 2004
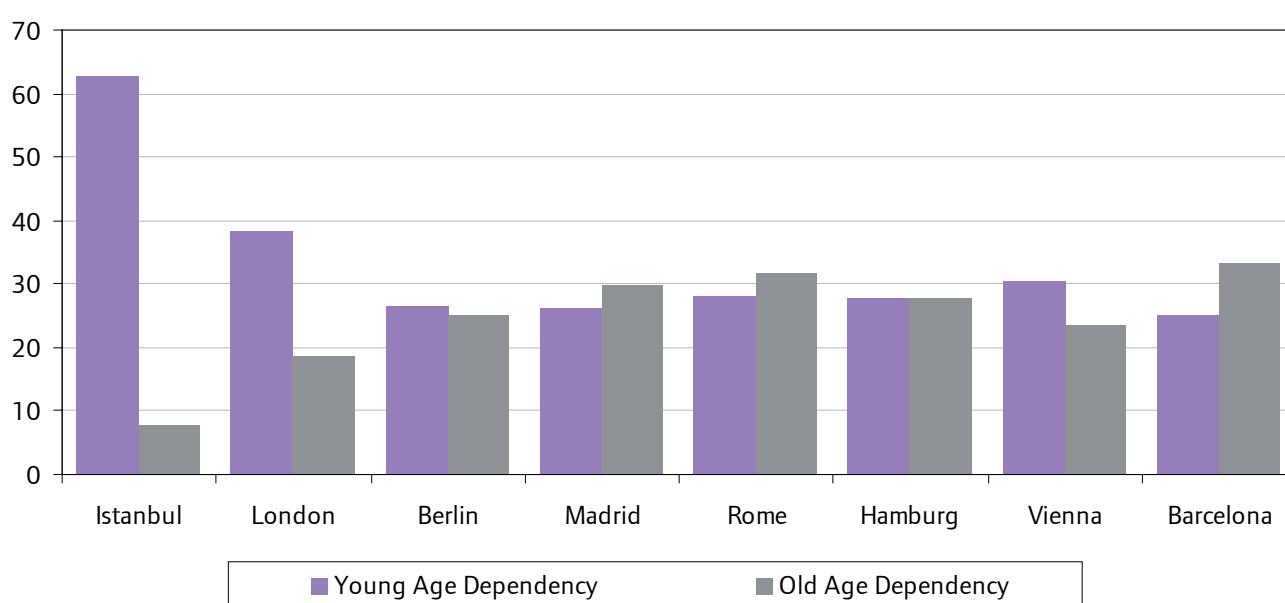
NB Paris did not submit data

Source: Urban Audit III, Eurostat

In 2004, London's population was growing at a rate of 0.6 per cent per year. The population in Milan was expanding at a rate of 2.2 per cent whilst Barcelona recorded a decrease in population of 0.3 per cent and populations in the German cities of Berlin and Hamburg remained constant.

London's ratio of those moving in divided by those moving out was 1.01 - equal to Berlin's ratio, This indicates that in terms of migration, inflow and outflow were almost equal in 2004 in both these cities. Barcelona was the only city to provide data showing a net outflow of people with a ratio of 0.55. Madrid recorded the highest rate at 1.35, indicating a net inflow to the Spanish capital (Table 5). The relatively vast range in ratio size for this variable is worth noting and interpretation of the data should be undertaken with caution.

Just 82.3 per cent of London's population were British nationals in 2004, the lowest of any of the selected cities, which emphasises the high levels of cultural diversity within the English capital. The Italian cities of Rome and Milan have the highest Percentage of nationals within the population at 94 per cent and 89 per cent respectively (Figure 6).

Table 5: Percentage population change over previous year and ratio of inflow to outflow, 2004

	Total population change over one year	Inflow/Outflow
Milan	2.2	-
London	0.6	1.01
Roma	0.5	1.14
Madrid	0.2	1.35
Hamburg	0.0	1.07
Berlin	0.0	1.01
Barcelona	-0.3	0.55

- Value not included in dataset

NB Istanbul, Paris and Vienna did not submit data

Source: Urban Audit III, Eurostat

Figure 6: Nationals as a proportion of total population,2004
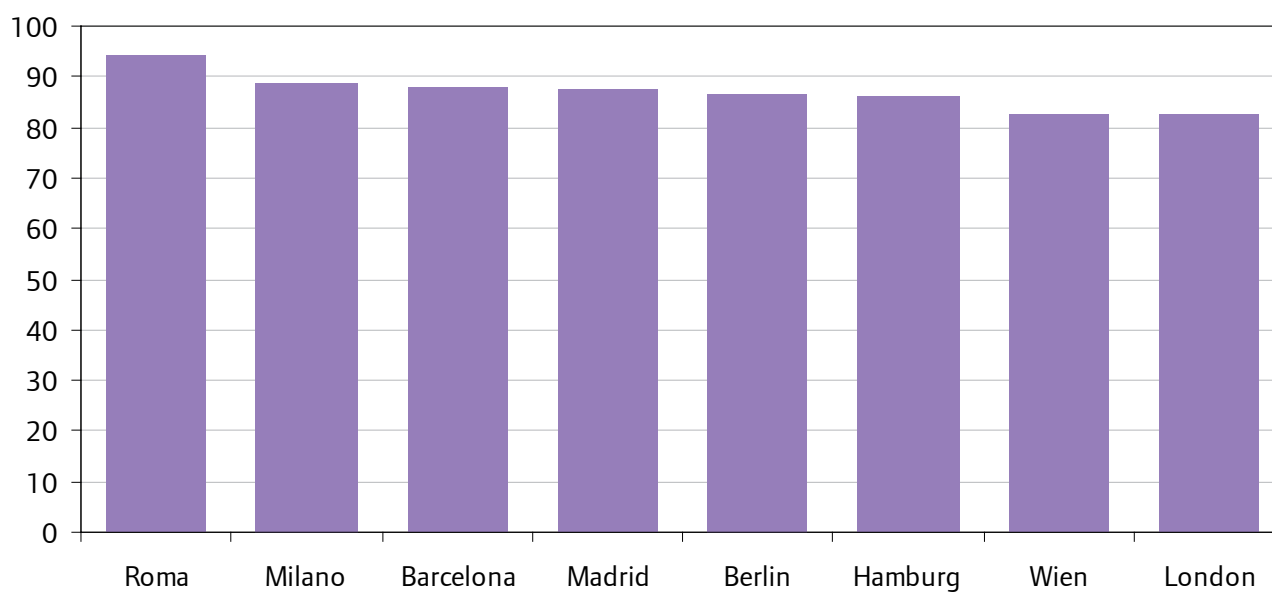
NB Istanbul and Paris did not submit data

Source: Urban Audit III, Eurostat

3. Employment, Labour Market and Economy

Of the six cities to submit data, London had the highest employment rate at almost 66 per cent, marginally higher than Madrid and Hamburg, both with a rate of 65 per cent. Barcelona had the lowest recorded employment rate at 63 per cent, demonstrating a reasonably small range between large European cities. The number of people recorded as unemployed as a Percentage of the total working age population in London in 2004 was just over five per cent. This compared favourably with the other cities – with only Madrid having a lower rate at 4.6 per cent. Berlin had the highest rate at 13.8 per cent (Table 7).

Table 7: Employment rate, economic activity rate and unemployment as a Percentage of working-age population, 2004

	Employment rate	Unemployed as % of working age pop	Economic activity rate
London	65.8	5.1	70.9
Hamburg	65.0	7.8	72.7
Madrid	64.9	4.6	69.5
Vienna	63.7	6.2	69.9
Barcelona	62.9	8.5	71.5
Berlin	58.5	13.8	72.3
Istanbul	–	6.8	45.7

– Value not included in dataset
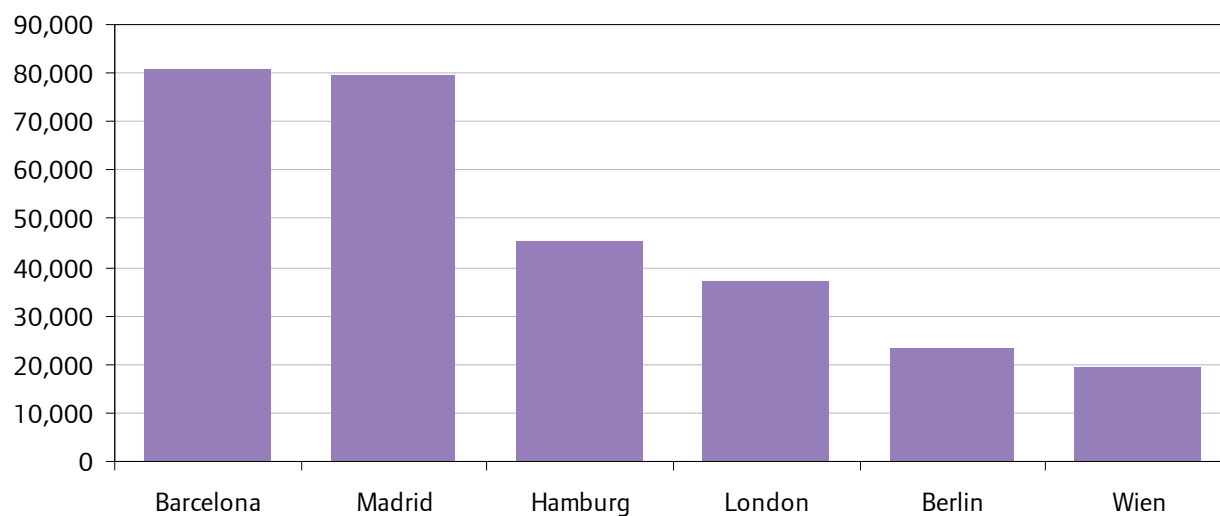
NB Paris, Milan and Rome did not submit data

Source: Urban Audit III, Eurostat

In terms of economic activity, London's 2004 rate of 71 per cent was four percentage points higher than the average of 67 per cent. Barcelona, Hamburg and Berlin also recorded rates above 70 per cent, with Hamburg having the highest rate at 73 per cent. Istanbul had an economic activity rate of just 46 per cent. This may be an example of where incongruities exist within the methodologies used to calculate economic activity rates.

Only five of the selected cities submitted a figure for GDP per head in 2004. London's figure has been constructed by multiplying the GVA of £26,262 by a pound to Euro exchange rate of 1.42 to give a value of €37,292. The average across the six cities included was €47,669, though this is significantly skewed by the high values recorded in the Spanish cities of Madrid (€79,516) and Barcelona (€80,894) (Figure 8). If these two cities are removed then the average is much lower at €31,401. The extent of the variance between the Madrid and Barcelona figures and those for other European cities, may be explained by differing methods used in calculating the GDP.

Almost a third (32 per cent) of employed Londoners worked in the sector titled "Financial Intermediation and Business Activities", second only to Milan with 42 per cent. A further three in ten people were employed in the Public Administration, Health and Education sector, third behind Madrid (34 per cent) and Berlin (39 per cent). Just over a fifth were employed in the Trade, Hotels and Restaurants sector. Again this ranked third behind Rome and Milan, where around a quarter of employees fell under this category. A further nine per cent were employed in either Mining, Energy or Manufacturing and Construction. The remaining employees worked under the sector – transport and communication and just one in a thousand Londoners were employed in agriculture and fisheries (Figure 9).
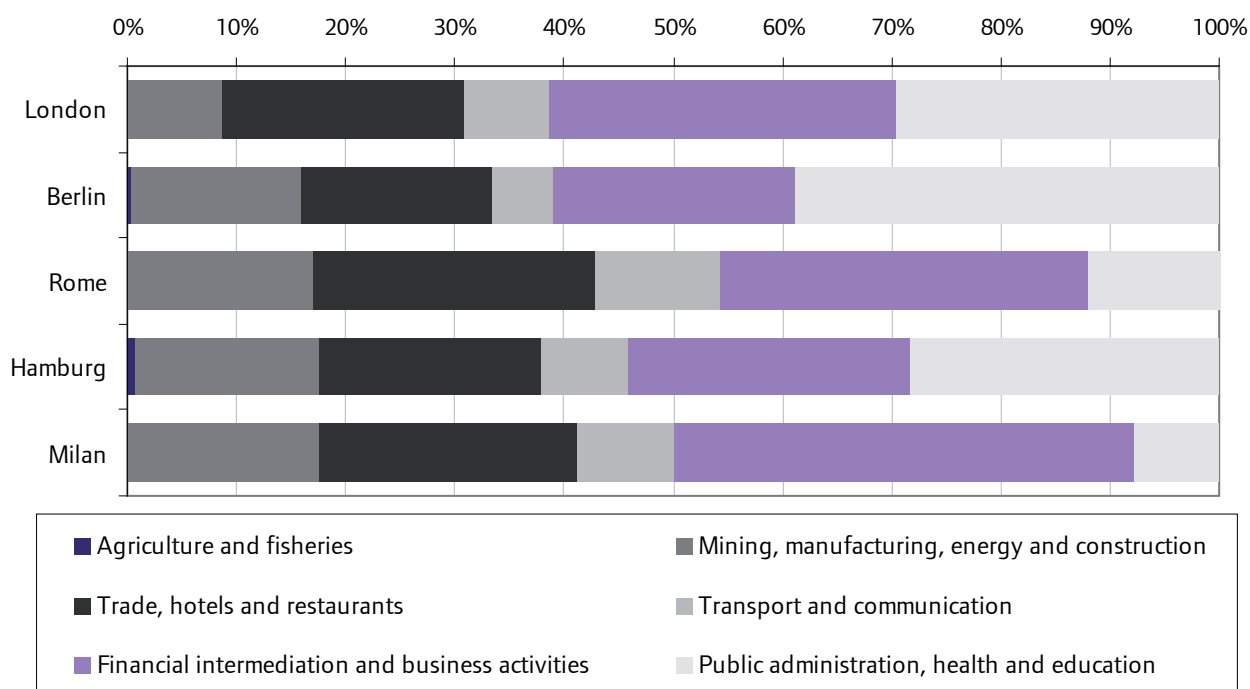
Figure 8: GDP per head (Euros), 2004

NB Istanbul, Milan, Paris and Rome did not submit data

Source: Urban Audit III, Eurostat

Figure 9: Proportion of employment across industry sectors, selected cities, 2004

NB Barcelona, Istanbul, Madrid and Vienna did not submit data

Source: Urban Audit III, Eurostat

4. Elections

Just over 37 per cent of London's registered electorate voted in the European elections in 2004. This was the third lowest proportion of the selected cities, though is almost the same figure as Vienna. Hamburg had the lowest turnout at just 33 per cent. The Italian cities Rome and Milan had the highest Percentage turnout at 67 and 68 per cent respectively.

In terms of national elections, London recorded the lowest rate at 58 per cent of the registered electorate. The German cities of Berlin and Hamburg had higher turnouts at 77 and 78 per cent, whilst Rome and Milan (both 84 per cent) again led the way (Table 10). The results highlight a far greater interest in national elections compared with the European equivalent. The contrast is particularly marked in the german cities of Berlin and Hamburg.

Table 10: Proportion of the registered electorate voting in European and national elections, 2004

	European Election	National Election
Milan	68.1	84.3
Rome	67.3	84.2
Madrid	50.8	-
Paris	50.4	-
Barcelona	42.0	-
Berlin	38.6	77.4
London	37.3	57.8
Vienna	36.9	-
Hamburg	33.6	77.5

NB Istanbul did not submit data

- Value not included in dataset

Source: Urban Audit III, Eurostat

5. Education

Across the eight cities providing data, there was an average of 64 students in universities or further education establishments per thousand people. The London rate of 39 was the second lowest behind Istanbul with just 30 students per thousand people. Barcelona at 130 was the highest ranking city followed by Rome with 84 students per thousand population. Again the range between the London rate of 39 and the Barcelona figure of 130 would suggest discrepancies in how "further education establishments" has been defined during the collection and interpretation of data (Figure 11). For instance, The UK Annual Population Survey estimates that there are 69 full-time students per thousand population in London compared with the figure of 39 in the Urban Audit. However, this is still over 60 students per thousand less than Barcelona, suggesting that the Spanish submission may have included part-time students and/or used a different population denominator such as all people over the age of 16.

Figure 11: Number of students in universities and further education establishments per thousand population, 2004
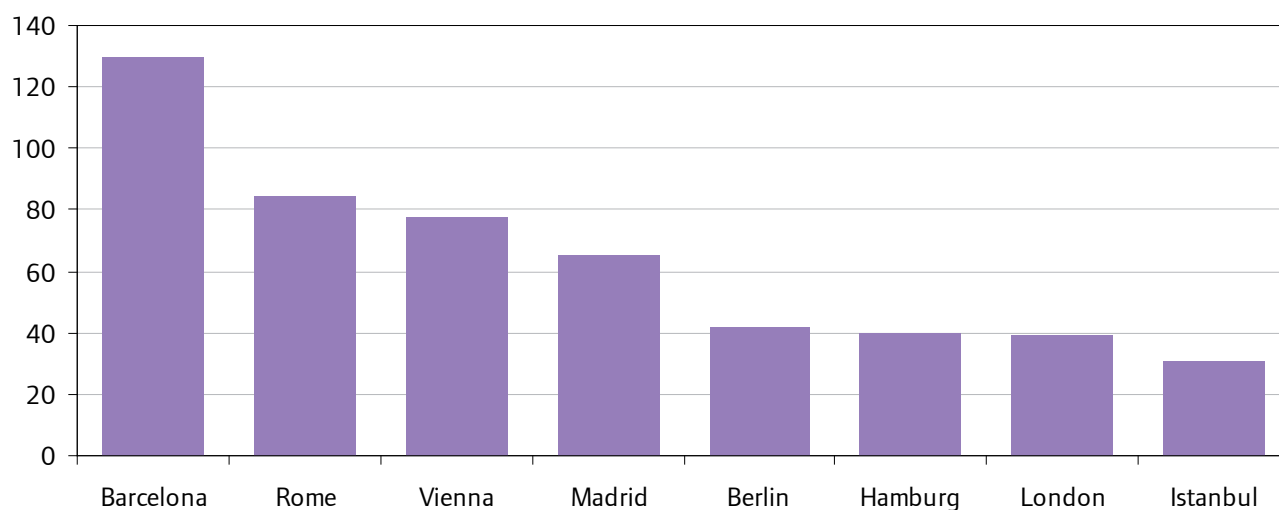
NB Milan and Paris did not submit data

Source: Urban Audit III, Eurostat

6. Environment

With 154 days of rain per year, London was the third highest ranked city for rainfall – 14 per cent higher than the average across the nine cities to submit data. Hamburg (195) and Vienna (168) had the highest rates, whilst with just 79 days of rain per year, Madrid is the driest city of the nine (Figure 12).

Figure 12: Number of days of rain per year, 2004

NB Paris did not submit data

Source: Urban Audit III, Eurostat

Figure 13: Number of days that ozone (O^3) concentrations exceed 120 Âµg/m³, 2004
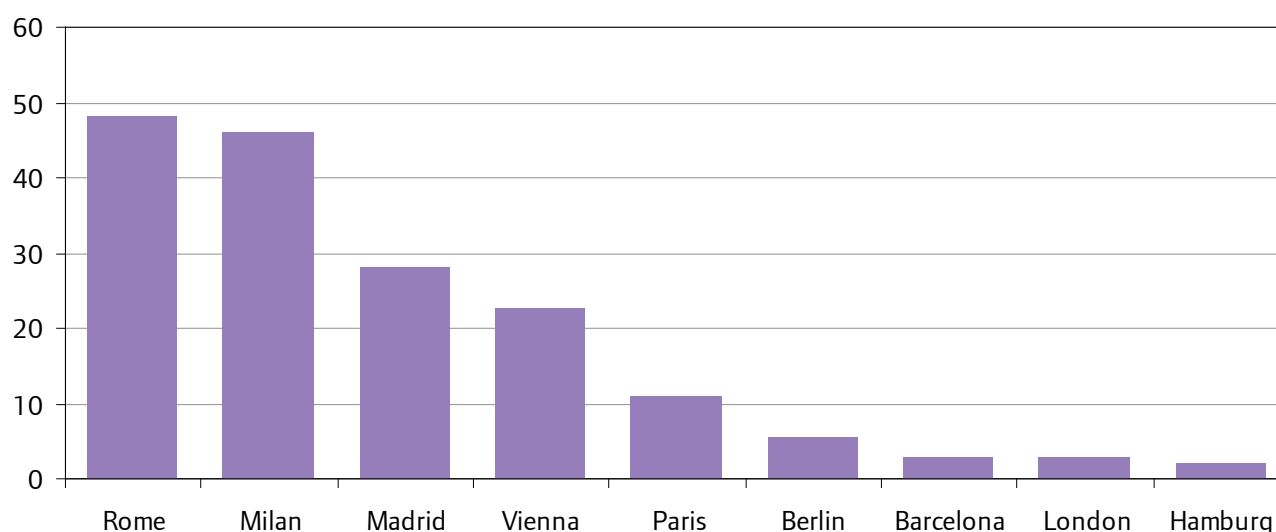
NB Istanbul did not submit data

Source: Urban Audit III, Eurostat

In 2004, London's ozone (O^3) levels exceeded 120 Âµg/m³ on just three days of the year. This compares favourably with the average across the nine cities, of 19 days. Rome and Milan both recorded more than 45 days with ozone levels above the specified concentration (Figure 13).

The most common measure of particulate matter in the atmosphere is PM^{10}. The number of days where London's rate of PM^{10} exceeded 50 Âµg/m³ was just nine, compared to 134 in Milan and an average across selected cities of 36 (Figure 14). The city with the lowest rate was Paris at just three days during 2004.

Figure 14: Number of days per year that particulate matter (PM^{10}) concentrations exceed 50 Âµg/m³, 2004
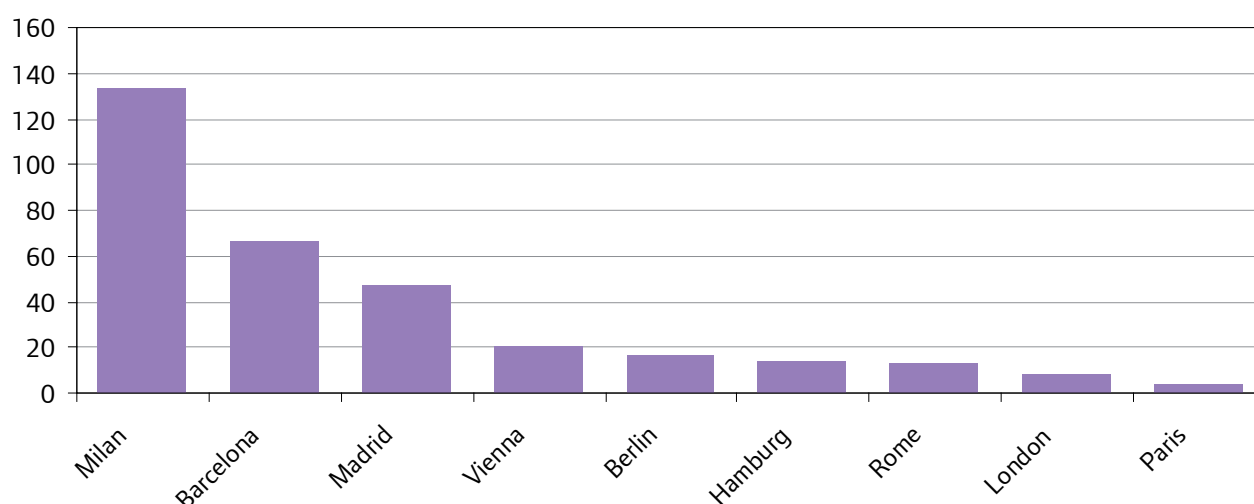
NB Istanbul did not submit data

Source: Urban Audit III, Eurostat

Figure 15: Method of handling municipal solid waste, 2004
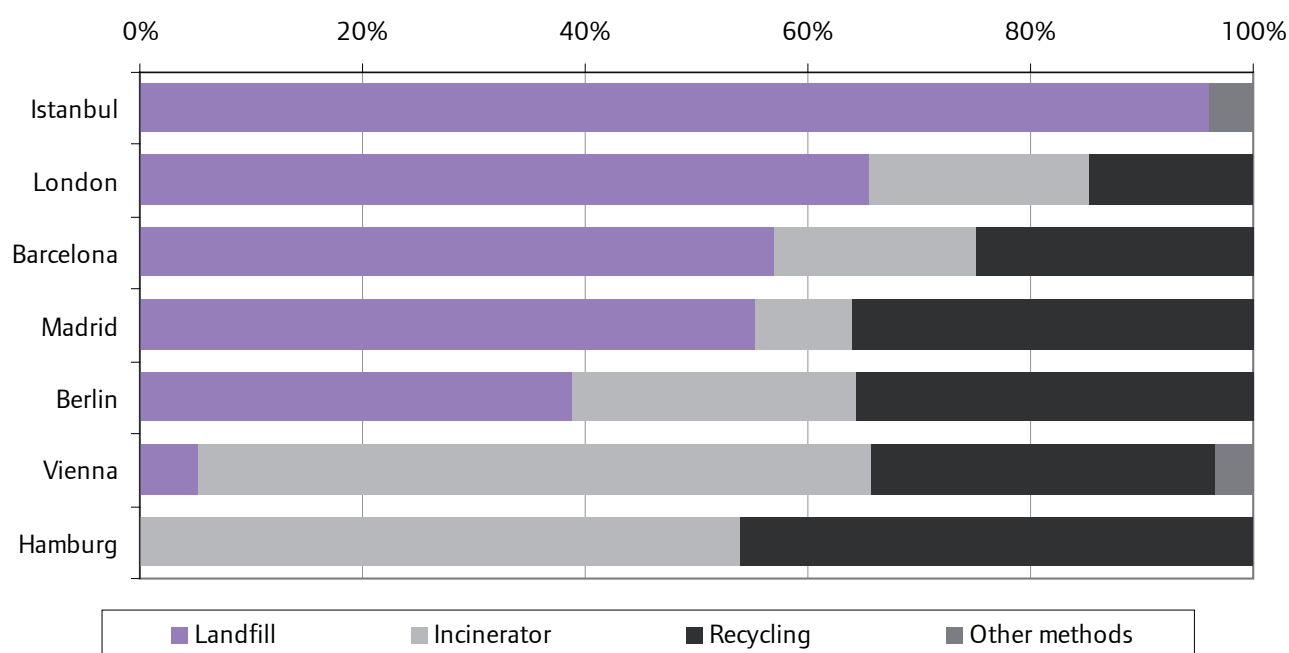
NB Milan, Paris and Rome did not submit data

Source: Urban Audit III, Eurostat

Almost all of Istanbul's solid waste was sent to landfill in 2004. At just under two thirds, London had the second highest proportion of its solid waste sent to landfill (Figure 15). Interestingly, Hamburg sent none of its solid waste to landfill, and Vienna just five per cent, thus giving rise to greater rates of incineration (54 per cent and 60 per cent) and recycling (46 per cent and 31 per cent) respectively. In contrast, London incinerated just a fifth and recycled 15 per cent of it's solid waste during the same year.

7. Vehicles and Accidents

In London there were 331 cars per thousand population, slightly lower than the average of these cities of 372. The lowest rate was recorded in Barcelona at just 61 per thousand population and the highest in Rome at 723 (Table 16). Milan also had a relatively high rate of car ownership at 561. The huge range between Barcelona and any other selected city suggests a different methodology has been employed to generate the figure.

In addition to the high level of car ownership in Rome, the Italian capital has by far the highest rate of accidents which result in serious injury with almost one in eight accidents involving serious injuries. Istanbul had the next highest rate at just one per cent which emphasises the extremely high rate in Rome. If the Rome figure is removed the remaining six cities have an average rate of 0.7 per cent, meaning the London rate falls below the average at just 0.5 per cent. It is important to note that the Rome figure of almost 12.5 per cent is an extreme outlier within the dataset, so caution should be exercised when using this data.

Table 16: Number of cars registered and number of road accidents leading to serious injury per thousand population, 2004

	Number of cars per thousand pop	Road accidents that led to serious injuries per thousand pop
Rome	723	12.1
Milan	569	0.9
Madrid	438	-
Vienna	398	0.4
Hamburg	370	0.5
London	331	0.5
Berlin	320	0.5
Istanbul	136	1.1
Barcelona	61	-

NB Paris did not submit data

- Value not included in dataset

Source: Urban Audit III, Eurostat

Crime

The rate of recorded crimes per thousand population in London (143) is significantly higher than the average across the eight cities to provide data (87). Crime rates were lowest in Istanbul at just 10 per thousand population, although this figure should be treated with caution owing to the variance between this and the mean. Both Spanish cities in the analysis recorded comparatively low crime rates with Madrid at 36 and Barcelona 35. Berlin recorded the highest rate of recorded crime at almost 160 (Table 17). In terms of the number of murders and violent deaths recorded per thousand population, the London figure

Table 17: Crime rates per thousand population, 2004

	Total number of recorded crimes per 1,000 population	Number of murders and violent deaths per 1,000 population
Berlin	159.3	0.05
Hamburg	150.6	0.05
London[1]	143.2	0.03
Milan	91.2	0.03
Rome	69.2	0.02
Madrid	36.7	0.01
Barcelona	34.7	0.02
Istanbul	9.5	0.05

1 The London figure is based on a two-year average (2003/04 and 2004/05) from the Metropolitan Police.

NB Paris and Vienna did not submit data

- Value not included in dataset

Source: Urban Audit III, Eurostat

of 0.03 was consistent with the average rate. Barcelona recorded the lowest rate at 0.02 with Istanbul and Hamburg tied for the highest rate at 0.05 incidents per thousand population.

8. Internet Access

In 2004, 54 per cent of households in London had internet access, the highest of all six cities providing data. The average rate was 45 per cent, nine Percentage points lower than the English capital. Just four in ten households in both Madrid and Barcelona had access to the internet (Figure 18).

Figure 18: Percentage of households with access to the internet, 2004
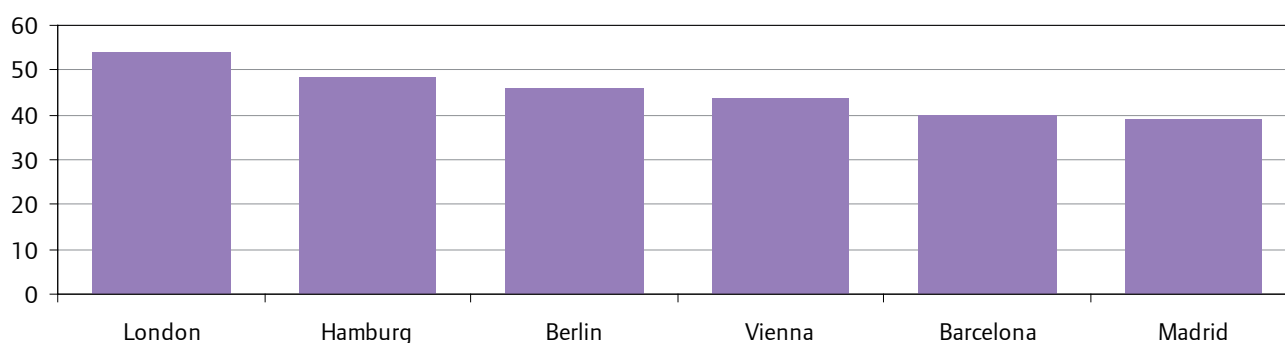
The London figure is taken as a three-year average from the Expenditure and Food Survey.

NB Istanbul, Milan, Paris and Rome did not submit data

Source: Urban Audit III, Eurostat

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Contact details for the Data Management and Analysis Group are as follows:

DMAG Contacts

Eileen Howes (020 7983 4657) is responsible for the work of the Census, SASPAC and General Statistics Teams and particularly for Census analysis. eileen.howes@london.gov.uk

John Hollis (020 7983 4604) is responsible for the work of the Demography, Education and Social Exclusion Teams, and particularly for demographic modelling. john.hollis@london.gov.uk

Gareth Baker (020 7983 4965) is the GIS Manager with responsibility for leading work on GI including strategy, the development of data holdings, analysis and dissemination. gareth.baker@london.gov.uk

Steve Forgan (020 7983 4185) is the London Analyst Support Site (LASS) Manager and is responsible for data exchange & analysis projects for crime reduction in London. stephen.forgan@london.gov.uk

Kelly Rump (020 7983 4655) is the Business Coordinator. kelly.rump@london.gov.uk

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Census Team

Eileen Howes (020 7983 4657) is responsible for the work of the Census, SASPAC and General Statistics Teams and particularly for Census analysis. eileen.howes@london.gov.uk

Bill Armstrong (020 7983 4653) works in the Census Team with particular responsibilities for commissioned tables, workplace data and mapping. bill.armstrong@london.gov.uk

Richard Cameron (020 7983 4473) works in the Census Team. richard.cameron@london.gov.uk

SASPAC

Alan Lewis (020 7983 4348) leads on the SASPAC project. alan.lewis@london.gov.uk

General Statistics Team

Gareth Piggott (020 7983 4327) works in the General Statistics Team with particular responsibilities for Focus on London and Compendia. gareth.piggott@london.gov.uk

Richard Walker (020 7983 4532) works mostly on statistical compendia and special publications. richard.walker@london.gov.uk

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Please use the above descriptions in deciding whom to contact to assist you with your information needs. For further details of DMAG staff please contact Kelly Rump at kelly.rump@london.gov.uk