The quality of life in European cities as seen by the citizens and measured by the European Urban Audit

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1. Outline of this paper

Urban planning on the local level may sometimes be mainly a matter of architectural concept and design. On the European level it must be based on hard facts. This is why, at the end of the 1990s, the European Commission with its DG Regional Policy initiated the Urban Audit, a comprehensive collection of comparable statistics for a large sample of European cities. This exercise has meanwhile become a core task of Eurostat, the Statistical Office of the European Union, and a permanent task of the European Statistical System.

In order to capture the quality of life in European cities, this data collection is designed to describe the social and economic structures, employment and unemployment, the provision of goods and services, housing, educational and cultural facilities, the quality of water supply, the degree of air pollution, people's exposition to noise, waste management, land use and land cover, health, safety, citizens' participation, traffic and transport.

But can this collection of secondary statistical data mirror what the citizens themselves perceive as their quality of life? What are their personal views on their living conditions, the quality of their environment, their satisfaction with educational and cultural facilities, medical care, public transport, services by their city administration, their housing conditions, safety in the city and their economic perspectives? This subjective side of the picture can only be captured by asking the citizens themselves.

DG Regio has tried to take the perception of citizens into account as well. A perception survey in the framework of Eurobarometer has shown already twice that what is being measured by the Urban Audit does not necessarily coincide with what people feel. The results of the two perception surveys, so far, have provoked great interest with politicians and in the media so that this tool is also becoming a permanent part of the European "urban observatory".

The German cities with their long experience in perception surveys organised a coordinated parallel survey thus creating a sufficient basis for national comparisons in the European context also in this field.

This paper will describe the organisation, content and results of both, the statistical Urban Audit and the qualitative perception survey, and it will try to relate the results of both. It will show that looking at the same facts through different "glasses" produces different pictures. Both are relevant for those who design programmes and make the decisions, but neither can replace the other.

2. The Urban Audit – concept and coverage

The Urban Audit started with a pilot project in 58 European cities. It was conducted by a Belgian-British consortium that presented the results to a large audience of European, national and local politicians in 2000. The great interest that this pilot project arouse and the need to give it a sound, comparable and reliable statistical basis led to the decision that the Urban Audit should become the task of the European system of official statistics led by Eurostat and that it should be managed in cooperation with DG Regio to ensure the political relevance of its content and results.

Although a considerable part of the data has to come from the cities, there is no direct connection between Eurostat and the cities. This task is left to the National Statistical Offices serving as national coordinators and being in charge of all parts of data collection in their country. Only Germany with its complicated federal structure found a modified solution: Here, national coordinator is an association of the Urban Audit cities that cooperates with the statistical offices of the States (Lander) and the Federation (The Federal Statistical Office is responsible for all legal and financial aspects of the project.)

The first official round of data collection in 2002/03 – named Urban Audit II - focused on the year 2001. In order to support not only an analysis of structures and structural disparities but to reveal also recent changes and developments, additional data were requested for 1996 and 1991. Results were presented in a dedicated website by DG Regio under "urbanaudit.org"[1] and can be downloaded from Eurostat's NewCronos database[2]. A comprehensive analysis of this data followed with some time lag and was published by DG Regio in 2007[3].

Urban Audit III followed in 2006/7 for reference year 2004. And now, Urban Audit 2009/10 is on the way. This new round of data collection will bring some essential improvements: As a reaction on the main criticism by the users, that results are not up-to-date, it was agreed to establish an annual collection of a core set of key variables to be accompanied by a comprehensive data collection with the longer periodicity of three to four years. Reference years for the annual collection are 2005, 2006 and 2007, for the comprehensive collection the year 2008. For 2009, the annual core set of variables is requested again.

The number of cities involved has been kept almost constant so that in 2009 there are

323	Urban Audit cities of the 27 Member States,
4 – 10	cities of Switzerland,
6	cities of Norway,
5	cities of Croatia,
26	cities of Turkey,
1	city of Iceland (planned),

in total about 370 Urban Audit cities. In order to complete the picture, Eurostat introduced a "Larger City Audit" comprising all other cities of more than 100,000 population; these are 236 cities in the Member States alone. For them, a reduced data set is requested.

As the cities in their administrative boundaries don't always match the urban areas as the territories of urban life in and around the cities, the Urban Audit includes also the "Larger Urban Zone" as an approximation to the functional urban region. In some cases, the Urban Audit distinguishes between the administrative city and a "Kernel". And, in order to inform on inner-city disparities, data are also collected for the "Sub-city Districts". Finally, data for the national level are requested to relate the city values to the national average.

The 338 variables of the Urban Audit cover the following domains:

1. DEMOGRAPHY
   - Population
   - Nationality
   - Migration
   - Household Structure
2. SOCIAL ASPECTS
   - Housing
   - Health and Health Care
   - Crime
3. ECONOMIC ASPECTS
   - Labour Market
   - Economic Activity
   - Income, Income Disparities
4. CIVIC INVOLVEMENT
   - Participation in Elections
   - Local Administration
5. TRAINING AND EDUCATION
   - Education & Training: Provision
   - Educational attainment
6. ENVIRONMENT
   - Climate
   - Air Quality and Noise
   - Water
   - Waste Management
   - Land Use
7. TRAVEL AND TRANSPORT
   - Modes of Transport
   - Public Transport
   - Accessibility
8. INFORMATION SOCIETY
9. CULTURE AND RECREATION
   - Culture and Recreation
   - Tourism

[1] http://ec.europa.eu/regional_policy/themes/urban/audit/ and http://www.**urbanaudit**.**org**/.
[2] http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/city_urban/urban_audit_data_collections
[3] European Union, DG Regional Policy (ed.), State of European Cities Report – Adding value to the European Urban Audit, Study contracted by the European Commission, May 2007.

Repeated attempts to reduce the number of variables led to only very few deletions because there were always good reasons to keep most of them in order to meet the demand of a growing number of departments of the Commission. On the other hand, there were requests for more than one hundred additional variables. The majority could not be satisfied because they would have required costly primary surveys. Nevertheless, this demand proves the growing interest in this unique collection of comparable data on cities. It is a great challenge to give enough incentives to the data providers to reduce the large data gaps by more (qualified) estimations.

2. Urban Audit analysis – examples of results

The Ministers in charge of urban development explicitly recognised, in their meeting in Marseille on 25 November 2008, the importance of the Urban Audit and affirmed their commitment to carry on with and reinforce the work on it. Preparations for the Structural Funds 2007 – 2013 had already used the comparative information of this project and it has also been applied in previous Cohesion Reports.

The first comprehensive analysis of this data collection was only published in 2007 as "State of European Cities Report". This study by DG Regio's contractor ECOTEC and their consortium provides an informative description of the great differences among the European cities, their population and their economy. It leads to a typology of the cities that may be taken as a starting point for further analyses, but gives also rise to some criticism with regard to the methods applied and to some disputable results. This first study did not attempt to answer the question what recommendations could be given to turn development into a desired direction.

The report deals with the following topics

Growth and stagnation of Europe's cities

- Are Europe's cities expanding or contracting?
- What factors lie behind the expansion and contraction of Europe's cities?
- Which cities in Europe are growing and which are stagnating?
- Conclusions

The competitiveness of cities

- The economic performance of cities
- Economic performance of cities – some pieces of the puzzle
- A typology of urban competitiveness
  (International hubs, Specialised poles, Regional Poles)
- Conclusions

Living in cities

- Unemployment as a key challenge for social cohesion
- Housing
- Household size
- Education
- Are cities healthy places to live in?
- Urban transport
- Conclusions – the main characteristics of urban life

Governing cities

- The role of city government – an ongoing debate
- Towards an index of city power?
- Does size matter?
- Not all cities are equal
- Money matters too
- At the heart of the differences: local responsibility
- Conclusions

Some very few examples may illustrate the kind of information presented in this analysis:

Maps provide a picture of the **regional disparities**: Coloured dots on the locations of the Urban Audit cities show the geographical distribution of cities with high or low values for an indicator. "Real GDP Growth 1996-2001", e.g., is shown to be highest in peripheral locations like in Swedish cities, in

Helsinki, the capitals of the Baltic states, of Hungary, Romania and Greece. Very high growth rates can also be found in cities in Spain, Ireland and Poland, but also in London, Prague and Munich. Average growth rates prevail in the centre of Europe, in most cities in France and in Italy. In central Europe and in France this can be attributed to the high GDP that most of these cities had reached already at the beginning of the observation period.

The relation between **core city and the LUZ** is another aspect analysed in the report. A graph correlating population change in the core city and in the surrounding NUTS3 Region shows that in the majority of cases growth or loss occurs in both locations. Where they differ, there are more cities loosing population to the surrounding area than cities that grow while the surrounding area shrinks.

A third object of analysis are **inner-city disparities**. In many cases they are greater than the disparities between cities. Maps with boundaries of the Sub-city Districts show that problematic areas are very often close to the city centre. In all the districts of Prague, e.g. the unemployment rates of 2001 were lower than in any of the districts of Berlin. It is this kind of information that may lead to a very targeted development and funding policy, on the national and on the European level.

Competitiveness of the cities is a central aspect of the report. Innovation, entrepreneurship, talent and connectivity are seen as its main drivers. Taking into account also the size of cities, their economic structure, their economic performance and key drivers of competitiveness, the authors develop a **typology of competitiveness** grouping the cities into 3 main types and 13 sub-types:

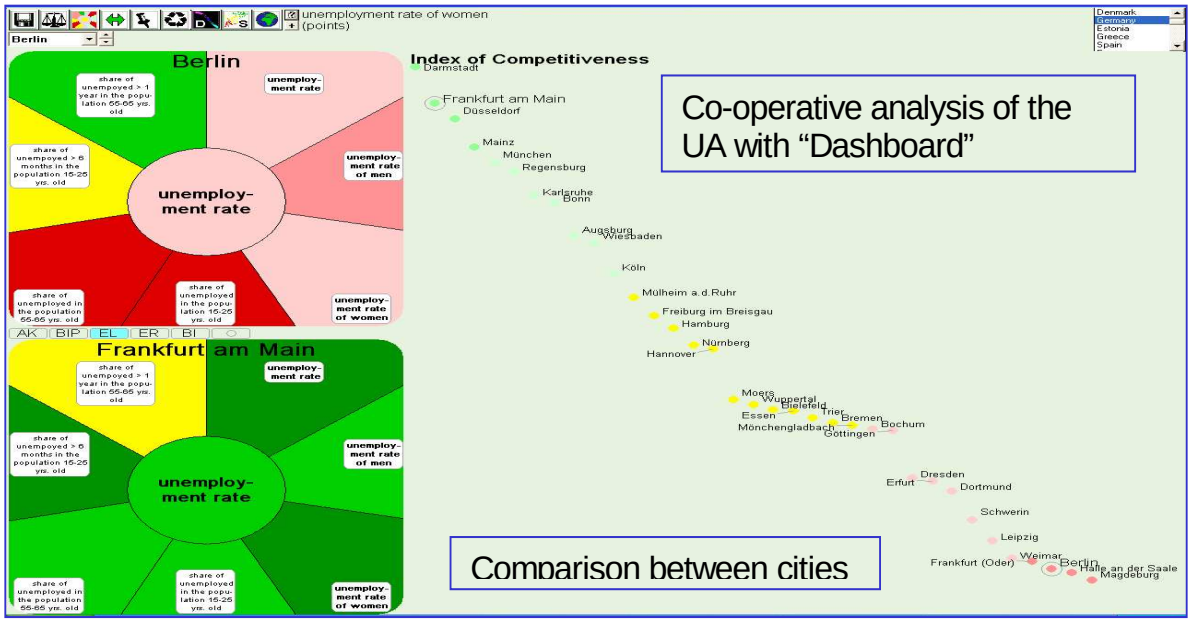
International hubs
- Knowledge hubs
- Established capitals
- Reinvented capitals

Specialised poles
- National service hubs
- Transformation poles
- Gateways
- Modern industrial centres
- Research centres
- Visitor centres

Regional poles
- De-industrialised cities
- Regional market centres
- Regional public service centres
- Satellite towns.

One of the intentions is to support inter-city comparisons and benchmarking by helping to select cities of similar type. There have been some doubts if this goal has been reached. The different stages of development after the fall of the iron curtain are not really taken into consideration; they could have been a main criterion in the typology. This reduces comparability within the groups. The methodology has also been criticised as being somewhat arbitrary. The names of the types don't always match the character of the cities in them. Nevertheless, DG Regio considers the typology as so important that improvements are an essential part of the programme of the new analysis based on the data for reference year 2004.

The Association of German Urban Audit Cities, trying to encourage applications of the Urban Audit data by the cities themselves, came to the conclusion that flexibility in grouping cities was more helpful than a single typology. They therefore recommended a tool that would enable them to study strengths and weaknesses of cities in their individual context.



"Dashboard" was first developed for ecological analyses by the research institute of the EU and is available free of charge on the internet[4].

3. EU perception survey – concept and coverage

The quality of life of the citizens is not only determined by the environment in which people live, which the Urban Audit tries to describe with hard statistical data. It is also a matter of people's perception of this environment and of their attitude towards it. To politicians and to the media, these perceptions are at least as important facts as the „hard statistical data".

DG Regio decided therefore already in 2004, at the time of the Urban Audit data collection for 2001, to conduct a perception survey in order to find out how the citizens themselves feel about their quality of life.

This first perception survey was organised in the framework of Eurobarometer with 300 telephone interviews in each of 31 selected cities. Its results were so informativeand were taken up by politicians and the media with such great interest that DG Regio initiated a second survey – together with the data collection for 2004 – now in 75 cities with 500 telephone interviews each. The results of both surveys were presented and discussed in several conferences, a.o. in the Commission's "Open Days"[5]. They are published in the Internet and results can be downloaded from Eurostat's Urban Audit database[6].

A new survey is planned for October 2009. This time, the list of questions will probably be slightly revised, maintaining comparability in the most important aspects. There may also be some changes in the cities included although it is again intended to find out about changes in people's perceptions. Between 2004 and 2006, with a fairly stable economy all over Europe, these changes were only moderate. The present economic and financial crisis may lead to different results.

The list of questions is kept simple. In 2004 and 2006 respondents were asked about their satisfaction with selected services, they were asked if they agree with a set of statements and they should say if they had experienced certain critical situations:

Are you very satisfied … not at all satisfied with the following services in your city

- public transport in the city
- schools
- health care services by hospitals
- health care services by doctors
- green spaces (parks, gardens)
- sports facilities
- cinemas
- cultural facilities
- public Internet access
- internet access at home

Do you strongly agree …. strongly disagree with the following statements

- in this city it is easy to find a good job
- foreigners are well integrated
- easy to find good housing at reasonable price
- administrative services help you efficiently
- air pollution is a big problem
- noise is a big problem
- this city is a clean city
- spends its resources in a responsible way
- you are satisfied to live in this city
- in the next five years, it will be more pleasant
- to live in this city

Is it true that you - always …. Never -…

- have difficulty paying your bills at the end of the month
- feel safe in the neighbourhood you live in
- feel safe in this city

4 European Statistical Laboratory of the Commission's Joint Research Centre JRC http://esl.jrc.it/envind/dashbrds.htm

5 European Union, Regional Policy, Survey on perceptions of quality of life in 75 European cities, Flash Eurobarometer, June 2007

6 http://epp.eurostat.ec.europa.eu/portal/page/portal/region_cities/city_urban/urban_audit_data_collections

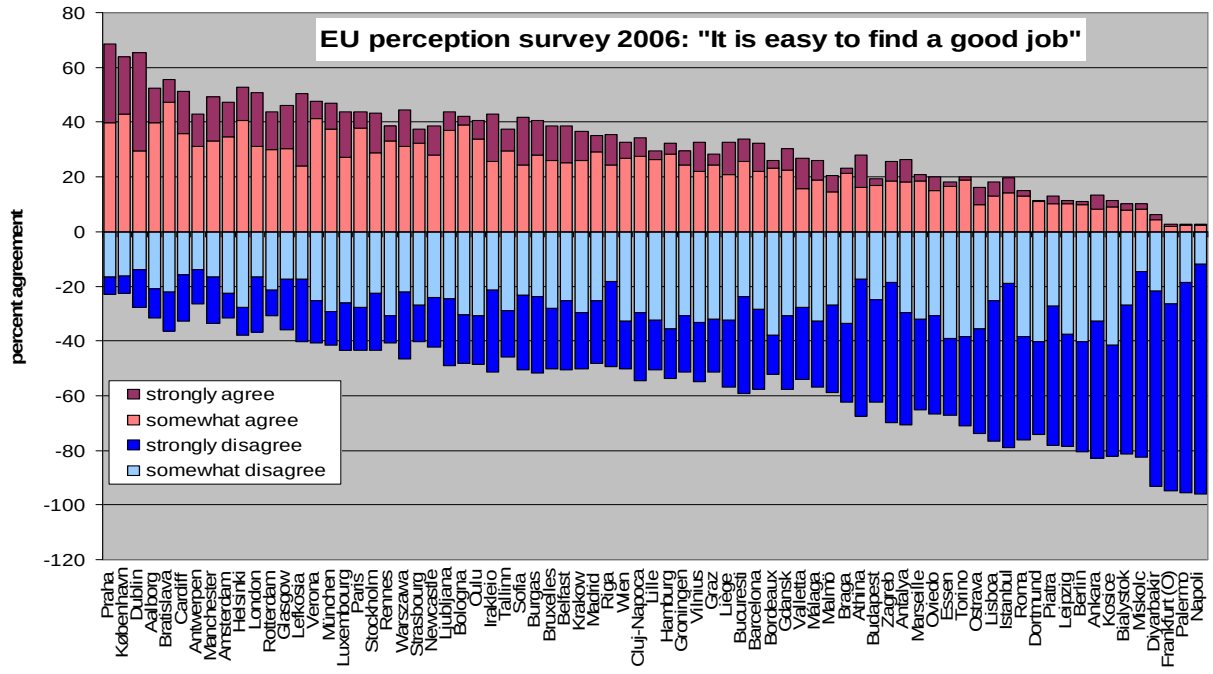
Up to now, only 1 in 5 Urban Audit cities could be included in the survey. 15 German cities, most of them participating in the Urban Audit, decided therefore to conduct a joint perception survey with the same questions, applying the same method (telephone interviews), with at least the same sample size of 500 interviews per city and carried out at the same time (Nov. / Dec. 2006) as DG Regio. Repeated attempts in Eurocities Working Group on Urban Research and by Eurostat to encourage cities in other countries to do the same had so far not been successful. The great value of national comparisons in the European context was certainly underestimated in the other countries.

Thanks to DG Regio's very constructive support an agreement was made to exchange the data. This way, results of 90 (75 + 15) cities in Europe and 22 cities in Germany could be analysed. The German Institute for Urban Affairs (Difu) made a typology based on the perception survey[7] and the Association of German Municipal Statisticians produced a joint analysis of the results as well[8].

4. EU Perception Survey - some comparative results

Just like the Urban Audit, the perception survey reveals vast differences among the cities. Ranking the cities by the degree of satisfaction with public services or their agreement with statements about aspects of the quality of life in their city, there are always cities with almost complete satisfaction or agreement while, at the other end of the scale, there are cities where citizens express almost complete dissatisfaction and disagreement with the proposed statements. The only mainly positive answer is given on the question if citizens in general like to live in their city. Dissatisfaction with some aspects of life in the city can obviously not lead to general dissatisfaction with life in the city that citizens have chosen to be their home town. A strong identification with "their" city is one of the most striking results of both perception surveys.

Ranking the cities by the degree of satisfaction or agreement with given statements is best demonstrated by bar charts like the following

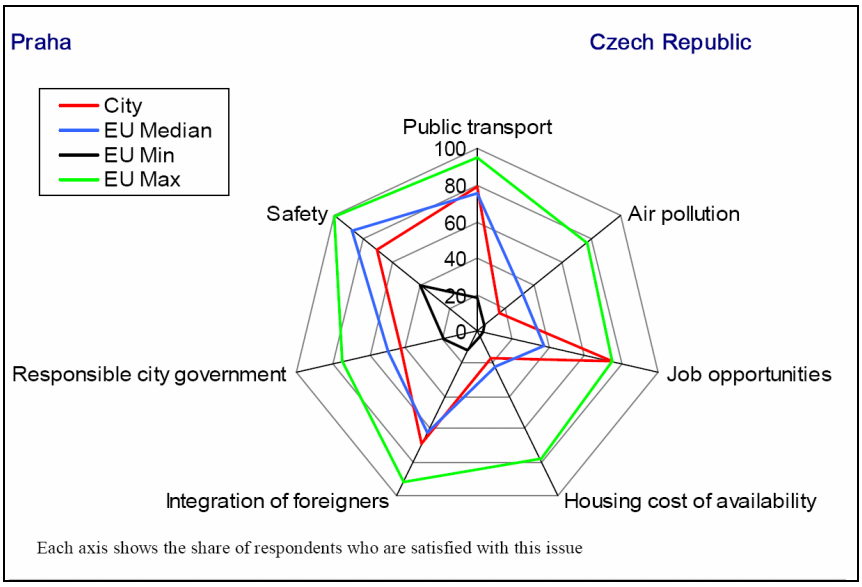


Here, Prague, Copenhagen and Dublin are the cities where most people found it easy to find a good job, whereas in Napoli, Palermo and in Frankfurt (Oder), a small German town on the border to Poland, there was hardly any positive answer on this question.

Citizens in the north, located on the coast of the North Sea or the Baltic Sea appeared to have less problems with air pollution than cities in the south. Here, citizens of Athens, Rome and Sofia have the most serious complaints.

[7] Deutsches Institut für Urbanistik, Lebenszufriedenheit in europäischen Städten, Berlin 2008, ISSN 1864-2853
[8] Verband Deutscher Städtestatistiker, Lebensqualität aus Bürgersicht, Frankfurt a.M., 2008, ISSN 0934-5868

The combinations of positive and negative views vary among the cities. Calculating an average per city would not make sense. A better overall impression is achieved by constructing city profiles with regard to the most relevant aspects. Lewis Dijkstra of DG Regio produced these profiles as “radar graphs” comparing the values for the city with the average, minimum and maximum values of all the cities included in the sample. Prague, e.g. achieved best results for “easiness to find a good job”, whereas housing costs and air pollution were perceived as greater problems.



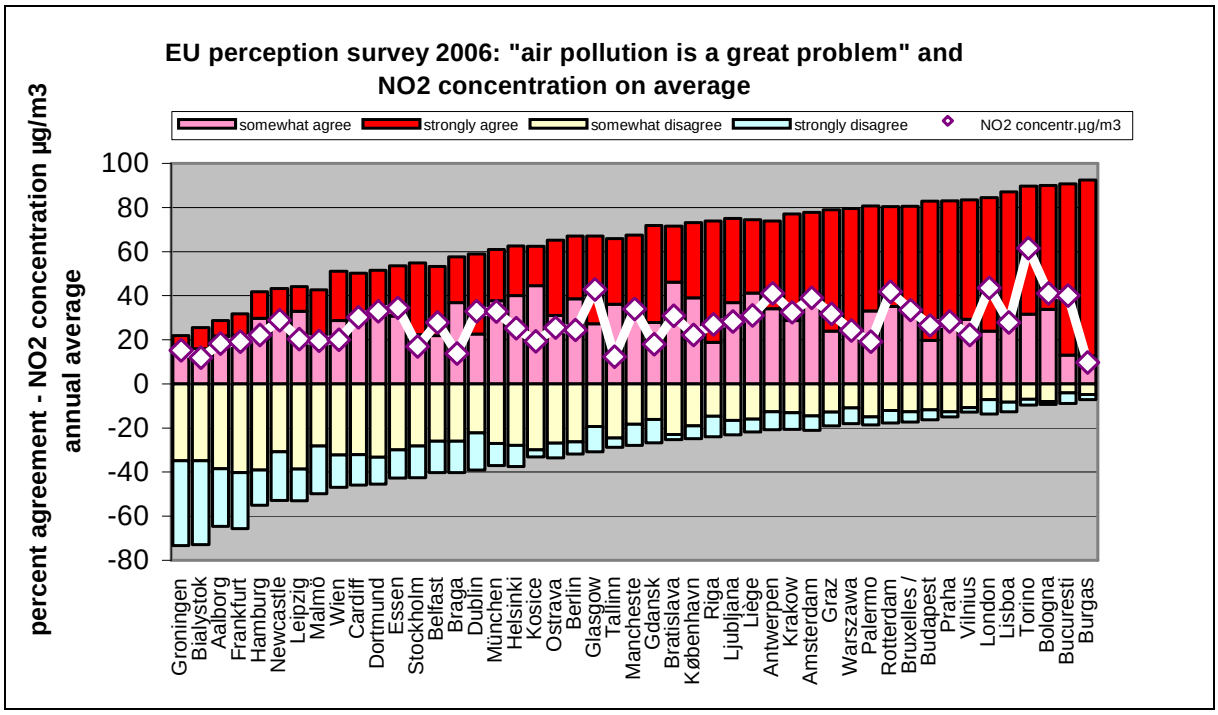
5. Attempts to correlate perceptions and „hard facts“

One of the goals of the perception surveys on the quality of life in European cities was to reveal how much citizens’ perceptions depend on the real situation they live in. Assuming that the “hard facts” measured by the Urban Audit describe the real situation, confronting survey results with related Urban Audit data should show significant correlations.

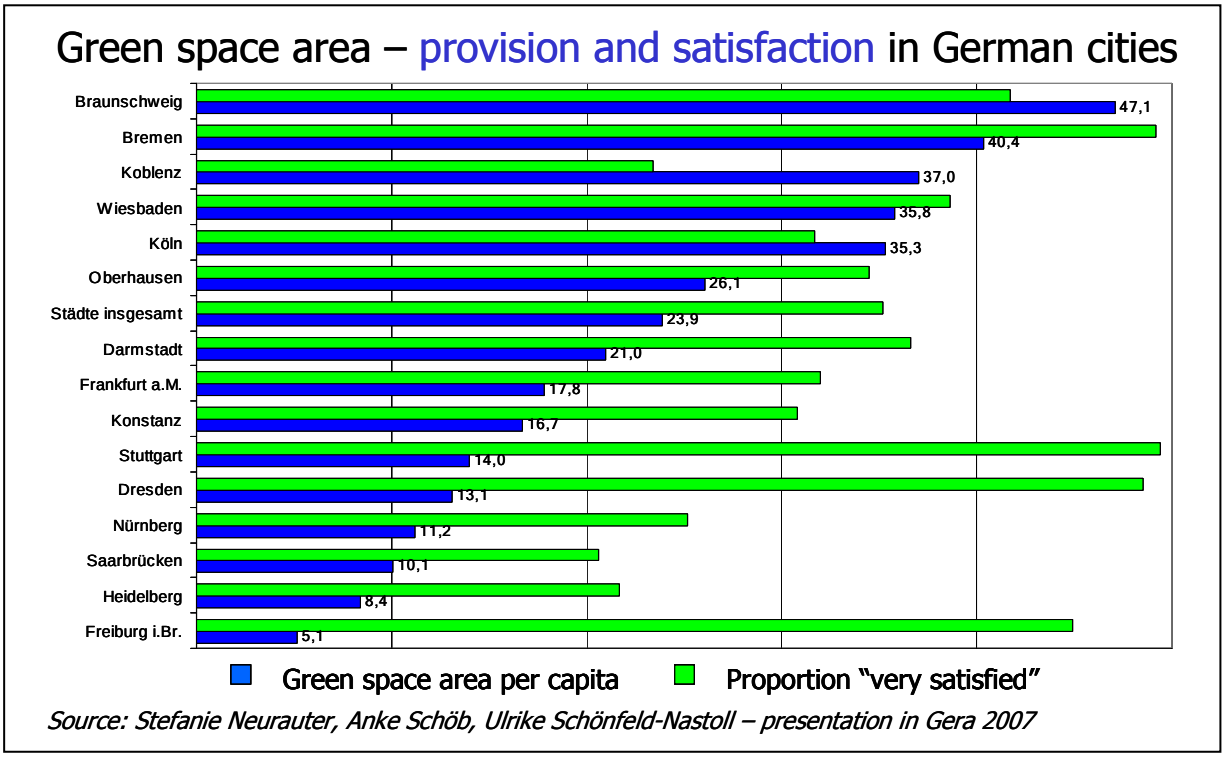
There are a few examples where this is true, but the correlations are not nearly as strong as they might have been expected. In cities with high unemployment rates citizens should experience greater difficulties to find a good job than in cities with full employment. But even here, the correlation coefficient R^2 is only 0.47[9]. A positive correlation could also be shown for the22 German cities when relating the number of domestic burglaries with citizens’ statement that they always feel safe in their neighbourhood; here R^2 was 0.69. But the same relation for all cities in the EU survey showed practically no correlation with $R^2 = 0.063$.

Looking at citizens’ satisfaction with public transport, one would expect that a high density of the transport network, of the number of stops per km² and of the share of rail lines in the total public transport network would be highly correlated with people’s satisfaction. But R^2 is only 0.12. Similarly, the reported degree of air pollution in the Urban Audit does not seem to have any great effects on citizens’ agreement with the statement that “air pollution is a great problem”:

[9] For perfect positive correlation R^2 would be 1.0



The correlation between available public green space and citizens' satisfaction with it is also weak. But looking at the situation in individual German cities revealed a plausible reason for it: All cities with little public green space and high satisfaction had a very attractive countryside around them. This has led to thoughts to include in the next survey a question about recreation outside the city.



Source: Stefanie Neurauter, Anke Schöb, Ulrike Schönfeld-Nastoll – presentation in Gera 2007

It has become clear that people's perceptions of their quality of life are influenced by more and sometimes different factors than the real situation as measured by the Urban Audit. The available public transport or medical care are more or less taken for granted. Satisfaction with this infrastructure signals qualitative aspects relevant for people's perception which cannot be directly derived from what

has been measured by quantitative statistical indicators. General attitudes, public opinion and specific local conditions may have very significant effects.

It is no surprise therefore, that a typology of the cities of the EU perception survey by the German Institute for Urban Affairs[10] does not show any correlation with ECOTECT's typology based on the Urban Audit data:

Urban Audit typology 2004 and Perception Survey typology 2006 combined

- number of cities in the combined groups –

Difu Types (Perception Survey)	ECOTEC Types of Urban Audit Cities		
	International Hubs	Specialised Poles	Regional Backbones
The Satisfied Ones	1	14	1
The Costly Ones	8	1	-
The Polarised Ones	4	5	1
The Potential Climbers	11	5	1
The Dissatisfied Ones	2	1	-
The Optimists	-	3	6

6. Influence of geographical location

The analysis of the Urban Audit data showed how different the living conditions of the citizens still are in Europe. Although there are great differences also within the countries, cities may be grouped in three generalised European regions to summarise the extent of these disparities:

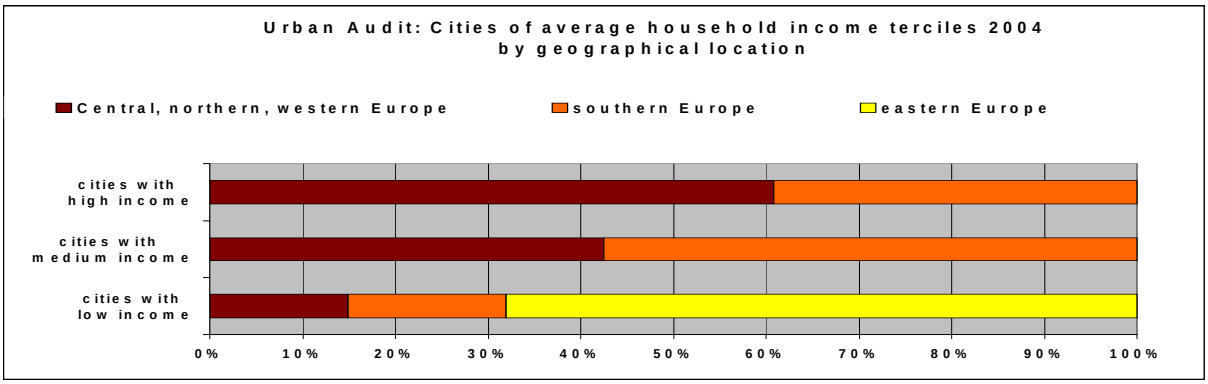
1. Central, western and northern Europe
2. Southern Europe
3. Eastern Europe

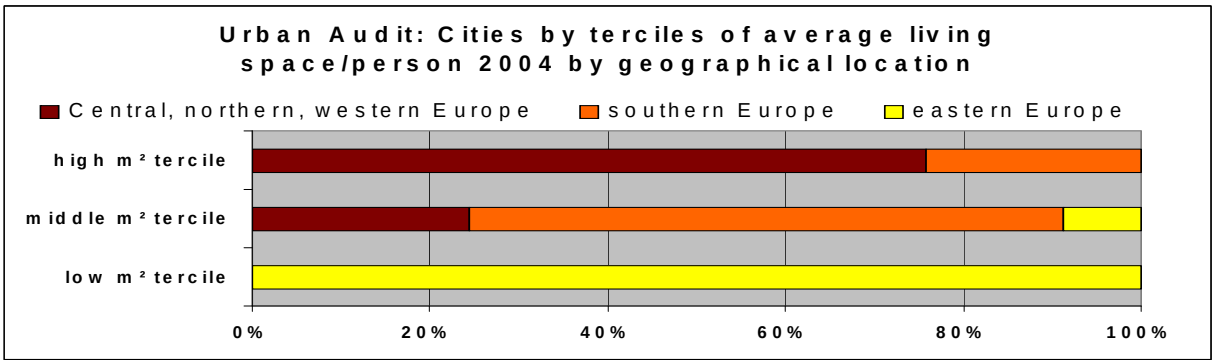
Groups 1 and 2 are made up of Western Europe before the opening of the Iron Curtain, group 3 contains the New Member States, and, for simplicity, Turkey was added to this group.

Most striking are the disparities of the living conditions when comparing the three geographical groups' average household income and available floor space per person. Sorting the cities for which data were available by the values observed the cities could be divided into three groups with an equal number of cities in each group. For household income this led to a high income group, a middle and a low income group, similarly for other variables The share of each geographical location in each group is shown in the following graphs: graphs.

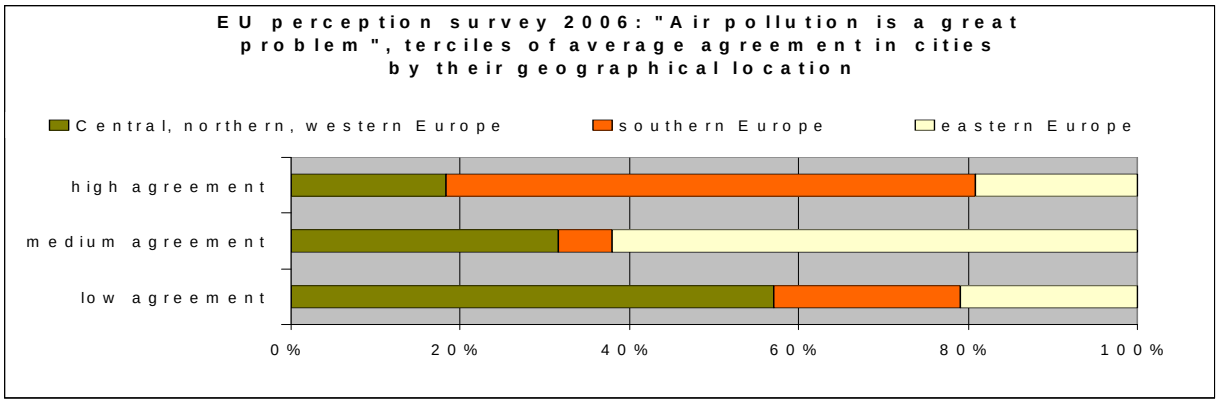
All the cities in eastern Europe for which data were available find themselves in the low income group, most cities in southern Europe in the middle and high income groups, and the share of the cities in central, western and northern Europe is highest in the high income group. The groupings by available floor space per person show a similar picture. None of the central, western, northern and southern cities belong to the lowest tercile of available floor space per person. These substantial disparities must be kept in mind when looking at peoples perceptions of the various aspects of their quality of life.

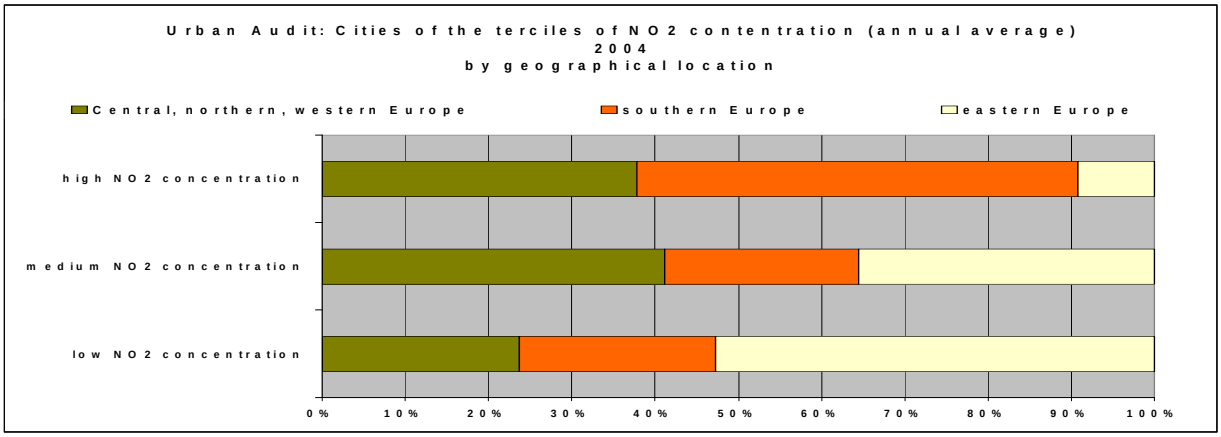
[10] Deutsches Institut für Urbanistik: Lebenszufriedenheit in europäischen Städten, Berlin 2008, ISSN 1864-2853





While the perception of air pollution as a great problem did not seem to be correlated at all with the amount of NO2 concentration measured, when relating the two values for each city, the geographical grouping produces quite a different result:





While the perception of air pollution as a great problem did not seem to be correlated at all with the amount of NO2 concentration measured, when relating the two values for each city, the geographical grouping produces quite a different result: Here it becomes apparent that cities in southern Europe are not only the ones in which there is the highest agreement with the statement that air pollution is a great problem, most of these cities belong also to the group with the highest NO2 concentration measured by the Urban Audit.

7. Conclusions

Growing attention for urban development in European and national policies has increased the interest for the Urban Audit as a unique collection of comparable statistical data for more than 500 cities in Europe. Analysing the available data has also improved understanding for the enormous disparities, not only among the cities but also among the neighbourhoods within the cities.

The intended information could have been even more convincing had there not been serious data gaps, especially in the period between census years. These gaps are a great handicap for everyone who tries to analyse the data with statistical tools. National Statistical Institutes are urged to provide qualified estimates where official statistical data is not readily available. This part of the Urban Audit as a joint exercise in the European Statistical System deserves more attention and greater efforts by some of the NSOs participating.

The annual collection of a set of key variables will, from now on, provide more up-to-date information and thus help to make the Urban Audit a more valuable data source for the observation of current changes in the cities as focal points of economic, social and environmental development.

The intention to analyse and monitor the quality of life in European cities cannot be realised by the collection of secondary statistics alone. This measurement of the “hard facts” must be accompanied by information on the citizens’ perception of the living conditions in their cities. The EU perception survey has therefore become an important addition to the Urban Audit and is starting its third round in November 2009.

Analyses of this qualitative information has revealed as great disparities among the cities as the Urban Audit with its “hard facts”. Not having been taken quite so serious at the beginning, the results of the perception survey have aroused such great interest with politicians and in the media that DG Regio greatly improved its coverage and – through bigger samples –its reliability in 2006, with prospects of further improvements in the new survey 2009.

German cities with their long experience with perception surveys organised jointly a co-ordinated perception survey following the European pattern and may do so again in 2009. This way they gaine comparative information on their own cities not only in the national but also in the European context. Other countries might be encouraged to do the same.

More research will be needed to better understand the relation between living conditions as measured by the Urban Audit and the perceived living conditions as expressed by the perception surveys. Citizens apparently take the characteristics of public services and their environment more or less for granted and make their judgements on the basis of this “real” situation. This may be one of the reasons why there don’t seem to be direct correlations between the measured and the perceived qualities. Another reason may be that citizens do not automatically compare their own city with other cities when they answer questions on their satisfaction with the existing situation. Somewhat stronger correlations are found when making the comparisons within the sphere of experience of the citizens, by selecting for comparison only cities of their own country (e. g. security only in German cities or air pollution in cities grouped by their geographical location).

All these comparative analyses have only just started. The information gained from them for urban policies also on the local level deserves more attention. To encourage the use of this wealth of information is a challenge also for national governments and the National Statistical Offices.