

*Marzena Walaszek*

*Adam Mickiewicz University  
Institute of Socio-Economic Geography and Spatial Management  
marwal@amu.edu.pl*

## Measuring of quality of life in Polish metropolises – application of method of standardized indicators

**Abstract:** Quality of life surveys should be an important part of the comprehensive management of urban areas. This especially refers to Poland where the integration but also a competition between metropolises has just started. Positioning studies conducted in relation to the local communities living in large cities are a valuable source of information. They are a useful tool to identify the attractiveness of metropolises which helps to compare their position to other cities, diagnose potential weaknesses and the application of development strategies allowing to increase the quality of life and hence the competitiveness.

The purpose of the paper is analysis of quality of life indicators in Polish metropolises and measuring their position in term of quality of life, using the selected indicators. The study was conducted on the example of 10 largest cities in Poland: Warszawa, Poznań, Wrocław, Katowice, Lublin, Bydgoszcz, Gdańsk, Kraków, Szczecin, Łódź. The selection criterion was the number of urban residents which ranges from 307 thousands (Katowice) to 1,7 million (Warszawa). It was decided that the analysis will focus on indicators that illustrate different dimensions of quality of life. The data were classified into 8 categories that reflect different aspects of quality of life in cities

**Key words:** quality of life, Polish metropolises

### Introduction

The study of quality of life is an interdisciplinary field of science, representing the area of interests for sociologists, economists, local politics, architects as well as socio-economic geographers. There are many definitions of “quality of life”. World Health Organization (WHO) defines quality of life as “individual perception of position in life in the context of culture and value systems in which we live in relation to goals, expectations, standards and concerns” (World Health Organization 1997). There is also a close term of “human development” found in

literature, which means “the process of exposing people to freedom and opportunities and in alleviating their well-being. In human development, real freedom is the most important element and the ordinary people have the right and choices to decide who they want to be, what they want to do, and how they want to live (...)” (Sulaiman 2012). The above aspects regarding “quality of life” and “human development” seem to be inseparable.

The specificity of studies on quality of life is mainly based on the fact that the standard of living depends on objective factors that can be measured. These factors relate to the income and prices of goods and services. The subjective factors are completing quality of life research. They refer to the sense of satisfaction and success in terms of revenue as well as family and work conditions. The cost of living is rather an independent factor on a single person where the amount of taxes, housing and public transport prices as well as other public services are formed at the national and local level and are also regulated by free market mechanisms.

Quality of life surveys are strongly embedded in the social and geographical science, particularly in relation to urban areas where the population density is high. Research approach implies the existence of relationship between geopolitical location of metropolis, local politics and the quality of living of its inhabitants. Ranking studies conducted in relation to the local communities living in large cities are a valuable source of information. They are a useful tool to identify the attractiveness of metropolises which helps to compare their position to other cities, diagnose potential weaknesses and the application of development strategies allowing to increase the quality of life and hence the competitiveness (Walaszek 2012).

Quality of life surveys should be an important part of the comprehensive management of urban areas. This especially refers to Poland where the integration but also a competition between metropolises has just started. Two decades of self-government in Poland was a period of progress in the development of civil society, modern management methods, development of technical and social infrastructure as well as local economy, that raised the standards of public services. (Kaczmarek et al. 2011). It is completely necessary to manage at the local level where the purpose of this management should be a continuous improvement of quality of life.

The purpose of the paper is analysis of quality of life indicators in Polish metropolises and measuring their position in term of quality of life, using the selected indicators. Chosen indicators are useful in locating Polish cities among national metropolises in terms of quality of life. The study was conducted on the example of 10 largest cities in Poland: Warszawa, Poznań, Wrocław, Katowice, Lublin, Bydgoszcz, Gdańsk, Kraków, Szczecin, Łódź. The selection criterion was the number of urban residents which ranges from 307 thousands (Katowice) to 1.7 million (Warszawa).

## Examples of quality of life research

Term of quality of life seems to be an integral tool of social and economic level measurement, recommended and regularly used by European Union in cities quality of life monitoring. The European Commission has been monitoring the evolution of public opinion about how citizens are perceiving their quality of life in the member states since 1973 (Quality of life cities. Perception Survey in 79 European Cities 2013). In the research based on Eurobarometr program, 41,000 people in 79 cities were interviewed by answering questions about quality of services such as public transport, health care, education. Unfortunately perception survey conducted by European Commission do not end with general positioning of all studied cities, which can be considered as a weakness of this report.

One of the reliable research on the quality of life in Poland is edited by Professor Janusz Czapiński "Social Diagnosis of Poles – the conditions and quality of life in Poland". One of the studies conducted in the Diagnosis deals with a sense of satisfaction with living in the city. Poznan took 9<sup>th</sup> position in the study. Residents of Wrocław, Kraków and Bydgoszcz were more satisfied with lives in their cities. In general, the quality of life study puts Poznań on 3<sup>rd</sup> place in the country (up from 4<sup>th</sup> place compared to the diagnosis of 2009).

General source of information referring to the quality of life in cities are rankings published in media. The survey regarding quality of life in Polish regional capitals conducted by "Newsweek" in 2010, was made for the 15 cities in the following categories: the quality of the labor market, quality of life and higher education. Quality of life in the cities was tested in the following areas: size of a flat that can be bought for an average salary, percentage of people with higher education, the number of doctors per 1000 people, the number of events organized or financed by the city, the number of cultural and sports facilities per 1,000 residents, infrastructure (airport, connection to the highway). In terms of quality of life the first position was reached by Katowice, followed by Kraków, Wrocław, Bydgoszcz and Poznań.

Rankings published in the media are interesting examples of the quality of life positioning, giving a general view, but very often without any scientific methods, so they shouldn't be concerned as reliable source of information. Although numerous world's and European's rankings of quality of life, they do not take into consideration medium sized cities, like Wrocław or Poznań, which results in a lack of studies comparing these cities with relevant urban centers abroad.

## Research methods and database

A significant element of the study was the selection of indicators of quality of live. The main reasons for the selection of the indicators applied in research were:

- the classification of quality of life dimensions used in the scientific literature,
- quality of life indicators most commonly used in Polish and world's rankings,
- the availability of public statistical data,

- the type of indicator (especially formed at the local level, if possible).

In research were taken into account only quantitative indicators published in Polish Central Statistical Office and local databases as well as official web sites and local documents of cities. Qualitative indicators reflecting among -others the subjective opinions of inhabitants couldn't be taken into account in this research due to the time- and work- consuming.

Prior to selecting the indicators, the author made certain presuppositions. It was decided that the analysis will focus on indicators that illustrate different dimensions of quality of life. The data were classified into 8 categories that reflect different aspects of quality of life in cities (households, costs of living – housing, cost of living – municipal services, costs of living – social and transport services, education, health, environment and public safety). The chosen indicators used in present research are:

- **households**: average monthly gross salary (X1) and average usable floor space in m<sup>2</sup> for person (X2),
- **costs of living – housing** – the average price per 1 m<sup>2</sup> of apartment (X3) and residential property tax (X4),
- **costs of living – municipal services** – price of 1 m<sup>3</sup> of cold water (X5) and price of 1 m<sup>3</sup> of wastewater (X6),
- **costs of living – social and transport services** – price of monthly ticket for public transport (X7) and the monthly cost of the child in public nursery (X8),
- **education** – percentage (%) of schools equipped with computers for students' use of the internet in primary schools (X9) and number of children in school division in primary schools (X10),
- **health** – doctors for 1000 residents (X11) and the number of population on the healthcare facility (X12),

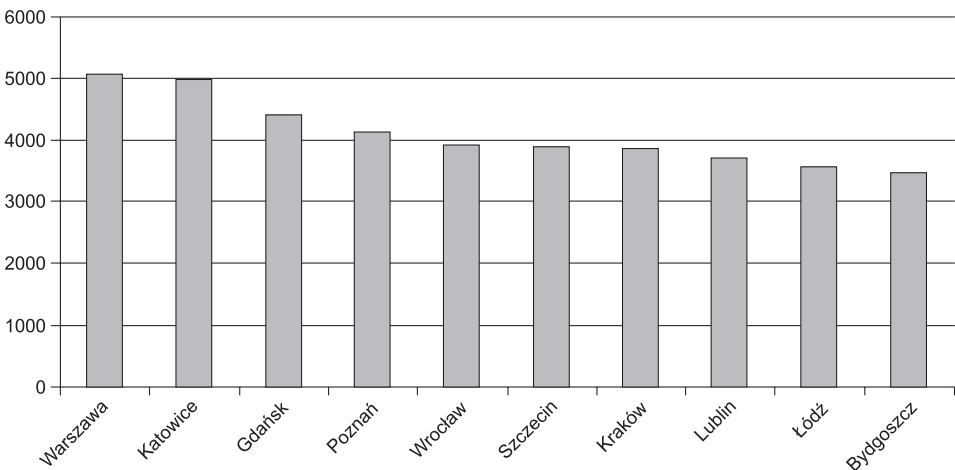


Fig. 1. Average monthly gross salary (zł) – X1  
Source: Central Statistical Office (2012).

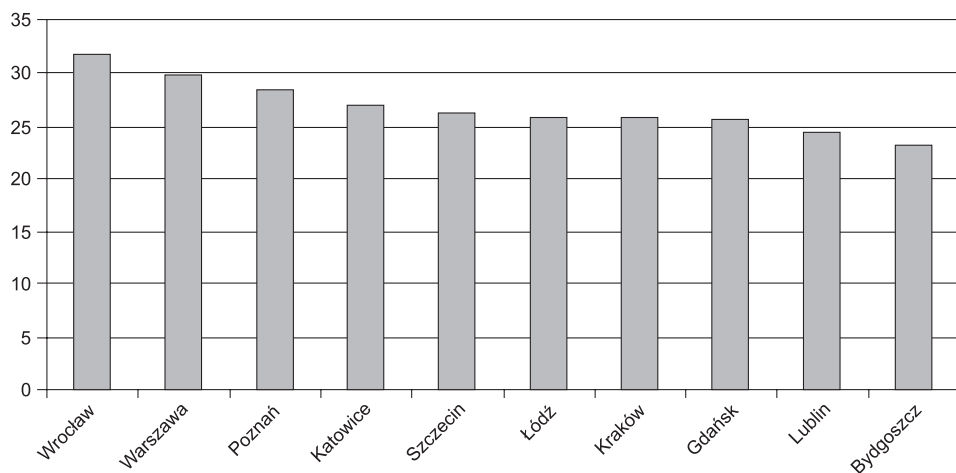


Fig. 2. Average usable floor space in m<sup>2</sup> for person – X2

Source: Central Statistical Office (2012).

- **environment** – annual total emission of dust and gas for 1 inhabitant (X13) and share (%) of green spaces (parks, green areas and green housing estate) in the total area of the city (X14),
- **public safety** – total crime per 1000 residents (X15) and crime detection rate (X16).

The number of chosen indicators was due to the procedure of calculation of a synthetic indicator of the quality of life in Polish cities. It was calculated as an average of the standardized indicators for each characteristic. The value of each indicator was standardized, and mean values for each of the indicators collectively were calculated. There should be also mentioned that the chosen indicators are stimulant or destimulants, and the standardized indicators are between  $-3,0$  (the less favourably) to  $3,0$  (the most favourably). This allowed a comparative analysis of largest Polish cities and their positioning in accordance with a synthetic indicator of the quality of life.

## Indicators of quality of life

In study of quality of life in largest cities in Poland, decided to include the 8 groups of indicators: households, costs of living – housing, costs of living – municipal services, costs of living – social and transport services, education, health, environment, public safety. Each of these areas allow to make conclusions to the studied cities.

### Households

From a sociological (and traditional) point of view, household is commonly identified with family, but it also should be treated as economic entity. The quality of

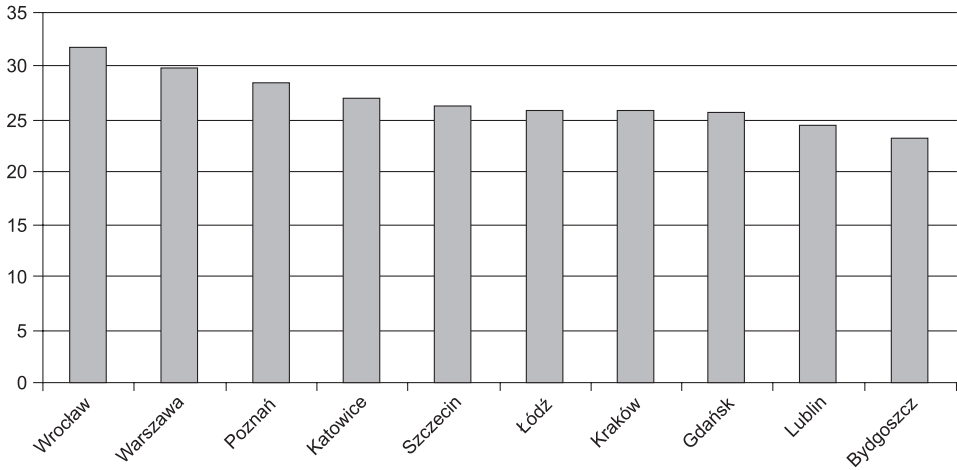


Fig. 3. The average price per 1 m<sup>2</sup> apartment (zł) – X3

Source: www.oferty.net (2013).

life can be influenced by household size (number of family members), because it directly influences the amount of expenditure per 1 person. The size of households and their burdens are mainly part of economic research.

An important factor influencing purchasing power and quality of life is an income coming from employment. The inhabitants of Warszawa (5,077 zł), Katowice (4,966 zł), Gdańsk (4,411 zł) receive the highest gross salary for their work in the group of studied cities. The lowest gross monthly income is obtained by residents living in Bydgoszcz, Łódź and Lublin. In terms of earnings, Poznań is located on the 4<sup>th</sup> place (4,119 zł).

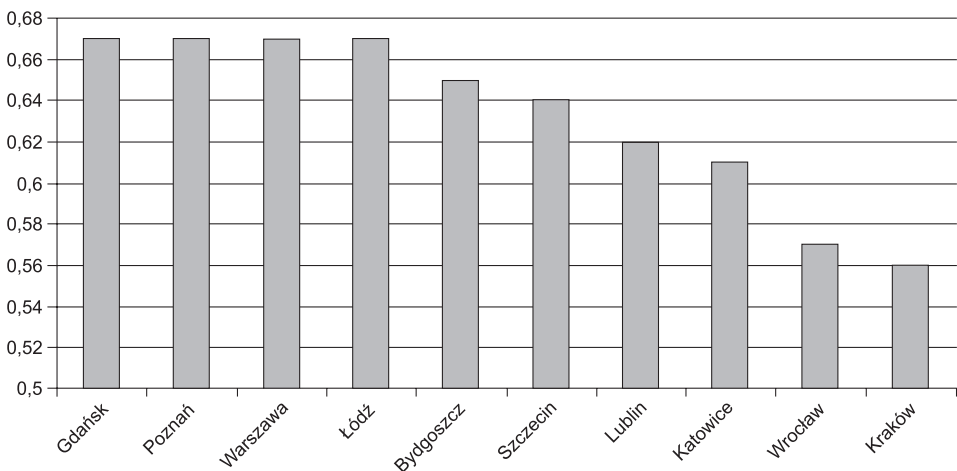


Fig. 4. Residential property tax (zł) – X4

Source: resolutions of City Council (2011).

The most important factors relating to the financial situation of households and purchasing power of public should be interpreted in relation to the costs of living in the city, especially the prices of food, housing and services. In this respect, earnings of Warsaw inhabitants are not sufficient guarantees for high quality of life. In the last 10-years period the housing market in Poland has strongly developed. More inhabitants have the opportunity to purchase their own homes which improves the quality of urban residence. The increase in quantity of housing leads to improved living conditions of Polish cities. The basic measure is housing space per 1 inhabitant. The most favorably is Wrocław (31.8 m<sup>2</sup>) and Warszawa (29.8 m<sup>2</sup>). In Poznań, the rate in 2012 was about 28 m<sup>2</sup> per person (with a value of 23 m<sup>2</sup> in 2002). Bydgoszcz appears to be the least favorably in this respect, where low housing growth does not significantly alter the number of meters per one inhabitant (23 m<sup>2</sup>).

Despite the large offer of apartments in free market, part of the population still does not have the material possibilities of purchase and this also applies to a large part of the inhabitants of Poznan. In spite of improving housing conditions, many of the housing areas (mainly old town) in all Polish cities require urgent renovation.

### Cost of living – housing

The scope of financial burden including the cost of residence (rent), utilities (sewage), food and services prices etc. belong to a large group of “costs of living”. The costs of living without doubt affect the quality of life, hence the price analysis is a crucial component of quality of life research.

Some of the costs borne by residents in daily life are independent on themselves and they do not have the direct impact of their height. These are primarily

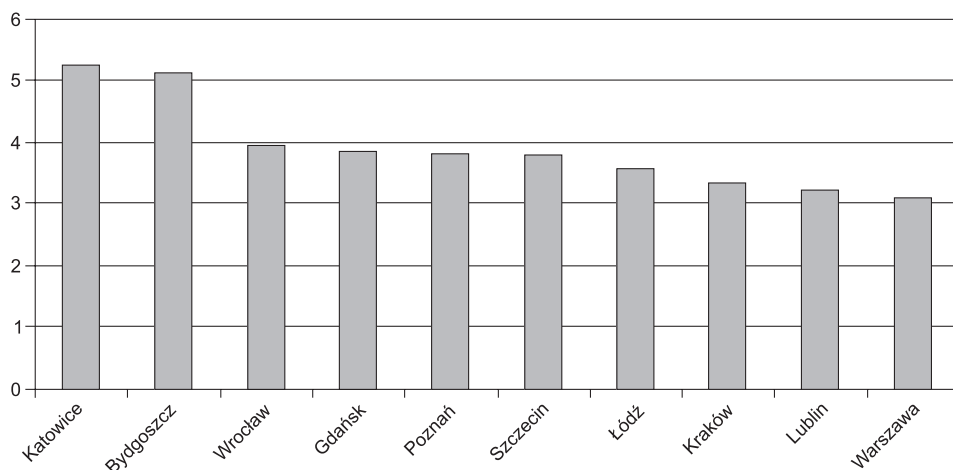


Fig. 5. Price of 1 m<sup>3</sup> of cold water (zł) – X4  
Source: resolutions of City Council (2013).

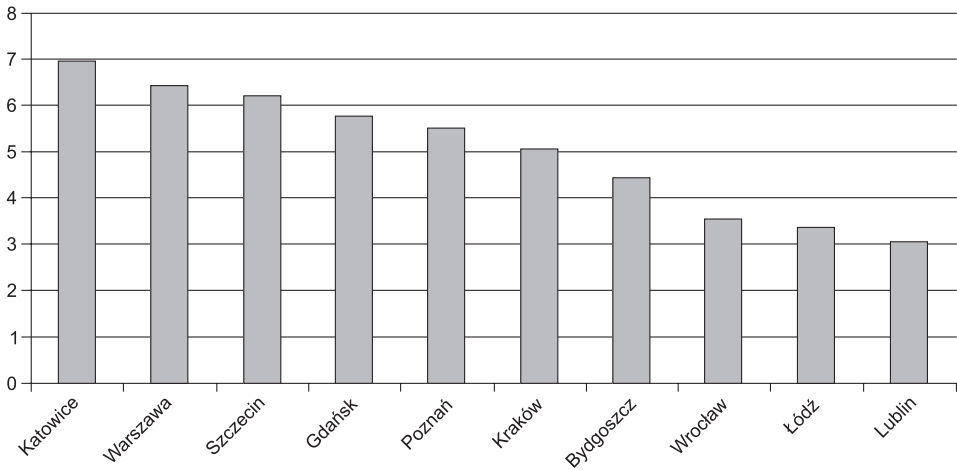


Fig. 6. Price of 1 m<sup>3</sup> of wastewater (zł)

Source: resolutions of City Council (2013).

housing prices in the open market, cars, fuel etc. formed by the private sector and global corporations. The rest of the costs, including the costs of public services and local taxes can comprise an element of public consultations with local communities.

The purpose of the costs of living analysis in the largest Polish cities is to diagnose the financial burdens formed by public and private sectors, their comparison and display of “good” cities to live. In this field, source of information have become published in the Public Information Bulletins as resolutions, under which in accordance with the law, municipalities have the ability to set prices in their area. In order to examine the group of “costs of living – housing” indicators

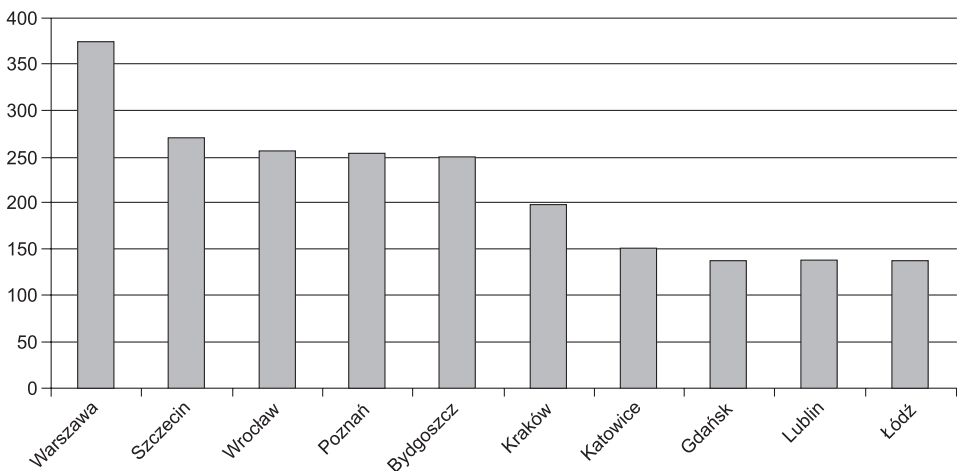


Fig. 7. The monthly cost of the child in public nursery (fixed fee) – X7

Source: resolutions of City Council (2011).



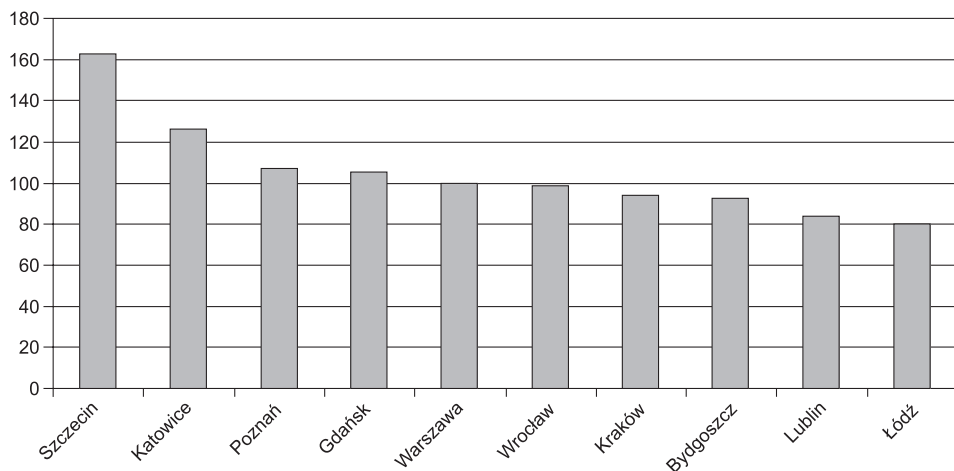


Fig. 8. Price of monthly ticket for public transport (zł) – X8

Source: resolutions of City Council (2013).

in the 10 largest Polish cities, prices data were collected: the average price per 1 m<sup>2</sup> of apartment (X3) and residential property tax (X4),

One of the major websites regularly monitoring the real estate market is [www.oferty.net](http://www.oferty.net). The service presents current trends on the housing market. Ten largest Polish cities are taken into account in terms of housing bid price per square meter in the secondary market. Consistently over the years, the most expensive apartments are in Warszawa (8,252 zł) and it is more than twice as expensive as in Katowice (3,724 zł) which is the cheapest. In Poznań the price is 5,384 zł per m<sup>2</sup> in relation to the other cities is rather average.

The basic rates for residential property tax are very close to each other, ranging from 0.67 zł (Gdańsk, Poznań, Warszawa, Łódź) to 0.56 zł per 1 m<sup>2</sup> (Kraków).

The monitoring of real estate prices in largest Polish cities can be an important tool for assessing changes in national urban areas.

## Costs of living – municipal services

In terms of the prices of municipal services in the study, it included the price of 1 m<sup>3</sup> of water and wastewater. Examination of other prices, such as impurities and waste reception, recognized for unrepresentative due to the large number of market participants and the large variation of prices and range of services. Water and wastewater prices have been developed on the basis of resolutions of the City Councils, usually undertaken annually.

Basing on the analysis, it should be considered that the prices of basic municipal services as water and wastewater are varied in Polish cities. The most expensive cold water is in Katowice (5.22 zł) and Bydgoszcz (5.1 zł). The cheapest price of water is in Warszawa (3.08 zł). Among the studied cities, Poznań is classified on 5<sup>th</sup> position, the price per 1 m<sup>3</sup> of cold water in Poznań is 3.81 zł.

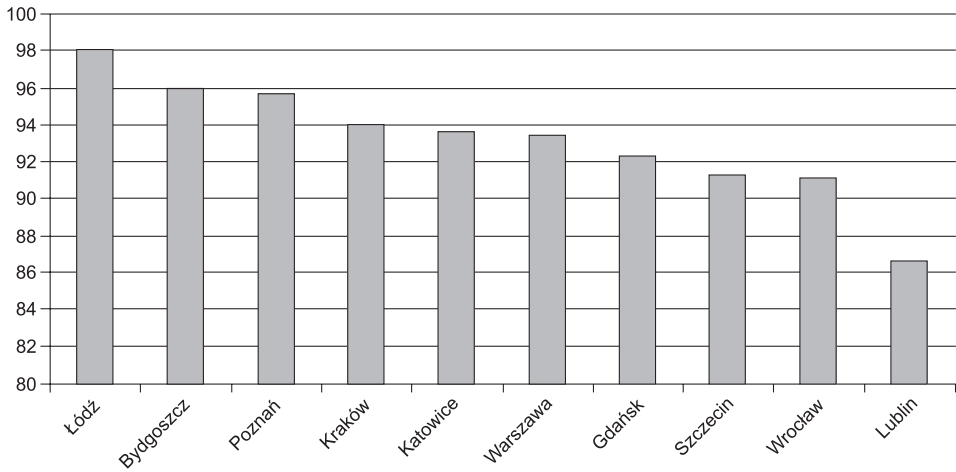


Fig. 9. Percentage (%) of schools equipped with computers for students' use of the internet in primary schools – X9

Source: Central Statistical Office (2012).

The prices for 1 m<sup>3</sup> of wastewater also vary. For the discharge of 1 m<sup>3</sup> wastewater you have to pay the highest price in Katowice (6.95 zł) and the lowest in Warszawa (6.42 zł). In Poznań the price of 1 m<sup>3</sup> of wastewater is 5.50 zł which puts Poznań on 5<sup>th</sup> position. The costs of cold water and wastewater in Poznań oscillate around the average for the 10 Polish cities.

Despite the large differences in prices of water and wastewater, prices in Poznań and Gdańsk are average in group of studied cities. The price of water, not exceeding 4 zł, in both cities is favorable for inhabitants.

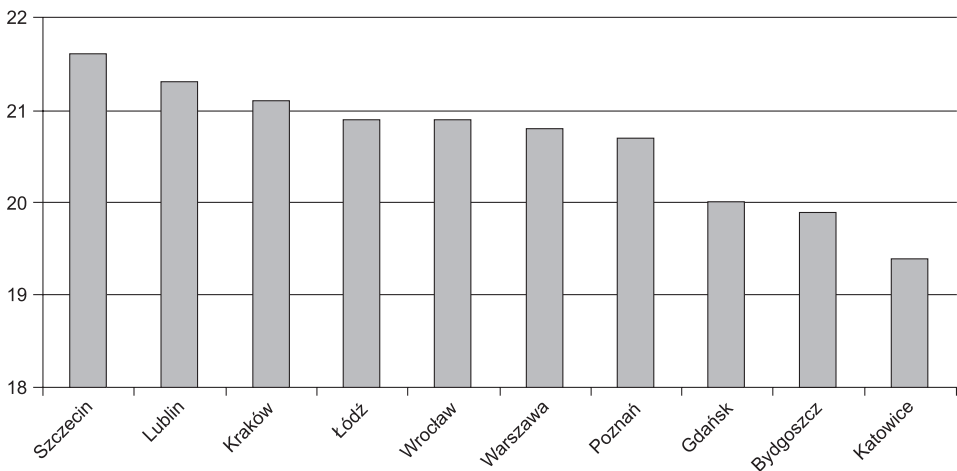


Fig. 10. Number of children in school division – Primary schools – X10

Source: Central Statistical Office (2012).

Table 1. Positioning of Polish metropolises as per the synthetic indicator of preconditions for the quality of life

City	Households		Costs of living – housing				Costs of living – municipal services		Costs of living – social and transport services		Education		Health		Environment		Public safety		Mean sum of indicators	Position
	X1	X2	X3	X4	X5	X6	X7	X8	X9	X10	X11	X12	X13	X14	X15	X16				
Lublin	-0.7	-0.9	0.3	-0.5	0.9	1.4	1.0	0.9	-2.1	-0.9	2.0	0.6	0.8	0.4	1.2	0.7	0.31	1		
Katowice	1.6	0.0	1.0	-0.3	-1.8	-1.4	0.9	-0.9	0.1	1.9	1.2	1.0	0.0	0.8	-1.3	0.8	0.23	2		
Łódź	-1.0	-0.4	0.9	-1.8	0.4	1.2	1.0	1.0	1.6	-0.4	0.0	0.9	0.6	0.3	0.4	-1.7	0.20	3		
Wrocław	-0.3	2.0	-0.3	0.8	-0.1	1.1	-0.5	0.3	-0.7	-0.4	-0.6	0.1	1.1	-0.1	-1.7	-0.7	0.00	4		
Bydgoszcz	-1.1	-1.4	1.0	-1.3	-1.7	0.4	-0.4	0.5	0.9	1.1	-0.2	-2.0	0.5	1.6	0.5	1.1	-0.03	5		
Kraków	-0.4	-0.4	-1.1	1.0	0.8	0.0	0.2	0.5	0.2	-0.6	0.0	0.3	-1.4	-0.2	-0.2	-0.5	-0.12	6		
Poznań	0.0	0.6	-0.1	-1.8	0.1	-0.3	-0.5	-0.1	0.8	-0.1	-1.3	0.7	0.5	-0.5	-0.7	0.1	-0.15	7		
Warszawa	1.8	1.2	-2.0	-1.8	1.1	-1.0	-2.0	0.2	0.1	-0.2	-0.9	-0.3	0.1	0.7	0.6	-1.4	-0.24	8		
Gdańsk	0.6	-0.4	-0.3	-1.8	0.1	-0.5	1.0	0.0	-0.3	1.0	-1.1	-1.4	-2.1	-1.2	1.3	0.8	-0.27	9		
Szczecin	-0.4	-0.2	0.7	-1.0	0.1	-0.8	-0.7	-2.4	-0.6	-1.4	0.3	0.0	-0.1	-1.8	-0.2	0.8	-0.48	10		

Source: Own calculations.

## Costs of living – social and transport services

The basis for the calculations of cost of public nurseries were resolutions published in the Public Information Bulletins. Rates in these resolutions were fixed, flat rate fee for one child in the nursery and the maximum rates for meals. Fixed fee is calculated in each city as a % of the minimum wage under the Act of 10 October 2002 on the minimum wage. The price of public nursery in 10 examined cities is various. The most expensive public nursery fee is found in Warszawa (374 zł), Szczecin (270 zł), Poznań (250 zł) and Bydgoszcz (249 zł), the cheapest in Łódź, Lublin and Gdańsk (138 zł).

The highest price of monthly ticket for public transport is in Szczecin (162 zł) and Katowice (126 zł). The least is paid for a monthly ticket in Lublin (84 zł) and Łódź (80 zł).

The study shows that the highest cost of social and transport services are in major cities and are formed according to the purchasing power of consumers. This applies to public childcare facility as well as price of monthly ticket (see Fig. 7 and 8).

## Education

Research on social and economic disadvantage has shown that, alongside with employment status and occupational level, education is a major determinant of one's economic well-being and social status. Low levels of education and skills tend to be associated with higher levels of unemployment, insecure employment and low wages which negatively contribute to quality of life (Fahey et al. 2003).

Quality of education is important part of research on quality of life. High quality of education affects the level of social cohesion and economic development. There is no doubt that the best and well-equipped schools are located in large cities. Big cities are the target of daily trips to schools at all levels for thousands of students across the country target, and in the case of university centers are also the place of residence of students and in the future their place of work.

This study on quality of education based on indicators of Central Statistics Office: percentage (%) of schools equipped with computers for student's use of the internet in primary schools and the number of pupils per 1 division in primary school. Analysis of the computerization at schools shows mixed results, which can reflect difficulties in their interpretation. The highest percentage of primary schools equipped with computers with Internet occurs in Łódź (98.11%), Bydgoszcz (95.92%) and Poznań (95.65%), while the lowest rate is in Lublin (86.67%).

It is commonly believed that the number of children in the class affects the quality of education. The smaller the number of children in the school division, the more comfortable teaching is. There is a better contact with the student and the ability to devote more time to the student. The average number of children per class in primary school for all the studied cities was 20.7. The largest class in primary schools are located in Szczecin (21.6), the least numerous classes are in Katowice (19.4).

## Health

World Health Organization defines health as: "A state of complete physical, mental, and social well-being not merely absence of disease (...). It follows that the measurement of health and the effects of health care must include not only an indication of changes in the frequency and severity of diseases but also an estimation of well-being and this can be assessed by measuring the improvement in the quality of life related to the health care" (World Health Organization 1997). In order to meet the needs of health and social welfare which is on one hand a sense of security determining the individual and family residents, on the other hand it affects the social and economic processes in the agglomeration (Kaczmarek, Kisiała 2011).

In this part of research which is concentrated on health care, the following indicators were used: the number of doctors for 1,000 residents and the number of population per 1 health care facility. The high number of doctors and the small number of residents per 1 health care facility should be seen as good accessibility to health services.

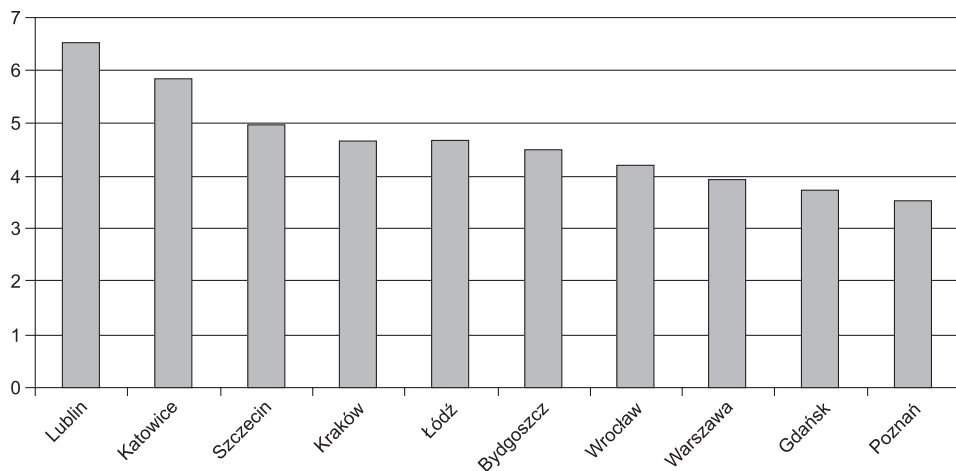


Fig. 11. Doctors for 1000 residents – X11

Source: Central Statistical Office (2011)

The research on the number of doctors per 1,000 residents ranks Lublin on the highest positions (6.5 doctors for 1,000 inhabitants). In Poznań, which is surprising in view of the location of one of the best medical schools in the country, for 1,000 people there are only 3.6 doctors assigned. This indicator ranks Poznań on the last position in the group of studies cities.

The highest number of residents assigned to one health care facility is in Bydgoszcz (2,286), the smallest number in Katowice (1,086).

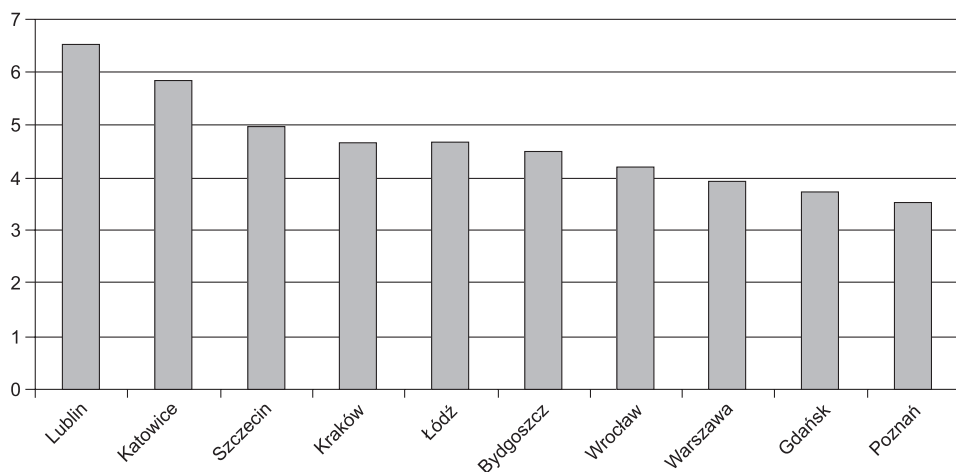


Fig. 12. The population on the healthcare facility – X12

Source: Central Statistical Office (2011).

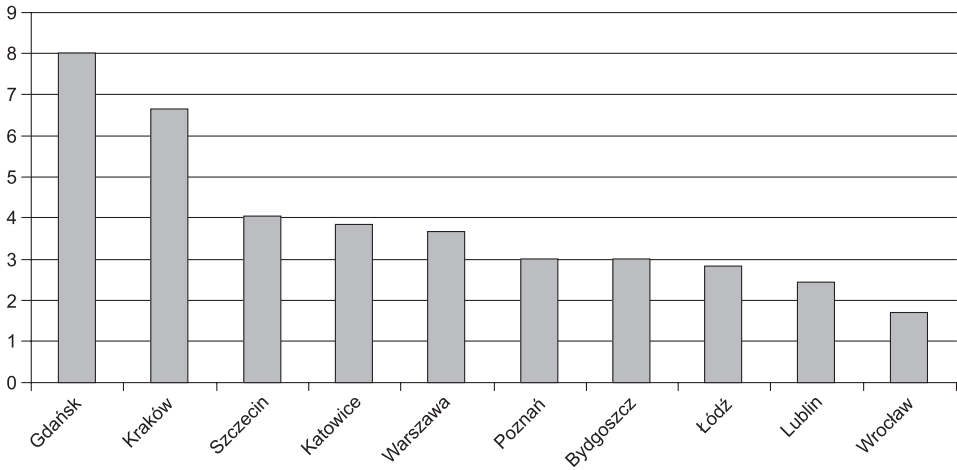


Fig. 13. Annual total emission of dust and gas per 1 inhabitant (in tons) – X13  
Source: Central Statistical Office (2012).

## Environment

An important element of the research on quality of life is the quality of the natural environment. The purity of environment at the present time is playing an increasingly important role in people's lives. The city, which has good environment can provide its residents a sense of security, comfort, health and life satisfaction.

The methodology involves not only the analysis of the indicator, which directly affect the contamination, but also those which affect the reduction of pollution and environmental regeneration capacity. Two categories of indicators

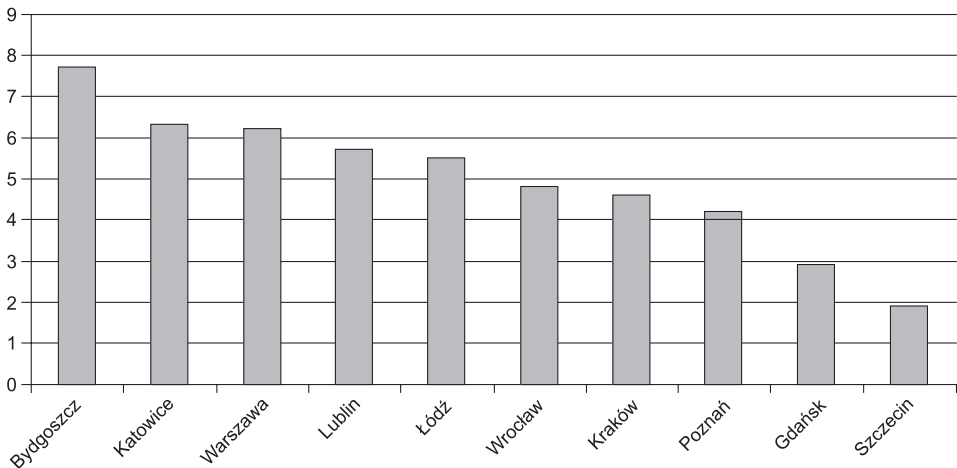


Fig. 14. Share (%) of green spaces (parks, green areas and green housing estate) in the total area of the city – X14  
Source: Central Statistical Office (2012)

including pollution and green space indicators should be treated as complementary elements.

The highest emission of dust and gas per 1 inhabitant is in Gdańsk and Kraków (more than 6 tons per 1 resident in year), the lowest in Wrocław (only 1.7 tons per 1 resident in year).

The environment and its impact on quality of life is affected by the presence of significant green spaces. Green areas give the city a particular climate. Parks and forest are the places where a person can go to relax, get some fresh air and use it as a place of entertainment. The highest percentage of the total green area of the city is in Bydgoszcz (7.8%), followed by Katowice (which promotional slogan is “City of Gardens”) and Warszawa. By far the lowest % of green areas is in Szczecin (1.5%). The percentage of green spaces in Poznań is 4.2% and puts the city on the 3rd place from the end.

## Public safety

One of the categories of subjective feelings in term of quality of life is a sense of security. Due to the combined spatial and social structure of the city, it is difficult to use one term evaluating or depreciating the city (city “safe or dangerous”). In every city there are areas, housing estates, where the probability that something bad will happen is higher than in other parts of the city (this is confirmed by the Municipal Police Command statistics).

Taking into account the total number of crimes in 2012, the biggest crime rates characterize Wrocław, where the total number of crimes per 1000 residents is more than 64. Poznań is classified into 3rd position, just after Wrocław and Katowice.

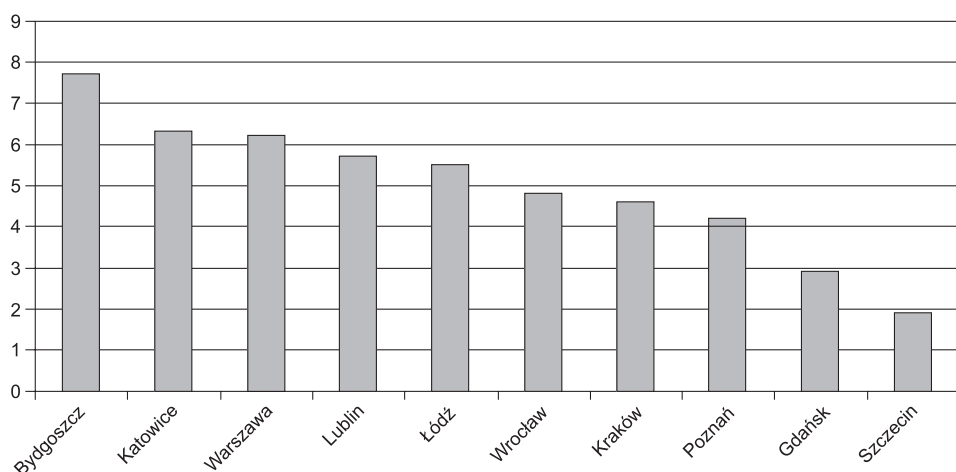


Fig. 15. Total crime per 1000 residents – X15

Source: Central Statistical Office (2012).

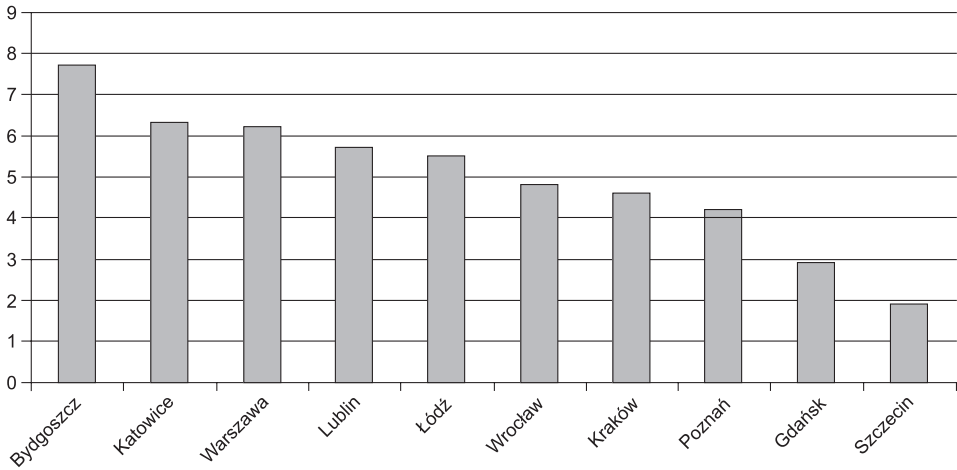


Fig. 16. Crime detection rate (in %) – X16

Source: Central Statistical Office (2012)

It should be noted that crime rates are correlated with the number of people living in a city. In the largest cities crime rate is higher than in other smaller cities but the number of crimes is also a result of the declaration of victims.

Crime detection rate is the highest in Bydgoszcz (64%) and the lowest in Łódź (44%). In Gdańsk, Szczecin, Katowice and Lublin crime detection rate has the similar value (about 61%).

Crime rates and crime detection puts Poznań on average position in the group of surveyed cities. Both Wrocław and Katowice are characterized by high rates of crime, can affect the lower sense of security among the residents of these cities.

## Positioning of Polish metropolises in term of quality of life

The synthetic indicator of preconditions for the quality of life for the inhabitants of the largest Polish cities was calculated as the average of all indicators taken into account. The procedure of positioning was made in accordance with the value of this indicator.

The highest mean sum of indicators characterizes Lublin (value is 0.31) and Katowice, with the mean sum of standardized indicators which value is 0.23. The lowest values characterize Szczecin (mean sum of indicators  $-0.45$ ) and Gdańsk ( $-0.27$ ).

Lublin takes his high mean of values due to: low prices of municipal services and costs of social and transport services, good accessibility to health services, low emission of dust and gas, high share of green spaces in total area of the city, low rate of crimes per 1,000 residents and high crime detection rate.



Katowice are also placed on high position. According to Professor Czapiński (2011) Katowice takes the highest position in many quality of life research due to the fact that the city is still associated with declining industries, job losses and poverty. The city authorities must take special attention to maintain low prices, otherwise, as the Professor says, “people begin to get out of here”.

The last position of Szczecin in research is due to: high costs of social and transport services, the lowest rate of schools equipped with computers and the highest number of children in school division, high total emission of dust and gas, and the lowest share of green spaces.

The average value of mean sum of standardized indicators took Bydgoszcz, Kraków Poznań and Warszawa. The capital city Warszawa isn't high positioned because of high prices of goods and services (analogously: other largest cities like Kraków or Poznań), but it shouldn't be considered as these cities are the worst places to live. Summarizing, the position of the cities studied in the survey, depends on the selected indicators.

## **Conclusion**

Quality of life surveys are one way to monitor socio-economic development and verify the performance and efficiency of local governments' work. They also assess whether the aims and objectives pursued by public authorities translate into results in the form of improved living conditions of the inhabitants. In this respect, what matters are not only the results of studying the subjective feelings of inhabitants, but also test methods that use hard and objectified indicators (Mizgajski et al. 2013).

“Cities have acquired a phenomenally important role in today's world. From being isolated “seats of power from where to govern rural holdings” cities have become the ultimate abode of humanity, and human beings are now a predominantly city dwellings species. Today every second person inhabiting the world is an urban dweller. The trend is not going to change in near future as the urban population is expected to grow at double the rate of growth of total world population during 2005–2030” (UNCHS 2007, Hasan L. 2010). This is just one of the reasons why the quality of life should increase and why the people and authorities need to monitor the level of quality of life, especially in the biggest cities.

The indicators used in research are only examples which may comprise a “local quality of life indicators”. The local quality of life indicators help to “paint a picture” of the quality of life in a local area. The quality of life indicators set complements as a number of government policies, projects and initiatives that support the work of local authorities and their partners to deliver sustainable development. (Audit Commission 2005). This study of quality of life, should be successively repeated in major Polish cities. This would allow to monitor the changing quality of life and the needs of the residents. The deteriorating quality of life could be a signal to the authorities which could introduce additional local policies.

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